



2008 Fall Tour

Indiana Association of Professional Soil Classifiers (IAPSC)

Indiana Association of Professional Soil Classifiers Fall Tour

Location: Eagle Marsh
Fort Wayne, Indiana

UTM NAD83 649068E 4544472N
Zone 16

When: September 12, 2008

Agenda

- 9:00 – 10:00 **Registration:** Paul McCarter
IAPSC Secretary/Treasurer
- 10:00 – 10:15 **Welcomes and Introductions:**
Scot Haley, Area Soil Scientist.
Travis Neely, State Soil Scientist
/ MO Leader.
Kimberly Neumann, Area
Conservationist.
- 10:15 – 10:40 **History of Eagle Marsh:**
Betsy Yankowiak, Executive
Director Little River Wetlands
Project
- 10:40 – 11:10 **Using the Soil Survey for
Elementary Education:**
Natalie Haley, Environmental
Educator, Allen County Parks

11:10 – 12:00 **WRP in Indiana:** Jerry Roach,
Resource Conservationist

12:00 – 1:00 **Lunch**
(Lunch included with registration fee)

1:00 – 1:30 **Wetland delineation:**
Hugh Brown

1:30 – 3:00 **Business Meeting:**

3:00 – 4:00 **Soil Pits**

The Indiana Association of Professional Soil Classifiers (IAPSC) is a not-for-profit organization of soil scientists who are interested in the field study and evaluation of soils.

Brad Lee, President
Dena Marshall, Past President
Spence Williams, President Elect
Phillip Owens, Vice President
Paul McCarter, Jr., Secretary-Treasurer
Norm Stephens, Pedestal Editor

<http://www.isco.purdue.edu/irss/iapsc.html>

Indiana Registry of Soil Scientists
(As written on the IRSS web site.)

The Indiana Registry of Soil Scientists is a program that establishes ethical standards and education, examination, and work experience criteria for Indiana Registered Soil Scientists.

<http://www.isco.purdue.edu/irss/>

Meeting Location and Map

This year's IAPSC Fall Meeting will be held at Eagle Marsh near the junction of SR-24 and I-69 south of Fort Wayne, Indiana near 6801 Engle Road.

Eagle Marsh, at 705 acres, is the largest preserve in Allen County and the third largest wetland restoration in Indiana. With two adjacent natural properties, Fox Island County Park and wetland mitigation site owned by National Serv-All, Eagle Marsh creates a 1,500 acre habitat for birds and other wildlife, including many that are endangered, threatened, or of special concern in Indiana.

A registration fee of \$15.00 will cover the cost of coffee, snacks, and **lunch**. Please fill-out the registration form on the last page and **mail to Paul McCarter by September 5th**; registration after September 5th will be \$20.00. Spouses and guests of IAPSC members may attend for \$11.00.



Camping for the Fall Tour

Free primitive camping will be compliments of Sherman Liechty, Allen County District Conservationist, on a semi-private lake about 30 minutes from the meeting site near 7154 State Road 1 Spencerville, IN 46788-9425. A small collection for a port-o-pot rental will be our only expense there. UTM Zone 16 NAD83 673539E 4571267N.



The IRSS Soil Pits will be at Don Ruesch's Place at 7620 West 200 North Larwill, Indiana 46764.

Message from the President : Brad Lee

Economic challenges...

Ladies and gentlemen, I want to be the first to tell you that the executive council has approved two relatively new initiatives: 1. travel reimbursement at the federal rate will be provided for executive council members on official business, and 2. annual membership dues will increase in 2009 from \$10 per year to \$20 per year.

The IAPSC has been collecting annual dues since its inception in 1974, which included a \$1 donation from each attendee. In 1975, the annual membership dues increased to \$5, and in 1990, the rate increased to \$10. Let's consider a few costs back in 1975. The average cost of a gallon of gas was \$0.53 (inflation adjusted price \$1.92). In 2005, the price per gallon was \$2.10. Just three years later, many of you will pay almost twice this amount per gallon to attend the fall tour.

Due to the high cost of fuel, we believe that many of our membership might become discouraged from participating on the executive council as it requires travel. The IAPSC by-laws include a statement that executive council members could be reimbursed for expenses incurred while conducting official IAPSC business. Reimbursement rates will be set at the federal level which is currently set at \$0.505 per mile. At this current rate, if all the council members traveled 200 miles and requested reimbursement, the cost incurred would be \$505.

