WEST CENTRAL INDIANA WATERSHED ALLIANCE
WWW.WATERSHED-ALLIANCE.ORG

Newsletter
WCIWA
Spring / Summer 2010

Grants and Partnerships

Springtime has produced a bumper crop of funding for the West Central Indiana Watershed Alliance.

In mid-May, the group was notified of its approval to host an Office of Surface Mining Intern for the summer of 2010. Ginger Korinek, 2010 Silver Buckshot Award recipient has joined the WCIWA in that position. She will be helping to develop a water quality monitoring plan for the Turtle, Turman, and Kelley Creek watersheds; analyzing the Middle Fork and Buttermilk Creek Subwatersheds for traditional septic system suitability; and working with the DNR Division of Reclamation as they develop a geo-referenced database of abandoned mine land sites.

Also in May, Peabody Midwest Coal made contributions from its Arbor Day Fund to Hymera Elementary, Union High School, and Rural Community Academy. Each school allocated funds for their Outdoor Classroom Facilities.

Peabody, along with Hoosier Energy stepped forward to support a Rain Garden Workshop hosted by the Greene, Sullivan, Clay, and Vigo County SWCDs, and the Sullivan Park & Lake. Sycamore Trails RC&D, the Sullivan Co. Recycle Center and the Sullivan Co. FSA also supported the event. Hoosier Energy provided funding for the workshop event. Peabody provided funding for plant materials needed to complete a rain garden installation at the Sullivan Co. Park & Lake.

Most recently, the Environmental Protection Agency approved a Section 319 Clean Water Act grant application for implementation of best management practices in the Busseron Creek Watershed. The Indiana Department of Environmental Management will oversee the allocation of nearly $750,000 in the form will be allocated over the next 4 years.

Agriculture is one of the largest industries in the State of Indiana. Within the Watershed Alliance, crop production is by far the largest land use.

Turn to page 5 for a map of cultivated areas as produced by the USDA National Agri-

REMINDER!!

Round 2 Cost-share Application for the Busseron Creek Watershed is **June 30th.** Applications may be downloaded from our website (www.Watershed-Alliance.org) or picked up at the Sullivan Conservation Offices.

Special Species

Crayfish Frog *(Rana areolata)*

The Crawfish Frog is an aquatic frog native to the central United States, so-named for its habitation of chimney crayfish burrows. In its northern ranges, it is sometimes called the Hoosier Frog, and in its southern ranges, the Texas Frog.

In Indiana, Crawfish Frogs are considered State Endangered, and their declining status across much of their range has caused broad concern about their conservation. These frogs were locally plentiful in southwestern Indiana until about 1970. The reasons for their recent and rapid decline are unknown.

This species of frog has an irregular distribution throughout the prairies of the Midwestern United States from Indiana west to parts of Kansas. Locally, populations are known to exist near the Hillenbrand and the Goose Pond Fish & Wildlife Areas.

Unlike other, more common, species of frogs such as Leopard Frogs or Bullfrogs, Crawfish Frogs are rarely found sitting at water's edge outside of their breeding season. Instead, they prefer to make use of terrestrial crayfish holes, sometimes sharing the burrow with another Crawfish Frog. This non-breeding habitat generally consists of low, wet areas including meadows, prairies, woodlands, and brushy fields.

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Adult Crawfish Frog. Note distinct humped lower back.
Photo - Andrew Hoffman, Hanover College

Inside this issue:

Natural Heritage of Indiana Project

In late 2007, Public Broadcasting Stations aired a 4-part series produced by WFYI which traced the changing faces of Indiana's landscape from ancient times to man's arrival. Since its premier, the project expanded to include educational materials, a public conference, book republication, podcasts, lesson plans and more.

Book and Documentary

The Natural Heritage of Indiana Project was inspired by the 1997 publication *The Natural Heritage of Indiana*, edited by Marion T. Jackson, ISU emeritus professor of life sciences.

Jackson pulled together 37 authors' essays and chapters as well as 40 photographs for the book. Documentary filmmaker Samuel Orr later spent over two years shooting footage for the series which received 4 Emmy nominations.

