



CONSERVATION AT THE CROSSROADS

Vol. 32, No. 1 Winter, 2011

SWCD Invites You to Attend Their 41st Annual Meeting - February 15th

The Marion County Soil & Water Conservation District invites you to attend their 41st Annual Meeting and dinner on Tuesday evening, February 15th.

The SWCD Annual Meeting dinner will be served at 6:30 p.m. with the business meeting and keynote speaker following. Tickets for the event are only \$17 per person. The Primo Center is located at 2615 E. National Avenue, which is just south of the I-65/ Keystone exit, north of Hanna and east of Keystone Avenue. The meeting will include a brief update of the local Conservation District's annual activities promoting the wise use of soil, water, and related natural resources in Marion County. To learn more about the Marion County SWCD visit their website at www.marionswcd.org.

See page 3 for information on our annual meeting keynote speaker Jane Lichtenberg, from the *Indianapolis Star*

Call Marilyn Hughes at 317-786-1776 for more information or email her at marilyn-hughes@iaswcd.org

Issue Highlight "LID" Low Impact Development

SWCDs are known for championing voluntary conservation efforts that improve or solve natural resource issues. LID fits that goal by preventing natural resource problems common in traditional development methods. This issue highlights the need for and benefits of LID for our county.

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Please Register to attend the Marion County SWCD Annual Meeting by February 4th
(Please Print)

Name(s) _____

Number Attending _____ X \$17 / person Total Enclosed \$ _____

Indianapolis, Indiana

Watershed Changes Cause River Degradation

The importance of lowering the impact of development in our county has been amplified by a recent United States Geological Survey (USGS) report on a study done to measure the impact of land use changes on river flows and water quality. The USGS's recent assessment provides the most geographically extensive analysis to date of streamflow alteration caused by watershed (the land area draining to a particular river) land cover conditions. It reports that across the U.S. ecological degradation is occurring where river flows are altered by land and water management activities.

The impact is widespread and considerable. The report's findings show that the amount of water flowing in streams and rivers has been significantly altered from land and water management changes in nearly 90% of the waters assessed by the study (2,888 sites were monitored nationwide). Flow alterations are a primary contributor to degraded river ecosystems and loss of native species whose survival and reproduction are tightly linked to specific flow conditions. These consequences can also affect water quality, recreational opportunities, and the maintenance of sport fish populations.

Decreasing the impact of development by encouraging conservation practices often promoted by the SWCD such as rain gardens, pervious pavement, green roofs, wetland restoration or creation and rain barrels is a big job. Breaking the job into small steps, taken on by individual landowners and land use decision makers, will affect and minimize the streamflow alterations and ecological consequences. More information on conservation practices can be found in this and previous issues of *Conservation*

at the *Crossroads* and at the Marion County SWCD website:

www.marionswcd.org

(Information for this article was taken from "Alteration of Streamflow Magnitudes and Potential Ecological Consequences: A Multiregional Assessment" an article in the *Journal of Ecological Society of America, Frontiers in Ecology and the Environment*.)



SWCD Honors the Life of Carroll White

With great sadness the Marion County Soil & Water Conservation District staff and supervisors pay our respects and send our sympathy to the family of long time supervisor Carroll White. Carroll, a grain and livestock farmer and resident of Warren Township, had been active in Marion County Farm Bureau, Cooperative Extension (4H Beef and Open Class Agriculture/Horticulture Supervisor), and was an ASCS member.

Carroll was an active supervisor on the SWCD board for many, many years and was always generous in allowing the staff to use his

farm for educational and training opportunities. Even in his later years he and his wife LaVon were faithful supporters of the District and always attended the annual meetings.



The Mission of the Marion County SWCD is to assist Marion County land users in conserving soil, water and related natural resources by providing technical, financial and educational services.



Conservation at the Crossroads is published quarterly to give information to landusers by the Marion County Soil & Water Conservation District, 6960 S. Gray Road, Suite C, Indianapolis, IN 46237

Phone: 317-786-1776 FAX: 317-786-1757 website: marionswcd.org

The Marion County SWCD holds a regular monthly board meeting on the third Tuesday of each month at 3:30 p.m. These meetings are open to the public & are held at the SWCD office at the address above. This board meets to administer the program of soil & water conservation in Marion County. The district prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.)