To cover the costs incurred by the reimbursement for executive council travel, we increased the annual dues from \$10 to \$20. Additionally, members have requested a more professional meeting with speakers that may discuss business management, diversifying businesses and consulting practices. Many times these speakers require an honorarium and/or travel expenses.

The HASTI conference was also discussed at the executive council meeting. There was some concern that our not-for-profit discount registration may not be accepted next year. The increase in revenue will ensure our place at the HASTI conference, where the IAPSC has a chance to interact with primary school educators from across the state.

Thank you for your support of this decision and I look forward to seeing you all at the Fall Tour.

Obituary: Donn H. Spilman Jr.

(The details surrounding Donn's passing were not available in time to publish in the Winter Meeting Pedestal and this is what little we know about it.)

Oct. 4, 1957-Dec. 24, 2007

Donn H. Spilman Jr., 50, 65514 Canal Drive, Goshen, died Monday at 7:08 a.m. in Goshen General Hospital.

He was born Oct. 4, 1957 in Bloomington, to Dr. Donn H. and Mary A. (Baughman) Spilman. He graduated in 1976 from Penn High School and from Indiana State University, Terre Haute, in 1981, majoring in environmental science. He attended Purdue University, West Lafayette, from the fall of 1989 to the fall of 1990. He was a private consultant and an environmental, soils and land-use specialist.

He is survived by his parents; four daughters, Andrea Spilman and Marisa Spilman, both of Jacksonville Fla., Casey (Jeremiah) Spilman-Dumka, Goshen and Chelsea Spilman, Elkhart; two granddaughters, Ellie and Kaydence Spilman-Dumka, Goshen; a sister, Susan (William) Hadler, Greensburg; three brothers, William (Melissa) Spilman, Bristol; John A. (Susan) Spilman, Chicago, and Dr. Jeffery A. (Heather) Spilman, Belleair Bluffs, Fla.; five nieces, Karley and Kelsey Hadler, Autumn, Elizabeth and Emma Spilman; four nephews, Clayton Spilman, Max, Noah and Nathaniel Spilman, and A private memorial service will take place Friday at Rieth-Rohrer-Ehret Funeral Home, Goshen. The Rev. Klaudia Smucker of College Mennonite Church will conduct the service.

Engineer vs. Soils

By Genny Helt

Time after time man has tried to overcome the power of Mother Nature. Time after time we have failed. Once again I have witness this failure.

In a very big project, U.S. Highway 50 in Ripley County was widened. When they widened Highway 50 the toe slope was cut. Gabion baskets were added to stabilize the 40% slope. The gabion baskets were finished in the fall of 2007. In March, after a couple of heavy rains the hillside began to slip. The slippage took out several feet of the baskets and spilled out into the highway.

Dena Marshall and I visited the slippage site. We walked along the hillside and saw the main fracture and several small secondary fractures. This entire slippage event was over several days. The main fracture slid about 4 feet in one week, while the smaller fracture slid about 1 foot. We walked up the slope to witness older slips. The trees in this area are smaller in diameter and have curved trunks. At the site of the failure, water could be seen seeping out of the hillslope.

I am no engineer, but I have a really good guess about one of the many contributing factors to the failure of these baskets. SOILS! The soils in that area formed out of interbedded limestone and shale of Ordovician age. The soils that are developed from the Ordovician limestone and shale are extremely high in clay. These soils range from 50 – 70% clay. The clay mineralogy is predominately smectite and vermiculite; 2:1 expanding clays. This combination makes for very “slimy” mess when saturated. The soils on these hillsides also tend to be moderately deep, 40 to 60 inches, to limestone. So, if you add all the soils factors together this project is already off to a bad start. Then factor in a couple of minor

engineering mistakes and it makes a recipe for failure.

As a soil scientist I feel a personal responsibility to educate to the public about the importance of soils and the risks that could occur if soil properties are not taken into consideration for any project, whether it be building a house or placement of a farm lane. I do not know to what extent soil properties were taken into consideration on this project. But after seeing the end result, I would venture to say soil properties and landscape were not a consideration in planning.

I know as humans we think we can harness anything, but we must face the fact there are some things not meant to be controlled. The best I can hope for is that a valuable lesson was learned at this site to prevent similar situations in the future – Remember to respect the soils, they will win!







Multiple fractures along the hillside

Soils Exhibit at the Indiana State Fair in the Pathway to Water Quality



A very nice and shady place to tell people about the virtues of soil science. Travis Neely and Tonie Endres put a lot of time and effort

into renewing the soils exhibit and promoting Miami as our state soil.



