THE Pedestal

# 2007 Winter Meeting

**Indiana Association of Professional Soil Classifiers (IAPSC)**

## Indiana Association of Professional Soil Classifiers Winter Meeting

## Location: The Garrison Lodge

Fort Harrison State Park
Indianapolis, IN
UTM 584579E 4413150N NAD83

## When: January 24, 2007

## Agenda

**9:00 – 10:00 AM Registration**
Paul McCarter
IAPSC Secretary/Treasurer

**10:00 – 10:10 AM Welcome and Introductions**
John Bowen: IAPSC President

**10:10 – 10:40 AM DEM's and Modern Soil Survey**
Sam Indorante: NRCS
MLRA Project Leader Carbondale, IL

**10:40 – 11:40 AM Improving Customer Service Adds Value To Your On-Site Reports**
David Ralston:
Soil Tech, Inc. (Soil Consultant)
Dick Blazer:
Blazer Farms (Installer) Howard County

**11:40 – 12:00 PM NRCS Update**
Travis Neely: NRCS
MLRA Leader / State Soil Scientist
Indianapolis

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

**1:00 – 1:30 PM Indiana's Orthophotography: The Promise, the Product, and Procurement**
Bruce Nielsen: NRCS, GIS Specialist
Indianapolis, IN

**1:30 – 2:00 PM Water Table Depths for Soils with Dark Horizons**
Dr. Brad Lee: Purdue University
Department of Agronomy

**2:00 – 2:30 PM Terrain Attributes from a DEM and Soil Variability on the Wabash Moraine**
Edwin Winzeler: Graduate Student
Purdue University, Department of Agronomy

**2:30 – 2:45 PM Results of Soil Scientist Survey**
Brad Lee: IAPSC Vice-President

**2:45 – 3:15 PM Break**

**3:15 – 4:15 PM Business Meeting, Elections, and Passing of Leadership**
John Bowen, Dave Ralston, and Dena Marshall

**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.

John Bowen, President
Dave Ralston, Past President
Dena Marshall, President Elect
Brad Lee, Vice President
Paul McCarter, Jr., Secretary-Treasurer

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/

## HASTI 2007

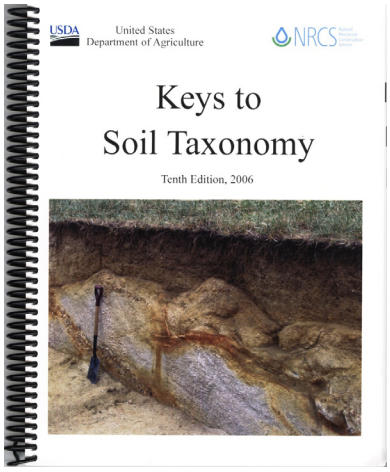
The Indiana Association of Professional Soil Classifiers is continuing their sponsorship of a booth at the Hoosier Association of Science Teachers February 7th through the 9th. We will be needing help staffing the booth largely on the 8th and 9th. 8:AM to 6:30 PM on the 8th , and 8:AM to 2:PM on the 9th. Most of the activity will be on the 8th and it would be great to have a number of people willing to work a 4 hour shift on either one of those days.

The 2007 HASTI Convention will have one big change in the program. Thursday, the Exhibit Hall will be open until 6:30PM instead of 4:00PM as in past years. They moved the Thursday evening Social to the Exhibit Hall to allow the exhibitors more access to the teachers.

If you would like to help with the HASTI project, please contact: norm.stephens@in.udsa.gov

## Soil Taxonomy the 10th Edition

The Tenth Edition of Soil Taxonomy has been published for 2006 and will be available on CD ROM at the IASPC meeting in January. The CD will also include all versions of Soil Taxonomy from the 7th Approximation to the 10th Edition. The CD will also contain the latest edition of the MLRAs of the United States too. Look for your copy at the meeting.