Indy Star's Jane Lichtenberg to be SWCD Annual Meeting Speaker

Jane Lichtenberg will be the featured speaker at Marion County SWCD's 41st Annual Meeting on Tuesday evening, February 15th at the Primo South Banquet and Conference Center on Indianapolis' south side. In 2007, the *Indianapolis Star*, in an effort to help resolve Marion County infrastructure problems reported by readers, named Jane Lichtenberg their Community Conversations Coordinator. Since its inception, Star Watch readers have reported more than 8,000 problems. Lichtenberg has helped resolve nearly 3,000 of them. These complaints range from potholes to animal threats, abandoned properties to flooding, etc. Lichtenberg's presentation will focus on what trials and tribulations she has encountered in attempting to assist local residents with their home and local community infrastructure problems.

Lichtenberg, an Indiana native who grew up in Bloomington and attended Indiana University, has been with *The Indianapolis Star* for 40 years. For more than three decades, she worked as the copy editor and later the Sunday opinion page editor for the editorial pages. In addition to being a member of the Editorial Board, she also has been serving as the Community Conversations Coordinator. During the past three years, Jane says, "I often have relied on

expertise from the Marion County SWCD staff to help resolve reader reported drainage issues. As a private citizen and President of a neighborhood homeowners association, I have also personally received help from the district."



We hope you will join us for a wonderful evening of good food, information about our community and updates on how your conservation district is improving the natural resources of the county.



**Farm Services Agency News
Marion/Johnson Counties
3059 N. Morton
Franklin, IN 46131
317-736-6822**



Sign up for DCP & ACRE

Producers need to report wheat acres planted this fall



**The SWCD Board and Staff are dedicated to improving the health and natural resources of Marion County while serving the community -
one land user at a time.**

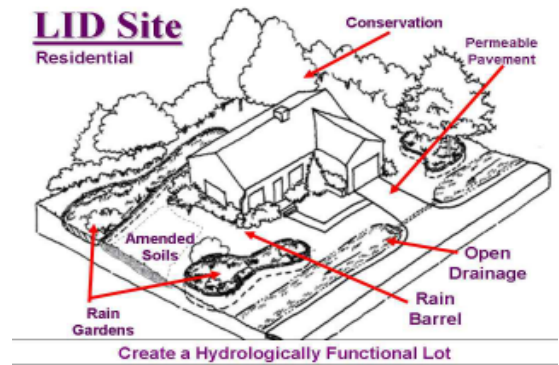
**Would you like to receive *Conservation at the Crossroads* by email? Send your name, mailing address and email address to:
marilyn-hughes@iaswcd.org and we will send our quarterly newsletters to you by email.**

Support the Marion County SWCD by becoming an Affiliate Member! Call 317-786-1776 for more information.

What is Low Impact Development?

A Low Impact Development (LID) is an innovative stormwater management land development approach with a basic principle that is modeled after nature. A LID's goal is to mimic a site's predevelopment storm water runoff or hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. LID techniques are based on the premise that stormwater management should not be seen as stormwater disposal. Instead of conveying and managing/treating stormwater in large, costly end-of-pipe facilities located at the bottom of drainage areas, LID's address stormwater through small, cost-effective landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMPs), are the building blocks of LID. Almost all components of the urban environment have the potential to serve as an IMP. This includes not only open space, but also rooftops, streetscapes, parking lots, sidewalks, and medians. LIDs use a versatile approach that can be applied equally well to new development, urban retrofits, and redevelopment / revitalization projects.

