

Conservation Today For Tomorrow

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Urban Conservation—From Attracting Wildlife to Slowing Stormwater Runoff



Photo courtesy of the City of Maplewood, Minnesota

Rain Garden Flourishes while Cleaning Up Stormwater Runoff

Even the most urban landscape can be turned into a sanctuary for wildlife and help improve and protect our natural resources. Simple plantings of native shrubs, wildflowers and grasses can attract birds and butterflies and other animals, providing food and cover. In addition to bringing nature to your doorstep, many urban conservation practices can help improve the quality of our lakes and streams by reducing and cleaning up stormwater runoff. Urbanization has greatly increased the amount of impervious surfaces creating an overload of stormwater runoff in our watersheds. Large quantities of water, which previously were allowed to infiltrate into the ground and wetlands, now flow quickly through storm sewers and into our lakes, streams and rivers. This short-term spike in water flow intensifies flooding and erosion problems as well as delivers large amounts of nutrients and sediments into our waters. The use of rain gardens, rain barrels, pervious paving and other runoff reduction methods can greatly increase on-site treatment of stormwater and help improve the quality of the lakes, rivers and streams we all enjoy.

Did you know that the watering of our lawns and gardens can account for up to 40% of residential water use? Meanwhile hundreds of gallons of water are draining off of our roofs each time it rains, water that could be used to help our gardens stay green and colorful throughout the hot summer months. A simple solution, rain barrels, has been rediscovered by many homeowners to take advantage of this resource. A 1" rainfall on 1,000 sq. ft. roof yields approximately 623 gallons of water. It takes just a ¼" rainfall to fill a barrel. The water stored in your barrel contains no chlorine, lime, or calcium, few salts, and few sediments. This water is ideal for use in gardens, lawns, and washing windows, it is not, however, recommended for human consumption. Be sure to buy one with a lid to eliminate mosquito breeding areas.

Traditionally rainwater has been directed from our rooftops and sidewalks into storm sewers. On it's way to the storm drain, this water picks up pollutants such as oil from our cars and lawnmowers, fertilizer, grass clippings, and pet/geese waste. Storm sewers often empty directly into our lakes and rivers, where the excess nutrients cause algae blooms and can have other adverse effects on wildlife. Up to 70% of pollutants enter our water bodies through stormwater runoff, up to half of which comes from households in the watershed (the area that drains to a particular water body). We all live in a watershed and can do more on our own property to minimize stormwater runoff.

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What is the Tippecanoe County Soil & Water Conservation District?

Soil and Water Conservation Districts (SWCDs) are located in every county of the state. They are legal subdivisions of State Government. The District is a multi-member board that establishes and implements programs to protect and conserve soil, water, farmland, woodland, wildlife, energy and other renewable resources on local, and non federal lands. Five supervisors, three elected by landowners, and two appointed by the Indiana State Soil Conservation Board, oversee the District program.

The District works with local, state, and federal agencies, Purdue University, as well as various other groups, associations and individual landowners to fulfill it's responsibilities. Cooperation with the SWCD is voluntary. The District's primary function is the encouragement of and assistance in the wise use of our natural resources through best management practices. The District uses available technical, financial and educational resources to meet the needs of the local landowner for conservation purposes.

In addition to providing technical assistance to landowners, the District's other primary service is to inform and educate. The District's accomplishes this by sponsoring field days, meetings, workshops, publications, and by making presentations to schools, civic groups, and other organizations as well as working one on one with landowners.

Stop by our office in the USDA Service Center located behind the Frozen Custard on CR 350 South near South 18th Street for more information. Check out our website www.tippecanoeswcd.org or give us a call (765) 474-9992, extension 3. We look forward to meeting you!

(Runoff continued from page 1)

Rain gardens are now being planted to intercept stormwater runoff. Rain gardens are planted with a diverse mix of native wildflowers and grasses that collect rainwater from your roof, driveway, or other impervious surfaces like roads and parking lots. The water collects in a shallow pool and slowly filters into the ground instead of into storm sewers, which drain into lakes and rivers. By creating a rain garden, you can help reduce and clean up the amount of stormwater that enters our lakes and rivers. Rain gardens are an attractive, healthy alternative to traditional gardens and can be integrated into the home landscape.

Finally, pervious paving systems are those that allow water to percolate into the ground through small openings in the material. Pavements can be made of porous concrete or asphalt, paving stones, or open cell pavers. Porous concrete or asphalt has 15-25% open space and is durable enough to be used in parking lots, driveways and low traffic streets. Paving stones are made up of modular block with pervious joints and are often used for patios, walkways, and driveways. Open cell pavers are concrete or plastic cells with large open spaces. The cells provide structural support and prevent compaction of soil. Grass can be planted in open spaces. They are often used for paths, fire lanes, overflow / event parking, driveways, and utility access.