A few of my State Fair Co-Workers at the Soils Exhibit.

The Worst Hard Time – The untold story of those who survived the great American Dust Bowl

Reviewed by Mike Wigginton



As Walter Cronkite put it; “This is can’t-put-it-down history”. A fascinating read for anyone who is interested in conservation is “**The Worst Hard Time – The untold story of those who survived the great American Dust Bowl**” by Timothy Egan. Egan weaves personal stories of Great Plains folks into the historical account of the American Dust Bowl. “The Promise: The Great Plowup 1901-1930, Betrayal 1931-1933, Blowup 1934-1939” are the three sections of the book that chronicles the events that forever changed portions of Colorado, Kansas, New Mexico, Oklahoma, Texas, and arguably, the entire United States. The following excerpts provide a summary of the story.

“When the Native sod of the Great Plains was in place, it did not matter if people looked twice at a piece of ground. Wind blew twenty, thirty, forty miles and hour, as always. Droughts came and went. Prairie fires, many of them started deliberately by Indians or cowboys trying to scare nesters off, took a great gulp of grass in a few days. Hailstorms pounded the land. Blue northers froze it

so hard it was like broken glass to walk on. Through all the seasonal tempests, man was inconsequential. As long as the weave of grass was stitched to the land, the prairie would flourish in dry years and wet. The grass could look brown and dead, but beneath the surface, the roots held the soil in place; it was alive and dormant.” (p.112)

“The soil is the one indestructible, immutable asset that the nation possesses,” the Federal Bureau of Soils proclaimed as the grasslands were transformed. “It is the one resource that cannot be exhausted, that cannot be used up.” (p. 51) They would be proven wrong.



“Herbert Hoover... as the U.S. Food Administrator during the Great War, he had helped establish the first price guarantee for wheat, at two dollars a bushel, setting off a stampede of planting that would transform the grasslands. (p. 104) “In the early summer of 1931...The wheat came in just as the government had predicted-a record, in excess of 250 million bushels nationwide. They had removed the native prairie grass, a web of perennial species evolved over twenty thousand years or more, so completely that by the end of 1931 it was a different land - thirty-three million acres stripped bare in the southern plains.” (p.101) As an example of the boom days, “Ida Watkins, told everyone she had made a profit of \$75,000 on her 2,000 acres of bony soil in 1926 – bigger than the salary of any baseball player but Babe Ruth, more money than the President of the United States made.” (p. 44)

“Around noon on January 21, 1932, a cloud ten thousand feet high from the ground to top appeared

just outside Amarillo...The weather bureau people in Amarillo were fascinated by the cloud precisely because it defied explanation.” (p. 113)



When the dust storms began, Great Plains resident, Bam White, who would later be filmed with his animal drawn plow in the documentary film *“The Plough that Broke the Plains”*, (p.253) said, “The earth is on the move...Look what they done to the grass...Look at the land: wrong side up.” (p. 114) When he made his comments, he could not have imagined the hard times that would follow: severe weather, dust, sickness, death, foreclosures, locusts and more. Many would lose everything. “Hugh Hammond Bennett toured the High Plains as the ground started to blow, and he, too, had never seen anything like the black blizzards. But to Bennett, a flap-armed, big-eared, well spoken doctor of dirt, the diagnosis seemed obvious...The great unraveling seemed to be caused by man, Bennett believed.” (p. 125) “Even in the late 1920’s before anyone else sounded an alarm, Bennett said people had sown the seeds of an epic disaster.” (p. 126) “Most scientists did not take Bennett seriously. Some called him a crank.” (p. 134) “Out of school, he was part of a team hired by the government to do the first comprehensive soil survey of the United States. Big Hugh, as he was called since his teens, took to the road, camping out next to his car, taking soil surveys in every state.” (p. 125)

“in 1933...Aldo Leopold, had published an essay that said man was part of the big organic whole and should treat his place with special care. But that essay, “The Conservation Ethic”, had yet to influence public policy.” (p. 134)

“At the Panhandle A&M weather station, they recorded seventy days of severe dust storms in 1933.” (p. 137) “In 1933, Bennett had been given five million dollars in relief funds to jump-start his fledgling Soil Erosion Service – a temporary agency with a limited scope: relief.” (p. 225) “The

Agricultural Adjustment Act created the framework, and the Civilian Conservation Corps drummed up the foot soldiers. They would try to stitch the land back together.” (p. 133)