For those interested in the environmental heritage of the Midwest, both book and film chronicle a vibrant and complex history. One can read of 190 foot tall Tulip Poplars, the *silver* currents of the Wabash River, or the thunderous wing claps of migrating passenger pigeons. The series is divided into four episodes:

- *The Indiana that Was*
- *Life in the Water*
- *Life on Land*
- *Indiana's Changing Landscape.*

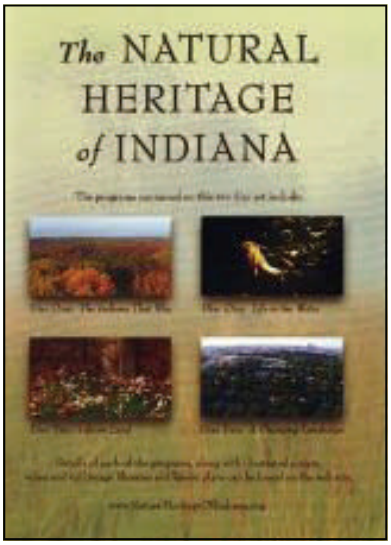
The Project

The NHI project may be described as a coalition that combines electronic media and wide-scale DVD distribution to bring together an alliance of educators, environmental and conservation groups, and state agencies to bridge an "environmental awareness gap". From the DVD to a complement of lesson plans, informative web pages, and learning kits, the coalition has assembled a wide host of information suited to any learning level.

The right column of the group's web site provides links to web pages dedicated to specific subjects:

- Glaciation
- Wetlands
- Old Forests
- Invasive Plants
- Mammals
- Wildflowers
- Birds
- Amphibians and Reptiles

Accessed from the upper menu, the "Teach" page provides links to lesson plans that complement each of the *Natural History of Indiana* episodes. Grouped by episode and by grade level, each title lists grade-level information, provides a short synopsis, and has a link to Indiana State Standards. Aren't sure where to start? Try the "Popular NHI Teach Lessons" listed in the right column.



From the NHI website:

Marion Jackson described his vision for the book **The Natural Heritage of Indiana** as *"a celebration of Indiana's natural heritage - its natural and human history, its landscape and its life - what it once was, what is now, and what promises to be."* He emphasizes the importance of understanding the past to prepare "us to better mold Indiana's future." He issued this challenge: *"if you feel moved to help protect what remains of Indiana's natural heritage, our objective will be fulfilled"*

Visit Natural History of Indiana

www.NaturalHeritageOfIndiana.org

Crawfish Frog

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Burrows often have flattened platforms at the entrance from which adults feed. They will consume almost anything they can overpower, including beetles, crickets, small amphibians and reptiles. Feeding and other activities have no apparent relationship to time of day.

Crawfish frog in primary burrow. Feeding platform is the bare muddy area located in front of the animal

Photo by Andrew Hoffman, Hanover College

A Crawfish Frog will spend most of its life in a single crayfish hole which may be located a mile or more from breeding wetlands. The only major above-ground movement of adults is from their primary burrow to an alternate burrow - or their breeding ground. Large expanses of grasslands are required for the migration of adult frogs from their primary habitat to the fishless wetlands required for reproduction.

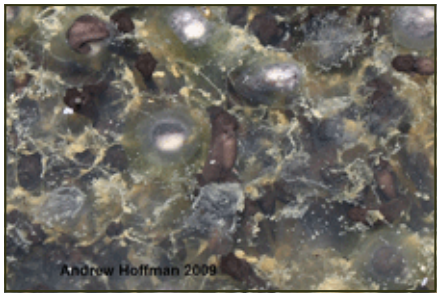
> It is said that large choruses of Crawfish Frogs sound like hogs at feeding time.

In Indiana, migration and breeding occur in mid– to late- March, whenever nighttime temperatures are in at least the mid 50s and there is significant rain. This activity is heralded by loud, deep, resonant snoring calls repeated at regular intervals. It is said that large choruses of Crawfish Frogs sound like hogs at feeding time.

The frog breeds in shallow, seasonal pools that may be in open fields or shrubby areas. In Southeastern Indiana, craters left over from testing of military explosives are utilized as breeding habitat.

