Dubois County Soil & Water Conservation District

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Winter, 2016

The Conservation Conversation

Showcase Tour

The Dubois County Soil and Water Conservation District (SWCD) has been named an Indiana Showcase District. To celebrate this honor, the SWCD hosted a tour on the Vincennes University Jasper Campus to showcase the partnership between the SWCD and VUJC, creating the VUJC Land Steward Initiative.

Thirty-five dignitaries, including county, state, and federal elected officials, representatives from Vincennes University, SWCD Supervisors, and local businesses learned more about the SWCD, and the Land Stewardship Initiative. The tour featured innovative conservation practices, including a raingarden, a newly installed waterway, field borders, cover crops, and other methods to improve soil health, and a tile system and stop-log structure.

Indiana's District Showcase Award highlights the successes of county Soil and Water Conservation Districts. Specifically, the honor demonstrates how SWCDs partner with traditional and nontraditional groups, businesses, government agencies, local officials and volunteers to achieve their conservation goals.

The Showcase Award, sponsored by the Indiana Conservation Partnership (ICP), was formally presented to SWCD and VUJC officials at the Indiana SWCD Annual Conference in January. The ICP includes the Indiana Associations of SWCDs, Indiana Department of Environmental Management, Indiana Department of Natural Resources, Indiana State Department of Agriculture's Division of Soil Conservation, Purdue Cooperative Extension Service, State Soil Conservation Board, USDA Farm Service Agency, and the USDA Natural Resources Conservation service. Although these organizations are from different agencies, all work together to accomplish similar conservation goals.

The Dubois County SWCD has a long history of working with local landowners to address conservation needs. The SWCD focuses primarily on erosion control and water quality, strongly utilizing USDA Farm Bill programs. Erosion control measures such as water and sediment control basins, grassed waterways, stream crossings, and pasture management are some of the practices that the SWCD assists with. Several of these practices have been installed on the Vincennes University Jasper cropland, and have been viewed by local farmers at annual LSI field events.

The VUJC LSI demonstrates and promotes sustainable land use across the university's cropland, prairies, forests, and watercourses. The LSI's primary goal is improving the campus' natural resources. On the cropland, the focus is on soil health. Significant investments have been made in drainage and erosion control, including the use of an innovative tiling system and improvements to the main drainage channel. These improvements have

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have stabilized the channel, reducing erosion, and preserving the integrity of the campus infrastructure.

Improvements in the cropland and forests benefit VUJC's water quality, and water quality downstream. Grassed buffers are planted around each crop field which, along with providing habitat for birds, insects, and small mammals, reduce sediment and nutrient runoff from crop fields. Keeping the soil and crop amendments in place on the cropland provides long term benefits to communities such as Jasper that use local rivers and lakes for their drinking water supplies.

The LSI steering committee developed strategic plans to manage the property's diverse ecosystems, promote the LSI's work, and ensure financial stability. This is accomplished through a partnership including employees of the SWCD, NRCS, DNR,IDEM, Vincennes University, local financial institutions, and private landowners. Additionally, the SWCD partners with Pioneer Seed, Gypsoil, Superior Ag, Purdue University, Crop Production Services, and IASWCD, among others. The VUJC property is part of the Indiana Conservation Cropping Systems Initiative as a demonstration site, and the Natural Resources Conservation Service and Sustainable Research and Education Program have utilized the campus for staff training. The cropland is enrolled in On Farm Network, now called In Field Advantage.

To promote and share the work of the LSI, soil testing, a tillage check strip, forest inventory, water samples, a weather station, and photographs are used to monitor improvements resulting from sustainable land management techniques.

To accomplish its goals, the SWCD is guided by skilled and trained Supervisors, elected officials of the State of Indiana to lead the SWCD. The Supervisors oversee a qualified and talented staff, funded by Dubois County government that complete the every growing workload. The local conservation partnership . . . staff, the supervisors, county government, and the ICP... work to support this SWCD. Without all the pieces of this machine working together in unison, Dubois County would not have the SWCD that exists today.

For more information about the SWCD and the Land Stewardship Initiative, contact Judi Brown at 812-482-1171, ext 3 or judi.brown@in.nacdnet.net

Bart Pitstick and Alan Smock presenting at a field site during the Showcase Tour

Gary Siebert demonstrating the stop-log process

Soil Judging Contest and SWCD Field Day

Students and pit monitor during the Soil Judging Contest

The 2015 SWCD Soil Judging Contest was held on September 21st at Mill Creek Farms located on the northwest side of Jasper. Many thanks go out to Duane Hopf for opening the family farm for our use, digging the pits, and bush hogging the corn stalks so the pits could be accessible.