May 9, 1934 “...the storm was measured at 1,800 miles wide, a great rectangle of dust from the Great Plains to the Atlantic, weighing 350 million tons.” (p. 151) “...the New York Times...called it ‘the greatest dust storm in United States History’. The storm moved out to sea, covering ships that were more than two hundred miles from shore.” (p. 152)



By that time “One hundred million acres had lost most of its topsoil and nearly half had been ‘essentially destroyed’ and could not be farmed again. Bennett had told congress that fifty-one million acres were so eroded they could no longer be cultivated.” (p. 183) “Bennett worked congress, trying to persuade them to create a permanent, well-funded agency to heal the land.” (p. 226) “On Friday, April 19, (1935) five days after Black Sunday (a huge dust storm), Bennett walked into Room 333 of the Senate Office Building.” He knew that the dust storm would soon be bearing down on Washington D.C. At one point “A senator who had been gazing out the window interrupted Bennett. ‘It’s getting dark outside’. ‘This gentlemen, is what I’m talking about’, said Bennett, ‘there goes Oklahoma’...Within a day Bennett had his money and a permanent agency to restore and sustain the health of the soil...150 CCC camps were reassigned from the Forest Service to Bennett’s renamed Soil Conservation Service...” (pp. 227-8)

“The high plains never fully recovered from the Dust Bowl. The land came through the 1930’s deeply scarred and forever changed, but in places it healed.” (p. 309) “During a three year drought in the 1950’s, dusters returned...Droughts in 1974-

1976 and 2000-2003 made the soil drift. But overall, the earth held much better. Why no second Dust Bowl? In 2004, an extensive study of how farmers treated the land before and after the great dusters of the 1930's concluded that soil conservation districts kept the earth from blowing.” (p. 311)



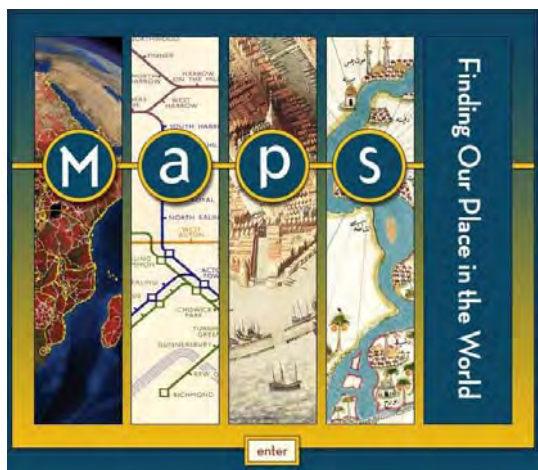
In the Indy Star 7/14/08 we can read of modern day episodes effecting agriculture. “It took our most valuable resource we have in the state of Indiana, and that is our soil,” said state conservationist Jane Hardisty. “We’re talking millions of tons of soil that have been lost. There are going to be some places that will never produce a good crop again.” Hardisty, who heads the Indiana office of the federal Natural Resource Conservation Service, says her tours of flood-damaged areas with her staff in the past two weeks showed massive erosion from storms that dropped record rainfall over dozens of counties. The Conservation Service is a division of the U.S. Department of Agriculture... “We’ve always dealt with flooding, but nothing to this volume and degree,” she said. “In some places, it completely eroded away topsoil and subsoil. We’re talking about 200- or 300-acre fields.” Johnson County farmer Jim Facemire was astounded to find a gully up to 6 feet deep, 15 to 20 feet wide and hundreds of feet long in one of his cornfields after a

storm dumped 10 inches of rain June 7th.



Hardisty is among those suggesting that some flood-ruined farmland may have to be taken out of production and put into federal wetlands, conservation reserves and flood-plain easements. Those programs pay landowners not to farm environmentally sensitive land.

Déjà vu? During a time in history when we hear daily of “Global Climate Change”, hopefully we still have champions like Hugh Bennett pleading the cause of conservation. Was the Dust Bowl “The Worst Hard Time”? Let’s hope so.



Maps – Finding Our Place in the World November 2, 2007 – January 27, 2008

By Mike Wigginton

A January rendezvous in Chicago with my daughter, visiting from California, found us visiting the “Maps” Exhibit at the Field Museum. I have made and worked with maps for more than 30 years so it seemed like the kind of exhibit that should interest me. Our Saturday, January 26 timing was not the best since it was the day before the exhibit ended. But judging by the number of people visiting the museum and the “Maps” exhibit that day, it certainly met the criteria that an old friend of mine applies for deciding where to eat: “If the place looks busy, it must be good.”