As she lays spherical masses of 2,000 - 7,000 eggs, the smaller male frog will grasp the larger female with his front legs as part of the mating process. At the same time, he externally fertilizes the egg mass

Tadpoles hatch in 1-2 weeks after eggs are laid and fertilized. The tadpoles feed on phytoplankton and algae found on at the bottom of shallower areas of their pool, continuing to forage in deeper areas as they grow to a length of approximately 3-1/2". Metamorphosis occurs just over 2 months after hatching. Newly metamorphosed Crawfish Frogs are just over 1" in length.



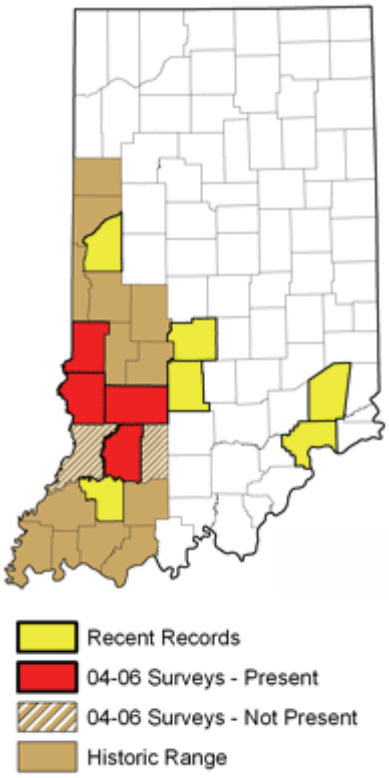
Hatching of Crawfish Frog tadpoles

Photo by Andrew Hoffman, Hanover College

Juvenile habitat is unknown, but presumed to be similar to that of adults.

Newly metamorphosed Crawfish Frogs

Photo by Andrew Hoffman, Hanover College



Distribution Map

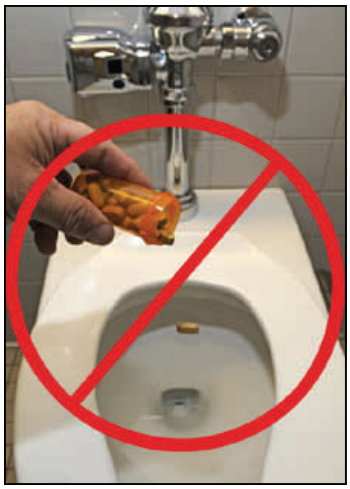
Crawfish Frog Description

- Length 2-1/4 - 4-1/2"
- Females larger than males at maturity
- Large, stubby body
- Distinct humped lower back when at rest
- Irregular dark spots crowded together and surrounded by light borders
- Belly white without spots
- Loud, deep, resonant, snoring call
- Lifespan - 5 years

Featured BMP: Pharmaceutical and Personal Care Products Disposal

When cleaning out your medicine cabinet, what do you do with your expired pills? Many people flush them down the toilet or toss them into the trash can. Although this seems convenient, these simple actions may be contaminating your water supply.

Recent studies are generating a growing concern over Pharmaceuticals and Personal Care Products (PPCPs) and livestock-related antibiotics and growth entering surface and ground water. PPCPs include chemicals such as prescription and over-the-counter medicines, cosmetics, and other personal care products .



In streams and rivers across the Nation, scientists are finding detectable concentrations of PPCPs. A USGS study published in 2002 found that over half of the 139 streams in 30 states were contained more than 5 different PPCP contaminants. In a more recent USGS study in Colorado, scientists found 12 of the 22 (55%) pharmaceuticals and 32 of the 47 (77%) looked for in their study.

PPCPs have probably been present in water and the environment for as long as humans have been using them. The drugs that we take are not entirely absorbed by our bodies and are excreted and passed into wastewater and surface water. Fragrances and antibacterial ingredients flow down the drain when we shower. Flushing unused drugs prevents poisoning of children and pets - but they are often not removed during septic treatment.

Chemicals such as sulfamethoxazole (an antibiotic used to treat a wide range of bacterial infections), triclosan (an antimicrobial agent commonly used in soaps) and caffeine are typically found in higher concentrations downstream from wastewater treatment facilities. However, some contaminants such as triclosan are also found in non-urban settings - scientists attribute their occurance to home septic systems and other sources in the landscape.