Team results are as follows: 1st place - Sullivan High School, Coach Kevin Cross; 2nd place—Gibson Southern, Coach Richard Ritter; 3rd place—North Harrison, Team #1, Coach Archie Sauerheber; 4th place—Gibson County Independents, Coach Julie Loehr; and 5th place—White River Valley, Team #1, Coach Sam Zuckschwerdt.

Individual results are as follows: 1st place—Eric Holscher, Sullivan High School; 2nd place—Colson Doyle, Gibson County Independents; 3rd place—Deven Pohl, Gibson Southern; 4th place—Isaac Murdock, White River Valley; and 5th place—Brendon Ridenour, North Harrison.

Jasper High School was the top Dubois County Team. The team was comprised of Wyatt Goeppner, Alexa Hopf, Kyle Stenftenagel, and Kaleb Stenftenagel. Their coach is Andy Helming.

Keys to Protect and Enhance YOUR Farm was the title of the September 1st Field Day held at the Vincennes University Jasper Campus. Featured speakers included Dr. Christian Krupke, Dr. Hans Kok, Hans Schmitz, and Matthew Pearson.

Dr. Krupke from Purdue University presented his latest research on neonicotinoid seed coatings and on the quantifying effects of widespread implementation of Bt strategies for the corn rootworm complex, with particular interest in evaluating and improving resistance management strategies.

Dr. Kok, an agricultural conservation consultant based out of Indianapolis, promoted a continuous no-till or strip-tillage approach to agricultural production which includes improving soil and water quality on cropland.

Hans Schmitz, Purdue Extension Educator shared ways that farmers can protect their soil from erosion and extreme weather effects. Selection and use of best cover crop practices can be planned into crop rotations and matched with soil health status which-help during weather extremes. Schmitz concluded the program with a discussion about fertilizer and manure in cropping plans. Fertilizer and manure use and record keeping have newer requirements in the past five years.

Senate Bill 359

Authored by: Sen. Ed Charbonneau, Sen, Jean Leising, Sen. Lonnie Randolph
Sponsored by: Rep. Don Lehe, Rep. Doug Gutwein, Rep Rick Niemeyer.

Confined feeding, composting, and manure storage

Provides that a person may not operate a confined feeding operation without obtaining the prior approval of the department of environmental management. Provides for renewal of an approval for the construction, expansion, or operation of a confined feeding operation. Provides that the law concerning the registration of composting facilities applies to facilities for the composting of vegetative matter and other organic material. (Currently the law applies only to facilities for the composting of vegetative matter resulting from landscaping maintenance and land clearing projects.) Specifies the conditions under which an application for registration of a composting facility may be denied or a registration may be revoked. Requires a person who applies for approval to construct or expand a satellite manure storage structure to provide notice concerning the approval to: (1) the county executive of the county in which the satellite manure storage structure is to be constructed or expanded and (2) each owner and each occupant of land of which any part of the boundary is one-half mile or less from any part of the proposed footprint of the satellite manure storage structure.

Second Session of the 119th Indiana General Assembly

March 2nd—Senate Third Reading of House Bills Deadline
March 3rd—House Third Reading of Senate Bills Deadline
March 14– Adjournment

Senate Bills

SB 7: Hunting wildlife; SB 109 Regulation of hunting preserves (Messmer); SB 180 Taxation of brown cigarettes; SB238 Soil and water conservation funding; SB 308 Property tax matters; SB 342 Timber management; SB 347 Water resources; SB 381 Cigarette and tobacco taxes

House Bills

HB 1001 Road funding; HB 1018 Sales tax exemption for drainage water management; HB 1094 State fair matters; HB 1125 Violations of wildlife protection laws; HB 1155 Designation of old forest areas in state forest; HB 1231 Hunting and property management; HB 1246 Various natural resources matters.

Track these and others bills on the State of Indiana website by clicking on Bills for Session 2016.

The USDA Natural Resources Conservation Service (NRCS) can help design and plan new manure storage facilities and provide financial assistance through the Environmental Quality Incentives Program (EQIP). EQIP is a voluntary conservation program that promotes agricultural production and environmental qualities. This program offers financial and technical assistance to install or implement structural and management practices on eligible agricultural land.

Manure contains all the macro– and microelements needed for plant growth. The properties of manure and soil significantly affect the mineralization of organic nitrogen creating the optimal quality of manure required to satisfy the nutrient requirement of crops in a given rotational system. Land application of animal manure increases soil organic matter and improves a number of soil properties including soil tilth, water-holding capacity, oxygen content and soil fertility. Animal manure is a valuable resource to be utilized.