An LID has numerous benefits and advantages over conventional stormwater management approaches. In short, it is a more environmentally sound technology and a more economically sustainable approach to addressing the adverse impacts of urbanization. By managing runoff close to its source through intelligent site design, LID can enhance the local environment, protect public health, and improve community livability - all while saving developers and local governments money. The need for such an approach has never been greater. Current stormwater programs require that a wide array of complex and challenging ecosystem and human health protection goals be addressed. Many of these goals are not being met by conventional stormwater management technology, and communities are struggling with the economic reality of funding aging and ever-expanding stormwater infrastructure. The challenge of how to restore stream quality in watersheds that have already been densely developed is even more daunting. Simply relying on impervious reduction and/or conventional detention ponds to address these issues is not feasible, practical or sustainable.



LID provides the key in its emphasis on controlling or at least minimizing the changes to the local hydrologic cycle or regime.

Local permitting agencies can use LID as a model in revising local zoning and subdivision regulations in favor of more cost-effective, ecologically sound development. Developers can achieve greater project success and cost savings through the intelligent use of LID, and designers can apply these techniques for innovative, educational, and more aesthetically pleasing sites.

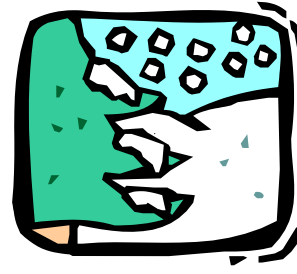
What are the costs associated with LID? Current experience has shown that LID often saves money over conventional approaches through reduced infrastructure and site preparation work. LID case studies and pilot programs show at least a 25 to 30% reduction in costs associated with site development, stormwater fees, and maintenance for residential developments that use LID techniques. These savings are achieved by reductions in clearing, grading, pipes, ponds, inlets, curbs and paving. Far outweighing any of the cost increases due to the use of LID, these infrastructure reduction savings enable builders to add value-enhancing features to the property, to be more flexible and competitive in pricing their products, or even to recover more developable space since there is no need to waste land for a stormwater pond.

More information about LID is available on the web at The Low Impact Development Center, a non-profit organization, at www.lowimpactdevelopment.org/ and the Environmental Protection Agency's (EPA's) web site at www.epa.gov/owow/nps/lid/.

Fun Fact:
The South Pole
is colder than
the North Pole

The Value of Urban Trees

Winter & Watershed Benefits



In our quest to reduce the impact that development has on the environment, we find that what is usually the first step in preparing a building site may cause the most harm. Clearing a building site of all existing trees eliminates one of the site's most eco-friendly features.

Trees have been shown to influence the flow of water. They reduce topsoil erosion by catching precipitation with their leaf canopies. This lessens the force of storms and slows down water runoff which in turn ensures that our groundwater supplies are continually being replenished. Research has indicated that 100 mature trees intercept approximately 100,000 gallons of rainfall per year and for every 5 percent of tree cover added to a community, storm water runoff is reduced by approximately 2 percent. Along with breaking the fall of rainwater, tree roots remove nutrients that are harmful to water ecology and quality. Leaves that have fallen from the trees and begun to decay form an organic layer that allows water to percolate into the soil which also aids in the reduction of runoff and soil erosion. All of this also helps reduce street flooding and sedimentation in streams.

Trees planted in urban areas have many benefits that are especially noticeable in the wintertime. The pines, spruces and Northern Red Cedar are the most commonly used species for hedges and screens because their foliage stays green during the winter months and they provide continuous screening and color in an otherwise rather drab winter landscape. Screens are also effective windbreaks and help to reduce winter heating costs when planted on the north and west sides of homes.

Need a remedy for cabin fever? Evergreens also provide shelter for birds and wildlife. This is especially important during severely low temperatures of January and February. A few evergreens and a bird feeder will bring you enough wildlife to keep you entertained as you sit in a sunny window on any winter day.

Thanks to Associate SWCD Supervisor Bob Eddleman, for background information for this article. Bob works diligently to encourage tree planting through the Plant A Million Project. For more information go to www.plantamillion.org

Benefits of Low Impact Development

Environmental

- ◆ Preserves integrity of ecological and biological systems (i.e. hydrologic cycle, soil health, stream channels, etc.)
- ◆ Protects site and regional surface and ground water quality and recharges aquifers
- ◆ Reduces impact on native plants and animals
- ◆ Reduces potential for health issues (i.e. West Nile virus)

Economic

- ◆ Lowers costs of development such as land clearing, grading and infrastructure
- ◆ Reduces municipal infrastructure and utility maintenance costs
- ◆ Reduces liability and safety concerns
- ◆ Increases development and community marketability

Fun Fact:
If all earth's water fit in a gallon jug, available fresh water would equal just over a tablespoon - less than half of one percent of the total.