This chemical soup makes it difficult to determine what type of ecological problems the PPCPs may present, however the presence of hormone-disrupting chemicals and pharmaceuticals in rivers and streams has been associated with feminization of male fish and reductions in their ability to escape predators. Further research is needed to determine whether the concentrations typically observed in the environment produce adverse effects on humans.

While this research progresses, you can take a few simple steps to help reduce the amount of PPCPs entering our surface and ground waters.

1. *Do not flush medications. Contact your pharmacy to see if they offer a drug take-back program. A drug task force or law enforcement agency may be able to provide information on local drug disposal events.*

2. *Avoid use of anti-bacterial soaps and cleaning products.*

3. *Reduce your use of fragranced products and detergents. Several compounds have endocrine disruption effects.*

4. *Maintain your septic system. A traditional septic system that is pumped on a regular basis is less likely to contribute to levels of raw sewage (and PPCPs) in our waters.*

5. *Lead a healthy lifestyle - A healthy diet can reduce risk of high-cholesterol, high blood-pressure, and other diseases… and reduce the need for medication.*

Operation Medicine Cabinet June 26th 9:00 - 1:00

Sullivan County
Sullivan City Park

Vigo County
Deming Park
Vigo County Fairgrounds

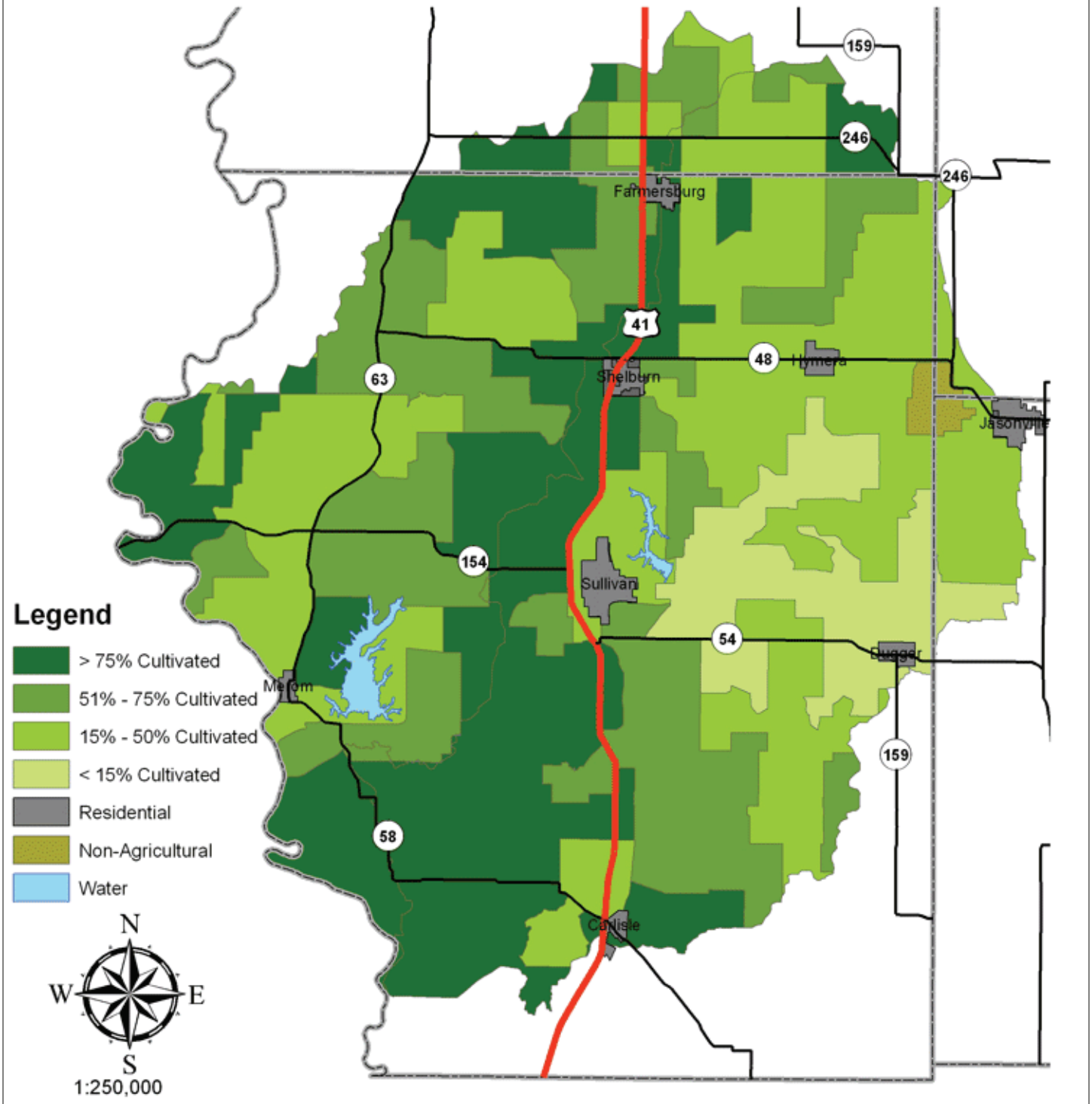
Clay County
St. Vincent Clay Hospital

Unused and out-of-date prescription and over-the-counter medications will be accepted for proper disposal.

Please mark out or scratch out personal information on prescription labels.