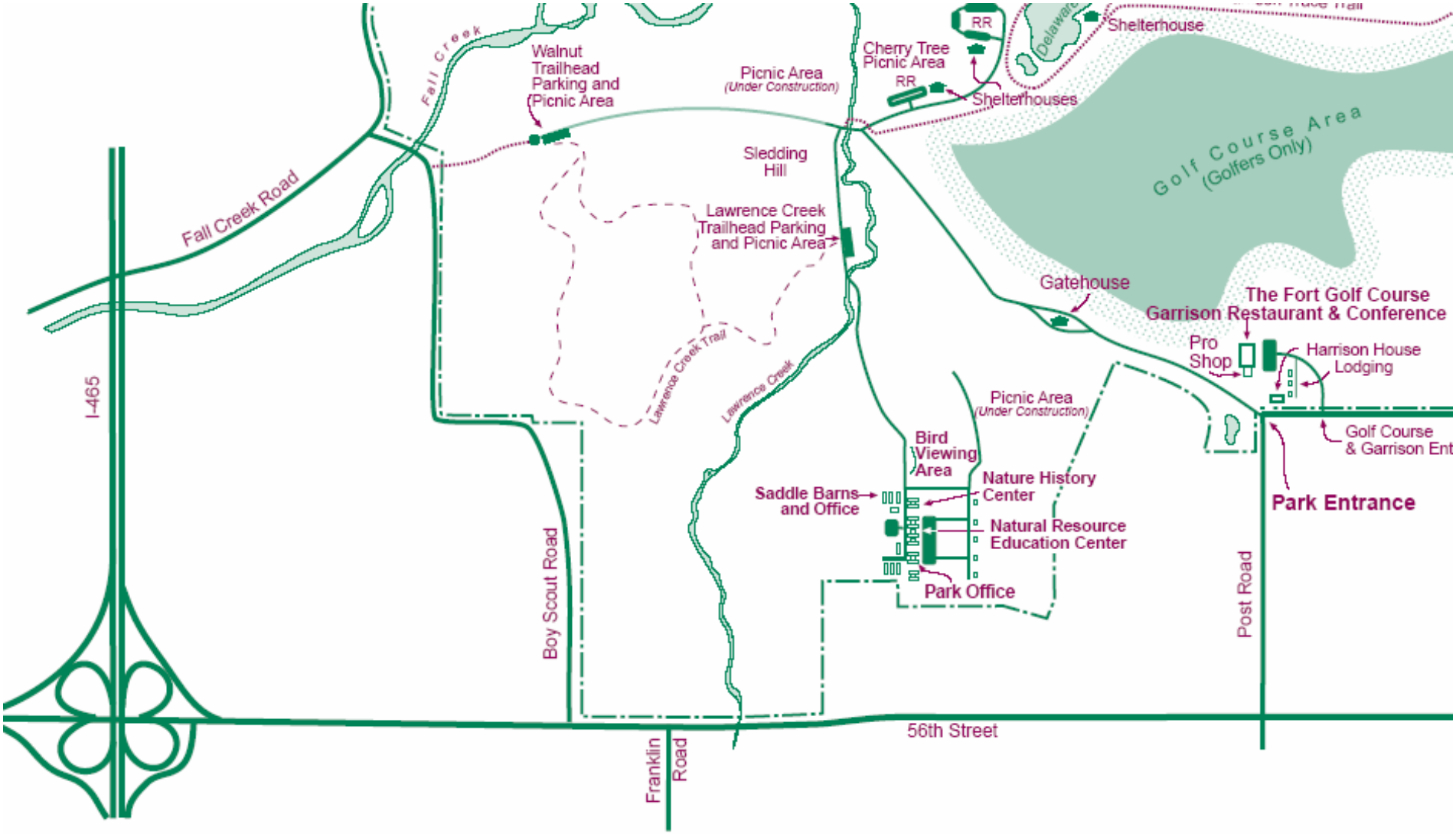

## Growing Pains and Meeting Spaces

Growing pains often are the mark of a successful group and that seems to be the case with IAPSC. It is becoming more difficult with each passing year to find low cost meeting space that will accommodate 80 to 100 people comfortably with plenty of parking, easy access, and eating establishments close by. Every site has its trade offs. Cheap or free meeting sites are still available, but often don't have eating establishments close by, or may require parking fees of $5-$8. This years choice of the Garrison is an attempt satisfy all of the criteria needed to have a successful meeting location. We will address this issue during the business meeting to get some feedback from the membership. Ideally we would like to find a site we could reserve well in advance to avoid the last minute scrambles we've had the past couple of years when our free meeting space has become unavailable for one reason or another.

This year's IAPSC Annual Meeting will be held in the historic district of Ft. Benjamin Harrison at the Garrison Lodge on January 24, 2007. The Garrison Lodge is the former Officer's Club and is located within the 1700-acre Ft. Harrison State Park on the east side of the I-465 loop at the 56th street exit.