Keys to LID For New Construction & Rehab for Existing Sites

It's not just stormwater...It's a valuable natural resource!

This is a statement embraced by the Indianapolis Office of Sustainability. Indianapolis is working towards improving existing developments and promoting green infrastructure for new developments as a major component of Low Impact Development initiatives. Green infrastructure is a general term for a variety of methods of managing, conveying, and treating stormwater runoff at the local level through the use of natural systems or engineered systems that mimic natural systems. The primary goals of green infrastructure are to capture and store stormwater as close to where it falls as possible so that it can be cleaned, infiltrated into the soil, and slowly released into rivers and streams. By slowing the release and reducing the amount of rain water into the sewer system, these strategies also help alleviate the problem of Combined Sewer Overflows.

According to the U.S. Environmental Protection Agency, "Green Infrastructure can be both a cost effective and an environmentally preferable approach to reduce stormwater and other excess flows entering combined or separate sewer systems in combination with or in lieu of, centralized hard infrastructure solutions."

A number of practices are used to capture rainwater or slow its release to rivers and streams. The following is a brief description of some of these methods.

Rain Garden - a graded depression planted with vegetation that is well adapted to store and clean stormwater. Surrounding areas are graded or a curb cut is made to direct stormwater toward the rain garden. Proper soils that drain within a 24 hour period are key to this practice.

Green Roof - a multifunctional roofing system that utilizes plants, a growing media, and waterproof membranes to collect and absorb stormwater, thereby reducing the amount of stormwater runoff from the site. These systems have increased in popularity in the US in recent years as an alternative to traditional roofing systems for their durability, discharge reduction in first-flush storm events, and for their aesthetic qualities.

Permeable Pavement - a pavement surface that allows water to pass through its surface and sub base for infiltration into the soil below. This type of pavement provides the structural support of traditional pavement materials, but also provides many stormwater and application benefits such as reduced runoff and impact to surrounding plantings.

Rain Barrels & Cisterns - are stormwater storage systems designed to capture rainwater for either slowed release into natural or engineered stormwater systems, or for reuse as irrigation or other non-potable uses such as toilet flushing. These systems are fed by downspouts and may have a limited capacity for rain water storage, but they provide excellent capture of first-flush rain water.

More information is available from previous editions of *Conservation at the Crossroads* or SWCD Fact Sheets available on our website www.marionswcd.org.

Thank You 2010 Affiliate Members

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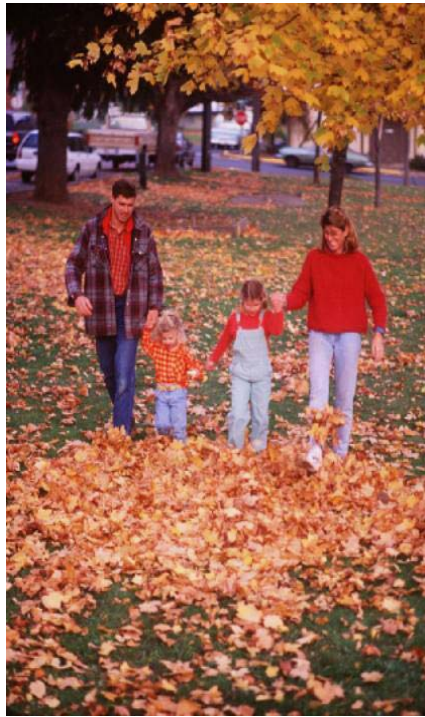
Fun Fact:
Four trillion gallons of water fall on the U.S. daily in the form of precipitation.