For more information contact:
Veronica Dougherty at the Junior Achievement office
(812) 232-6230.

Cultivated Areas



Survey - Water Pollution Sources

Turtle Creek , Turman Creek, Kelley Bayou

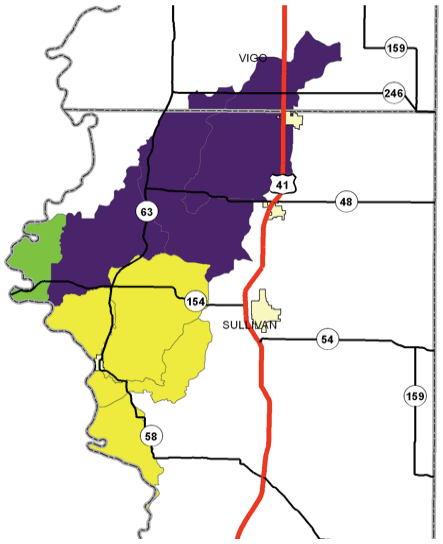
In order to reflect the concerns of the stakeholders of the Turtle Creek, Turman Creek, and Kelley Bayou watersheds, the WCIWA is asking anyone who works in, lives in, owns land in, or recreates in the watersheds to complete a survey of water pollution sources.

The sources were developed during an area-wide conservation planning meeting.

In each pairing, enter the letter corresponding to the item you prefer. For example, if you feel Animal Waste is a larger problem than Real Estate Development, enter "C" in the corresponding box.

Please mail or drop-off responses to:

WCIWA / Sullivan Co SWCD
2316 N Section Street
Sullivan, IN 47882



	Abandoned Mine Lands - A	Active Mining Practices - B	Animal Waste - C	Drainage / Ditches - D	Farming Practices - E	Illegal Dumping - F	Industry / Industrial Waste - G	Invasive Species - H	Land Clearing - I	Oil & Gas Wells - J	Private Septic Systems - K	Public Wastewater Systems - L	Real Estate Development - M	Other _____ - N
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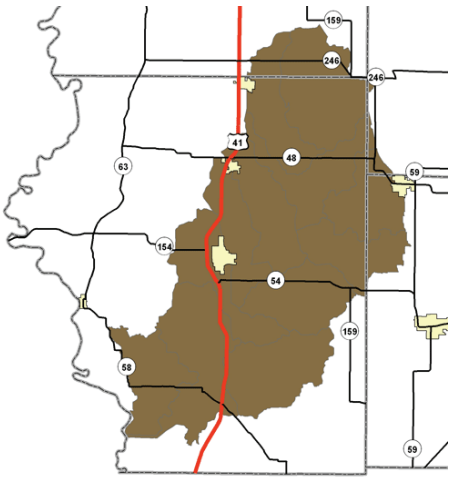
Programs for YOU

Busseron Creek Watershed - Precision Ag Cost-share

Tenants and landowners in the Busseron Creek Watershed can take advantage a Section 319 Cost-Share program to implement Best Management Practices (BMPs). These BMPs help improve surface water quality by reducing soil erosion, stream bank erosion, inputs of fertilizers and chemicals - or by filtering pollutants out of surface run-off before they enter a stream.