These paving materials may have open space of 15-40%. This allows for:

- Increased infiltration of water, up to 5 gallons per minute, reducing amount of runoff and flooding.
- Higher resistance to freeze-thaw cycles and related cracking.
- Lower temperature due to greater heat exchange with ground.
- Groundwater recharge

If you'd like more information or technical assistance, contact our office.



Pervious Vs. Impervious Pavement Display at the Indiana State Fair's Pathway To Water Quality



Cities Benefit from Rural Conservation Trees

In our rapidly changing world, the importance of trees and rural forest land is beyond anything imagined even a decade ago. In fact, the perception of rural trees as simply a supply of wood or a pleasant backdrop in the picturesque countryside is becoming as outmoded as dial telephones.

Rural forests and conservation trees directly benefit all of us who live in cities. 'Ecosystem services' is the new term given to this gift – and it translates into big dollars. Rural forests and field buffers mean less erosion, cleaner water supplies downstream, less flooding, more pure air and even cooler summer temperatures.

The value of trees and open space for the protection of city water supplies is especially important as more and more demands are being placed on limited amounts of water. According to the Wall Street Journal, New York City has spent \$170 million since 1997 to purchase 70,000 acres of forest land to protect waterways that feed city-owned reservoirs. The same story is repeated in places like Boston, and even Dakota County in Minnesota's Land of Lakes. "There are great examples of cities finding it just good economics to pay farmers upstream of their water supplies to plant or maintain conservation trees as buffers along waterways," says John Rosenow, president of the National Arbor Day Foundation. "It's just smart for cities to care about –

and pay for – conservation trees in rural areas that protect their water."

With an eye to the future, city managers are also recognizing the danger and public costs of depleting underground water supplies, or aquifers, if homes and pavement are allowed to blanket what has always been open space. In 2005, residents of San Antonio, Texas voted to tax themselves to purchase thousands of acres needed to prevent the smothering of soil with homes, highways and parking lots.

Rural conservation trees do double duty by enhancing recreation, harboring wildlife, and cleaning the air while also assuring future water supplies. In many cases, the trees are also available for sustainable forestry practices. But as we look into the future, the big question is – how can we keep conservation trees and rural forests serving our nation? Economic Evolution is Needed!

Because of increasing awareness of the 'ecosystem services' provided by forests, a non-profit, public/private partnership has been created to promote incentives and speed the evolution of economic systems to compensate owners of these forests. Forest Trends (www.forest-trends.org/index.php) sees market values as the key to preserving our nation's 427 million acres of private forest land. If economic methods are not soon employed to stop the trend of converting woodlands to housing developments, shopping malls, and other non-forest uses, society will lose the value of these lands for wildlife habitat, air pollution control, water purification and other 'services' we too often take for granted.

-James R. Fazio

Associate Dean, Univ. of Idaho

Urban Conservation Committee Call-Out

If you are interested in serving on the Soil and Water Conservation District's Urban Conservation Committee and would like to know more about our involved and talented group, please contact Tandy Easler at the District. The committee focuses on assisting while educating Tippecanoe County's urban sector about the benefits of minimizing stormwater run-off, reducing soil erosion, planting wildlife habitat, composting, recycling, etc. Please call (765) 474-9992, extension 3 or e-mail tandy.easler@in.nacdnet.net for more information.



Rain barrels come in many different shapes, colors and sizes

News from the Rural Conservation Committee...

Tippecanoe County Farmers Plant Habitat Buffers

You see them while driving in the country. They are areas of tall grasses and wildflowers along the edge of a field or stream. What are they? Habitat Buffers.

Habitat buffers are strips of vegetation established around the edges of crop fields to provide habitat for bobwhite quail, ring-neck pheasant, and other upland birds. Many of these birds have suffered population declines due to loss of habitat. Habitat buffers can provide important nesting, brood rearing and escape cover while also serving as travel corridors between areas of suitable habitat. In addition to habitat for upland birds, these buffers may provide habitat for other animals. They may also help to filter out sediment, nutrients, pesticides and other contaminants from stormwater runoff before the stormwater enters streams and other water bodies

By diversifying vegetation in these buffers, desirable habitat will



Photo courtesy of USDA Natural Resources Conservation Services

develop. The growth from of a variety of species will provide food sources in the forms of seed, insects and soil invertebrates. Most of these plantings consist of native warm season grasses like Little Bluestem, Side-Oats Grama, and Indiangrass; plants that grew here before European settlement arrived. Many plantings also include wildflowers like Purple Coneflower, Black-Eyed Susan, and Illinois Bundleflower.