Contact your local NRCS office for more information on EQIP programs.

Invasive plants vs Native Plants

Cheryl Coon, Forest Botanist

It's time of the year when I add planting to my landscape at home. I visit local nurseries to see what is available and watch for bargains. I also take time to understand how home landscaping affects surrounding natural areas.

Even if we are 10-15 miles from the nearest "natural area", birds and wind can carry berries and seeds great distances. So avoid non-native invasive species that might be for sale.

Some of the most popular plants sold at nurseries are some of the worst "offenders". They include Bradford pear, burning bush, Japanese barberry, periwinkle/vinca, honeysuckle, privet, winter creeper, and Chinese silver grasses. All of these were brought in from other countries and now natural resource managers spend a lot of tax dollars controlling them in natural areas.

Why are these plants sold? Some were used as standard landscape plants before we knew how invasive they were. As long as there is a demand, nurseries will continue to sell them.

Therefore, it is up to us as consumers to demand non-invasive alternatives from our nurseries. There are alternatives for the invasive species listed above. Alternatives can be found at the Midwest Invasive Plant Network (http://mipn.org/publications/). Follow the link for their Landscape Alternative brochure or the free app.

Suggestions include:

- Replace Bradford pear with Yellowwood *(Cladrastilutea)* a native tree with white, fragrant, pendulous flowers and yellow fall leaf color.
- Plant red or black chokeberry *(Aronia arbutifolia, A.mealocarpa)* or Virginia sweetspire *(Itea virginica)* instead of burning bush. These have brilliant red fall colors along with white flowers and fall berries.
- Instead of Japanese honeysuckle, plant native scarlet honeysuckle *(Lonicera sempervirens)* that has colorful trumpet-shaped flowers for hummingbirds to enjoy.
- For privet and Asian bush honeysuckle hedges, consider a variety of native shrubs and small trees that provide habitat for native birds and pollinators. Ideas include: Serviceberry *(Amelanchier spp.)* with white spring flowers, edible fruit for wildlife and fall color; Viburnum with small cluster of white flower and berries that persist into winter; Carolina allspice *(Calycanthus floridus)* has red, fragrant flowers that smell like strawberries; Elderberry *(Sambucus Canadensis)* provides white flowers and berry clusters for butterflies and birds or American hazelnut *(Corylus Americana)* provides early season pollen for our bees and edible nuts.
- Instead of Japanese barberry, plant *(Fothergilla spp.)* with white flower clusters and red to orange fall color, or native Strawberry bush *(Euonymus americanus)* with brilliant red pods with orange-pink fruits.
- To replace winter creeper and periwinkle groundcovers, plant native evergreen, Bearberry *(Arctostaphyloc uva-ursi)* or deciduous Wild Ginger *(Asarum Canadensis)* that fairs well in shady areas and spreads into a luscious green cover.
- Instead of invasive Chinese silvergrass, try native warm season grass; such as, Indian grass *(Sorghastrum nutans)* or big bluestem *(Andropogon gerardii).*

Animal Manure Storage Information

Manure storage structures are defined as 'any pad, pit, pond, lagoon, tank, building, or manure containment area used to store or treat manure.' If discharge of manure occurs, contamination of water sources can cause nutrient enrichment resulting in algae blooms, reduction of oxygen levels, and fish kills. Contamination with bacteria and elevated nitrogen compounds can also cause a human health risk.

All liquid manure storage structures constructed since 2002 must have at least 180 days storage capacity. The storage must contain the following: manure from the animals; any bedding used; net average rainfall during this time that falls on an uncovered manure storage and on any area that drains into the manure storage; expected run-off from a 25 year, 24 hour rainfall event that falls on any area that drains to the storage; process wastewater; and 2 foot of freeboard if the storage is uncovered.

The type of storage structure used depends upon the physical consistency of the manure to be stored and whether manure treatment is a part of the manure management system. A solid storage structure is generally a concrete pad with at least 3 sides walls where the manure is stacked. In poultry operations, solid manure is often stored in the same building housing the animals, either in the form of litter (bedding) in the floor level pen facilities or in deep underfloor pits in the case of layers. In some poultry facilities, solid manure is transferred on a daily basis to any outside roofed storage.

Liquid manure on Indiana farms is typically stored in one of the following types of structures: deep pits under the building floor that houses the animals; outside below ground earthen pits or concrete storage; outside above ground tank storages; treatment lagoons; and holding ponds.