**A registration fee of $15.00** will cover the cost of the conference room and **includes a buffet lunch** in the Garrison Restaurant. Please fill-out the registration form on the last page and **mail to Paul McCarter by January 18th**; registration after January 18th will be $18.00. Spouses and guests of IAPSC members may attend for $10.00. Lodging is available by contacting their website at: https://garrison.dnr.state.in.us/ or by calling **Reservations: 877-LODGES-1**

**Fort Harrison Golf Resort & Conference Center**
6002 N. Post Road Indianapolis, IN 46216
Phone: 317-543-9592 Fax: 317-543-3967


Fall Creek
Walnut Trailhead Parking and Picnic Area
Picnic Area (Under Construction)
Cherry Tree Picnic Area
RR
RR
Shelterhouse
Shelterhouses
Golf Course Area (Golfers Only)
Fall Creek Road
Sledding Hill
Lawrence Creek Trailhead Parking and Picnic Area
Lawrence Creek Trail
Lawrence Creek
Gatehouse
The Fort Golf Course
Garrison Restaurant & Conference
Pro Shop
Harrison House Lodging
Picnic Area (Under Construction)
Golf Course & Garrison Ent
Bird Viewing Area
Nature History Center
Saddle Barns and Office
Natural Resource Education Center
Park Office
Park Entrance
I-465
Boy Scout Road
Post Road
56th Street
Franklin Road

## A Brief History of the National Cooperative Soil Survey in Indiana

Mike Wigginton, Soil Scientist, Indiana
USDA Natural Resources Conservation Service
November 2006

On **December XX, 2006** digital soils data for Warren County, Indiana were posted to the internet. With a few clicks of the computer mouse, Indiana entered a new age, having digital soils information for all 92 counties.[i] And with a few clicks of the same mouse that digital soils information is available on the internet to anyone, anywhere, anytime through the Web Soil Survey and Soil Data Mart.

*(At press time we're still waiting for Warren County to become officially published, but by the time of the IASPC meeting in January it should be complete and available on the web. Look for a full version of Mike Wigginton's article on the CD with Soil Taxonomy. The full version is too long for a Pedestal article.)*

## 2006 Forest Soils Workshop In Missouri

The Forest Soils Workshop in Missouri was another great trip and a chance to look at soils and land use practices outside of those typically found in Indiana. It was very clear that our Missouri hosts had put a lot of time and effort into setting up a great tour. We arrived in time to see the cotton harvest in progress and from the looks of the fields we had just missed the rice harvest. Look for more information in the Fall Pedestal on the 2007 Forest Soils Tour in Southern Illinois, or check the Illinois website for updates: http://www.il.nrcs.usda.gov/

## Other Excitement on the Missouri Trip

Missouri was neat place to visit again ... and a bit more exciting than necessary this trip. The second Forest Soils tour bus we were riding in exited the four lane highway at 60 MPH into a side ditch deep enough that the roof of the bus was nearly level with the road. I thought for a second we might make the national news as the thing raced towards the bottom of the stream valley. Somehow ... the bus driver yanked it back up the slope and back onto the road just barely missing a bridge abutment. It put enough stress on the bus that it cracked one of the rear windows. The bus driver told us he was watching the rearview mirror and just drove off the road, but I was watching him and it looked like he was totally zoned out and didn't come back to life until we were at the bottom of the ditch with the rocks and rabbits bouncing off the windshield! Day two ... we had a different driver ... and 3/4s of the people from the second bus were driving there own cars.

# RETIREMENTS

## Neil Smeck

**Technical achievement** – Dr. Smeck has been actively conducting research in support of the soil survey program since 1966. He has published scores of papers relating directly to classification and morphology of soils common in the Midwest states. Topics that Dr. Smeck has researched include: Formation of argillic horizons in high lime Wisconsinan age soils, Development of soils with mollic epipedons, Phosphorus availability, Development and strength of fragipans, Computer storage of soil morphology data, Translocation of clay in soils with high water tables, Detailed characterization of Teays age soils in Ohio, Influence of underlying material on the weathering of loess in Ohio, and a host of topics related to these. Most of these research projects were begun as a direct result of questions raised during the conduct of initial surveys in Ohio. The availability of Dr. Smeck's research has greatly increased Ohio soil scientists' understanding of soils and their formation.

**National Program Support** – Dr. Smeck has been very active in the NCSS program at the national level over the years. In 1986 he chaired the North Central Regional Soil Survey Conference. These conferences are a big undertaking and in Ohio the job includes coordination of many active state partnership members. Dr. Smeck also served on the Steering Committee for the National Soil Survey Conference in 1983 and 1987.