Thanks to Tippecanoe County farmers, 350 acres of cropland were converted to wildlife habitat in 2006. So...the next time you see a strip of tall grass and wildflowers along a field or stream, tip your hat to a farmer! That farmer is doing the right thing for the soil, the water, wildlife, and your future!

-Linda Eastman
Rural Conservation Committee News

News from the Education Committee...

There is a Fish on Your Street

The Tippecanoe SWCD is leading the charge initiating stormwater education in the county. In the past, the District has used environmentally-friendly paint and large stencils that left the message, "Do Not Dump, Drains To Stream" on the pavement next to storm drains. The District has taken the program a step further with the cooperation of Battle Ground, Dayton, Lafayette, West Lafayette, Ivy Tech, Tippecanoe County, and Purdue University. Together, the entities have formed a team to relay educational information to the public and place plastic markers next to the storm drains that last much longer than the stenciled words. These "das" markers say "Do Not Dump, Drains To River".

The District has reached out into the community to find volunteers who have an appreciation for the environment and would like to better the water quality of the Wabash River. Because of the possibility of pollution washing into the storm drains like excess fertilizers from lawns, grass clippings, motor oil, gasoline, and other pollutants, it is important for citizens to know only clean rain and snow melt should flow into a storm drain.

The District has had much success this summer with the cooperation of many environmentally conscience groups such as the Community Family Resources Center, the Battle Ground Elementary Ecology Club, the Purdue EPICS (Engineering Projects In Community Service) Team, Lynn Treece



Boys and Girls Club, and individual volunteers from around the county.

Our efforts will continue until the cooler, rainy weather does not permit us to work since the special adhesive glue needs dry, warmer weather. However, during the winter we will be planning events for the remainder of the year. If you or your group would like to participate, please contact don.emmert@in.nacdnet.net for more information.

-Don Emmert
Education Committee News



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Conservation Dollars Make Good Sense!

No doubt about it - conservation dollars make good sense! And the Tippecanoe Soil & Water Conservation District (SWCD) has proven itself in the past, both physically and fiscally! "Getting conservation on the ground" while "being financially responsible" is something that's appreciated by all levels of government, especially local government and its taxpayers. The Tippecanoe SWCD has worked very hard over the past few years to do both.

All bragging aside, our fiscal attentiveness to date has afforded the SWCD the opportunity to purchase all capital outlays without financial assistance from local government. These purchases include a 2004 Chevrolet Silverado truck, two no-till drills, laser equipment, computers and printers, cameras and GPS units.

We don't mean to say that the Tippecanoe County Commissioners and Council haven't fully supported the SWCD. Quite the contrary, all SWCD full-time and part-time staffing is funded by Tippecanoe County government. In addition, they provide operating support as well.

As a matter of fact, the SWCD recently submitted its request to the Tippecanoe County Commissioners and Council for the appropriation of conservation dollars for 2007 staff and operating expenses. The staffing request was very similar to last year's, however

our request for operating expenses was twice the amount allocated for 2006.

The large increase was, consequentially, one unexpected expenditure. The SWCD was faced with, for the first time ever, the cost of renting office space beginning in 2007. To explain, historically since 1940, USDA's Natural Resources Conservation Service (NRCS) has paid rent for most Indiana SWCDs, in lieu of services provided. However, due to shrinking federal budgets, NRCS can no longer allow the absorption of SWCD overhead rental costs and, as a result, all SWCDs have been asked to carry "their share of the load". Due to the excellent working relationship and sharing of resources over the past 60+ years, we feel that it is of the utmost importance that Tippecanoe SWCD remain co-located with NRCS.

The current office staff includes federal, state and county employees, yet we've been able to provide a seamless office environment. Over the years, through our collective efforts, we've brought about conservation, development, and wise use of land, water, and related natural resources throughout Tippecanoe County. Our desire is to continue to work together to maximize our available resources and to accomplish identified natural resource priorities.

As stated earlier, "Conservation Dollars make Good Sense" and good sense means using dollars wisely for conservation! Please contact the Tippecanoe County Council and Commissioners and thank them for the additional funding provided for 2007 to assist us in maintaining our partnership/co-location with NRCS and allowing us to continue to provide you with the best service possible.

Thank you all for your continued support of the Tippecanoe Soil and Water Conservation District!

-Chris Remley
District Administrator

Tippecanoe County SWCD Board of Supervisors

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Jim King
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Randy Geswein
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Resource Specialist

SWCD Committee Chairs

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Urban Conservation - Dave Kovich
Education - Lorraine Rund
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