In Indiana, construction criteria must follow NRCS standards for construction. In Indiana, IDEM rules provide storage structure performance standards and basic site restrictions (Codes #213, titled Waste Storage Facility). Underground steel storage tanks for manure are prohibited in Indiana. Plastic and fiberglass tanks and above ground tanks must be designed with sufficient strength to withstand design loads, must be water tight, and must be installed to ensure seasonal high-water table is below the tank or else the tank must be anchored to prevent flotation. Above ground tanks must have shut-off valves for all inlet and outlet pipes to prevent spills.

Best management practices are recommended when siting manure storage structures. These include: locating storage facilities away from public view; not placing storages in the path of prevailing winds that could reach neighboring residences; using tree buffer strips to present a more pleasant scenery for the operation; and using good housekeeping practices to help the farmstead and manure storage facilities look clean, neat, and attractive.

Although odor control measure can be expensive, several control technologies and practices have been implemented by producers to minimize odors from manure storage facilities. These include: covering outside storage structures; regular addition of dilution water to treatment lagoons, aeration of liquid treatment storage facilities, and implementing new feed management practices.

If a permitted animal production unit plans to close or discontinue the use for a manure storage structure, the operator must notify IDEM and follow specific steps. Until all manure is removed from the storage facility, the same requirements and principles of management of the storage must be followed as stated in the initial permit. Procedures for closing manure storages are summarized below: all manure must be removed and land applied at requirements in the initial permit; all appurtenances and conveyances must be removed from uncovered manure storages; fill in the storage structure with appropriate fill; and cap the top of the storage structure with clay or slowly permeable soil to reduce the infiltration of rainwater.

If the structure will be used for another purpose, IDEM must be notified and specific procedures used for cleaning the structure and transfer of use.

Excerpts taken from Purdue University ID-352 CAFOs (Concentrated Animal Feeding Operations, Manure Storage Systems

You can also check out other Purdue publications:
ID120 – Design and operations of livestock waste lagoons,
MWPS – 18 Section 2 Manure Storage

Industrial Strength Cleanup

Chad Pregracke and his crew of seven has been cleaning up America's rivers for the past 17 years since he founded Living Lands and Waters. The Living Lands and Waters mission is simple: to aid the protection, preservation, and restoration of the natural environment of the nation's major rivers and their watersheds; to expand awareness of environmental issues and responsibility encompassing the rivers; and to create a desire and an opportunity for stewardship and responsibility for cleaner river environments.

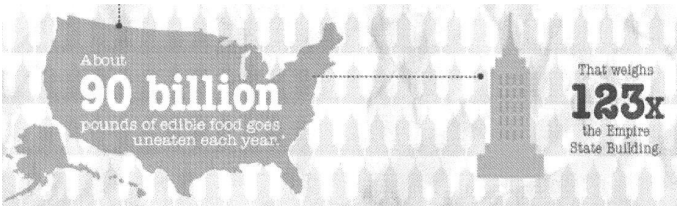
Chad and his crew are impossible to miss while on the river because of a 150 foot house barge and John Deer 210G Excavator. In August, 2015, The Living Lands and Waters team set a goal of removing 1 million pounds of trash from the Ohio River. With the excavator's help, the team is on track to achieve that goal by the end of Spring of 2016. So far, they have removed 78,034 pounds of trash and 509 tires; as well as an old Studebaker truck, two washing machines, and a small fiberglass boat. What used to take two men almost an hour now takes the excavator about 10 seconds.

Aboard the house barge is a floating classroom for middle school students with hands on lab that focuses on the effects of aquatic invasive species.

For more information check out : LivingLandsandWaters.org

Cut back on food waste to save money, improve access to food, and ***protect natural resources.***

About 90 billion pounds of edible food goes uneaten each year. That weighs 123 times the weight of the Empire State Building.



This costs consumers $370 per person each year. That breaks down into: $22 for grains; $45 for fruits; $140 for protein foods; $66 for vegetables; $60 for dairy; and $37 for added fat and sugars.

WHAT YOU CAN DO

You can help by reducing wasted food in your home with simple shopping, storage, and cooking practices. Plan and save, be food safe, check for quality, set storage reminders, be organized, re-purpose, donate, recycle and compost.

Source: USDA
Center for Nutrition Policy and Promotion
September, 2015

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The Dubois County **SWCD's Annual Report** was once again placed as an insert in **The Ferdinand News** in January 2016.

If you didn't get a copy of the **SWCD Annual Report** and would like to have a complimentary copy, stop by the SWCD office at 1486 Executive Blvd in Jasper.