Busseron Creek Watershed

Currently, the most sought-after BMP is Precision Ag Technology. Use of Precision Ag Technology can reduce overlap of fertilizer and chemical applications, reducing the amount of product applied - thereby reducing the amount of product entering surface waters. Automatic Shut-offs can automatically turn off equipment to prevent applications in buffers, waterways, and other no-spray zones.

Because the cost of equipment can be very expensive, the WCIWA adopted a tiered approach to Precision Ag cost-share. Growers who implement more BMPs are eligible for more cost-share funding.

Precision Ag cost share is only available for technology that is *new* to the operation. For example, a farmer who has already adopted autosteer technology *could* apply for an autoswath upgrade, but not for additional autosteer equipment.

The next application deadline is **June 30th**. Applications may be picked up at the Sullivan Co. SWCD office; 2316 N Section Street - or downloaded from www.Watershed-Alliance.org.

Precision Ag Cost-Share Levels

Level 1 - 30% Cost Share / 750.00 Cap
Must comply with at least ***1*** of the following:

- 100% no-till soybeans
- Plant all draws to cover crops (no cost-share available for this practices)
- Buffers on at least 50% of streams

Level 2 - 30% Cost Share / 1,500.00 Cap
Must comply with at least **2** of the following:

- 100% no-till soybeans
- Plant all draws to cover crops (no cost-share available for this practices)
- Buffers on at least 75% of streams
- Variable Rate P, K, and Lime

Level 3 - 40% Cost Share / 3,000.00 Cap
Must comply with at least ***3*** of the following:

- 100% no-till soybeans
- Plant all draws to cover crops (no cost-share available for this practices)
- Buffers on at least 75% of streams
- Variable Rate P, K, and Lime
- Split N applications (no Fall applications)

Level 4 - 50% Cost Share / 5,000.00 Cap
Must comply with at least ***4*** of the following:

- 100% no-till soybeans
- Grassed Waterways (erosion controlled)
- Buffers on at least 75% of streams
- Variable Rate P, K, and Lime
- Split N applications (no Fall applications)
- At least 10% of operation planted to cover crops

Level 5 - 50% Cost Share / 10,000.00 Cap
Must comply with at least ***4*** of the following:

- 100% no-till soybeans
- Grassed Waterways (erosion controlled)
- Buffers on at least 75% of streams
- Variable Rate P, K, and Lime
- Split N applications (no Fall applications)
- At least 10% of operation planted to cover crops

*In addition, must comply with at least **1** of the following:*

- Proof of septic inspection and/or maintenance on all properties within the watershed *and* for homestead
- At least 25% of all roads buffered (15 ft minimum)

August 2009 demonstration of precision ag accuracy
Iowa State University Extension Service Photo

Newsletter

West Central Indiana Watershed Alliance
2316 N Section Street
Sullivan, IN 47882

812-268-5157 x3
812-564-1162

Save a Tree!
Get your next newsletter via e-mail. Just e-mail Lisa Holscher (lisa@Watershed-Alliance.org)

We're Moving!

As of July 1st, the WCIWA offices will be located with the Sullivan Co. SWCD and NRCS offices at

2316 N Section Street
Sullivan, IN 47882
812-268-5157 x3
812-564-1162

www.Watershed-Alliance.org

To:

Special Thanks To:

Town of Farmersburg for use of office space for the last 3 years!
Bernardin, Lochmueller, & Associates
The Busseron Conservancy District
The Hagemeier Family
Hoosier Energy
The Hunt Family
Hymera Elementary
Indiana DNR - Lake and River Enhancement Program
Indiana DNR - Division of Reclamation
Indiana Department of Transportation
Indiana State University - Dept of Geography Geology & Anthropology
The Nature Conservancy
Northeast School Corporation
Peabody Midwest Coal
The Ream Family
Rural Community Academy
Sullivan County Park & Lake
Sullivan County FSA
Union High School
U.S. Office of Surface Mining
U.S. Fish and Wildlife Service
Wabash Valley Audubon Society
Wildlife Land & Resource Mgmt.
Dr. Michael Lannoo
Sycamore Trails RC&D
Four Rivers RC&D
And our partner SWCDs:
Sullivan Co. SWCD
Clay Co. SWCD
Greene Co. SWCD
Vigo Co. SWCD