Finding My Forest

Connecting Kids to the Great Outdoors

The central part of Indiana, prior to settlement, was primarily covered in forest. Today with all our residential, commercial, industrial and transportation land cover, most of the forest areas have disappeared. That means many of our youth have lost any association with what forests are or were. A new website, called “Finding My Forest” has been developed to provide some connections to the forest again. The site offers interdisciplinary lessons allowing parents, teachers, and outdoor educators to connect with young peoples’ diverse learning styles. The free forest conservation educational material and curriculum is at: www.findingmyforest.org

Today’s children, between school, scheduled activities, television, computers, and cell phones, have little free time. It’s no wonder that they are losing touch with natural spaces like our forests. Yet, time in natural spaces has been proven to help children and adults succeed. “Finding My Forest” provides the tools needed to help integrate the wonder of our forests right into youth education efforts. Interested individuals can start by taking a “virtual hike”, [downloading the curriculum](#), or exploring the rest of the site to find information about forests, what to do when you get there, and ways to connect with other “forest friends.”



The material is designed for grades three through eight. The curriculum helps make natural spaces, from the schoolyard outside, to public forests around the country, more relevant to students. The site offers simple ways to create a classroom blog and link it to the iForest Network Google Map, which connects participating classrooms from across the nation.

The site includes tools and resources from partner organizations. One area of the site that is particularly fun, is the online (by zip code) field guide, at www.enature.com/zipguides/. It is a great site to learn details about birds, butterflies, mammals, reptiles, amphibians, trees, wildflowers, for the area chosen. Pictures, habitat information and in the case of the birds, interested individuals can even listen to their sounds.

“Finding my Forest” is part of a USDA Forest Service and AdCouncil campaign aimed at connecting kids and parents with nature. For more information about the campaign and other resources, visit: www.DiscoverTheForest.org. Additional conservation education resources from the USDA Forest Service can be found at: www.na.fs.fed.us/coned/. With all these resources, we hope to see you in the forest!

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office at
317-786-1776 or
check out more
information at our
website:**

www.marionswcd.org

**Contact Us
for more
information on
soil & water
related issues**

**Marion County
Soil & Water
Conservation
District
6960 S. Gray
Road, Suite C
Indianapolis, IN
46237**

**Phone:
317-786-1776**

**FAX:
317-786-1757**

**On the Web:
marionswcd.org**

Marion County Soil & Water Conservation District



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Why I Serve

Marvin Brethauer lives near Broad Ripple Village, has been employed by the Indianapolis International Airport for over 30 years. He currently supervises the Conservation, Farm, & Land Management Department as well as co-manages the storm water runoff control program. Marvin is an accredited plantsman, master horticulturalist, and master naturalist. His volunteer activities include many education and outreach opportunities for scouting organizations, schools, and professional groups. Marvin was a SWCD associate supervisor for six years before becoming a supervisor. He is currently serving as board treasurer & supervisor.

I felt compelled to participate with the Marion County Soil & Water Conservation Board for several reasons, both personal and professional. When asked to serve, I agreed to participate.

First, I grew up in an urban setting on the near east side of Indianapolis just north of Brookside Park. Water quality in nearby streams and ground water concerns were often discussed by my family, even in the 1950s. The parcel we lived on was large and supported a good-sized garden so I understood pretty well at an early age the effects good soil and clean water have on crops.

Second, the Indianapolis Airport Authority is one of the largest landholders in central Indiana with environmental impacts in multiple watersheds. I have had the incredible opportunity to work with the airport, including its six airport facilities in four Indiana counties, for many years in mostly a “green” related capacity. This has been exceptionally rewarding to me because my work has had a direct positive effect on our community. Some of my efforts have included working with various agencies regarding habitat mitigation for the federally endangered Indiana Bat, managing airport owned farm ground, and managing storm water/deicing fluid runoff in the cold weather season.

Doing what I can personally, professionally, and by working with such a dynamic operation as the Marion County Soil & Water Conservation Board in this capacity allows me to contribute to something I feel passionate about and that also benefits our regional community. After all, we must share the water, the air, and the soil that sustains all living things.



SWCD

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NRCS Staff

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