The advertisement for the exhibit reads: “From clay tablets to sea charts, from satellite navigation systems to sketches of worlds real and imagined – maps are much more than wayfinding. This rare exhibition of 100 of the world’s greatest maps brings visitors through landscapes of time and space, science and imagination, allowing them to explore high-tech interactive displays, and see original works by Ptolemy, Leonardo da Vinci, J.R.R. Tolkien, and many others. Learn how maps were made, see how the technology changed over the centuries, and discover the latest advances in digital map-making during this one-of-a-kind experience at The Field Museum.”

I was impressed by the variety of media used in map making: clay tablets, stone, parchment, papyrus, eucalyptus bark, canvas, a silver vessel, a ceramic jar, plaster, marble, beads, leather, sticks, wood and twine. Included were globes, a hand fan,

a chronometer used by Captain Cook, a mariner’s astrolabe that was recovered from a ship wreck, a jigsaw puzzle, a board game and various types of digital media including aerial photos and satellite images. Water colors, oil paints, ink, pencil, printing presses, computers and printers and many other tools were used to create the maps.

There were road maps, topographical maps, geological maps, sea charts, flight charts, coastal and island maps, aeronautical charts, ocean bottom maps and subway maps. There were also maps of illiteracy, cholera deaths, vegetation zones, whale distribution, Indian tribes and other ethnic groups, maps of languages, Buddhist, Christian and Islamic world maps, Buddhist, Hindu and Jain cosmological maps, maps of places, maps of history, scale models, surveys, and even maps of places like The Land of Oz, The Land of Make Believe, Treasure Island, Lilliput and The Hundred Acre Wood. Items ranged from a 1300 B.C. clay tablet, the town plan of Nippur, which is the oldest known town plan drawn to scale, to an interactive display of satellite imagery for Chicago and surrounding areas.

A fascinating “Civil War in four minutes” display was a crowd pleaser. Among other items I was intrigued by the first topographic survey of an entire nation, done in France, which took about 100 years to complete between 1660 and 1760. My only disappointment was that there was not a single soil map! Apart from that injustice, my compliments to the Field Museum for an outstanding exhibit.

<http://www.fieldmuseum.org/maps/>

2008 Central States Forest Soils Conference

Join us in Bellville, Ohio for the 28th annual Central States Forest Soils Conference and earn ECUs!

The theme for this year’s conference is ‘**Change**’. Join us and explore the impact emerald ash borer will have on Ohio’s forests and management strategies to minimize that impact and how the soils influence those strategies. Learn how forests and forest soils ‘change’ as the landscape is converted from an old growth forest, to a second growth forest, to an agriculture field. And finally, explore the changes that occur to soils in the urban environment, and how urban soils and other urban environmental factors influence the survival, growth and performance of urban trees and forests. For an online registration form:

http://www.indianasoils.com/pedestal/Forest_Soils_brochure.pdf

New Arrivals to the World of Soil Science

By Dena Marshall

Several of our members have been busy ensuring the next generation of pedologists. Joanne Mosher, Genny Helt, and Zach Rigg have all welcomed new arrivals in the past few months. I'm especially happy due to the fact that the future of women soil scientists will continue to thrive, since all the new little ones turned out to be girls!

Joanne and big brothers, Levi and Caleb welcomed Gracey on December 27, 2007

Genny brought Hannah Catherine into the world on June 5, 2008.

Zach's wife Jill delivered their 3rd, Elizabeth Grace on June 10, 2008. She joins big brother and sister, Derrick and Dorothy.

Congrats to Joanne, Genny and Zach! May all of you prosper!



Joanne w/ Gracey, Levi, and Caleb on a mine tour in Minnesota.



Genny and Hannah



Zach's newest addition Elizabeth

2007 State Land Judging Contest Photos



Students rotating through soil pits.



George McElrath Jr. and Genny Helt



Gary Struben, Kevin Norwood, and Travis Neely.

2008 FALL TOUR REGISTRATION FORM

For Friday – September 12th

Send in your Check Today!

Registration Fee \$15.00 before September 5th.

LATE Registration after September 5th - \$20.00

If at all possible register before September 5th

Pre-Registered Spouses and Guests of IAPSC Members \$11.00

Make checks to I.A.P.S.C. Inc.
Clip and mail to Paul McCarter
R.R. #1, Box 252A
Bloomfield, IN 47424-9750

Name(s): _____

Members please update the following, if needed:

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