In addition, Dr. Smeck has been a regular participant of both regional and national conferences, where he freely shares his ideas for improving the soil survey program and for advancing our science.

Horace Smith, during his tenure as Director of the Soil Survey Division, assembled an Advisory Committee from Cooperating agencies from around the country. Dr. Smeck was a well respected member of this group during 1997 and 1998.

In 1975 Dr. Smeck chaired a symposium at the annual meeting of the Soil Science Society of America on the "New Format for Accelerating Publication and Use of Soil Surveys."

Dr. Smeck is very active in the Soil Science Society of America and makes good use of the forum it provides to discuss topics important to the soil survey program and to advocate for issues important to NCSS.

**Training and recruitment** – Dr. Smeck teaches courses at OSU that are vital for potential soil scientists in the Ohio soil survey program, both for employees of NRCS and Ohio Department of Natural Resources. Courses he teaches or has taught include Soil Morphology and Classification, Pedology and Edaphology, Advanced Soil Classification, Morphology and Genesis, Processes of Soil Formation, as well as courses in research techniques and soil management.

Dr. Smeck is one of the faculty members called on regularly to coach Ohio State's soil judging team. As the coach, Dr. Smeck actively recruits his best and brightest students to become a part of the soil survey program in Ohio. He provides valuable input to the State Soil Scientist and Ohio DNR's counterpart about who would make the most valuable future employees. Dr. Smeck has coached two teams to national championships and many teams to regional championships. In addition, he has coached many individuals who have placed first in the contests at both regional and national levels.

Dr. Smeck encourages Ohio field soil scientists to host his classes on field trips. Through this means the students not only receive valuable educational training, but they are introduced to members of the profession who can show them what the job an employee of a partner agency is like.

**Ohio Program Support** – Dr. Smeck is an untiring contributor to the Ohio soil survey program in many ways. He has served as the director of OSU's soil characterization laboratory for many years. The availability of this facility greatly increases the programs ability to provide data to our project offices. Since its creation, the lab has provided data for over 3000 pedons sampled in Ohio and still routinely analyzes20 to 50 pedons per year, depending on the ongoing activities of the project offices.

Dr. Smeck also serves as the university's representative to the Ohio Soil Inventory Board. This group meets monthly to coordinate activities of the partner agencies in Ohio. In addition to the time required to attend board meetings, membership on this board also includes Dr. Smeck's serving as the university representative on all field reviews conducted in Ohio Soil Survey projects as well as other program activities like Ohio's biennial workshop for soil scientists. These activities have required a huge commitment on Dr. Smeck's part, one for which he receives little or no support from university administrators, and one he has frequently had to argue for his continued participation.

Dr. Smeck's participation in field reviews over the years has been both a benefit to the quality of the Ohio program, and an opportunity for him to continue to teach agency field staff. He has fought diligently with university administrators to maintain time in his schedule to allow field review participation. Dr. Smeck's participation is so highly prized by field staff, that for many years, they have emphasized during our work planning process that we must strive to maintain that participation.

Dr. Smeck is one of only a few university faculty members in the country that continues to provide the level of support that has been so vital to the program throughout its history. I am pleased that we are recognizing outstanding contribution of our state partners, and I am happy to have the opportunity to nominate D. Smeck before he joins so many of the other well known NCSS faculty members in retirement.

## 2006 International Annual Meetings

**Agronomy Society of America**
**Crop Science Society of America**
**Soil Science Society of America**

The Tri-Societies meetings were held November 12-16$^{th}$ in Indianapolis, Indiana at the Convention Center. These meetings bring the opportunity for folks from around the world to present research findings and discuss cutting edge technology in the agricultural fields.

The focus of the groups has been shifting to try and incorporate more of the professional aspect of related careers. This year Dr. Philip Owens, Purdue University hosted a symposium on High Intensity Soil Surveys. This symposium highlighted studies and topics that are of interest to the soil consulting viewpoint. It was an extremely well attended session with nearly a hundred people in attendance. I feel that this was an opportunity for other professionals in the field to see what types of soil consulting work is being done in various parts of the country. It was very informative and interesting to see how even our soil survey information is being used and then improved upon as highly intensive uses are demanded by the public.

**The Land Use and Soils tour** hosted by Dr. Gary Steinhart, Purdue University was a very educational

tour. The opportunity to view the affects of urbanization on soils, the methods to preserve sensitive areas, while meeting the demands for urban growth was a good one. NRCS helped out with getting pits dug and described to show the types of soils that are being converted more and more to urban usages. Most importantly no one should have gone away hungry.

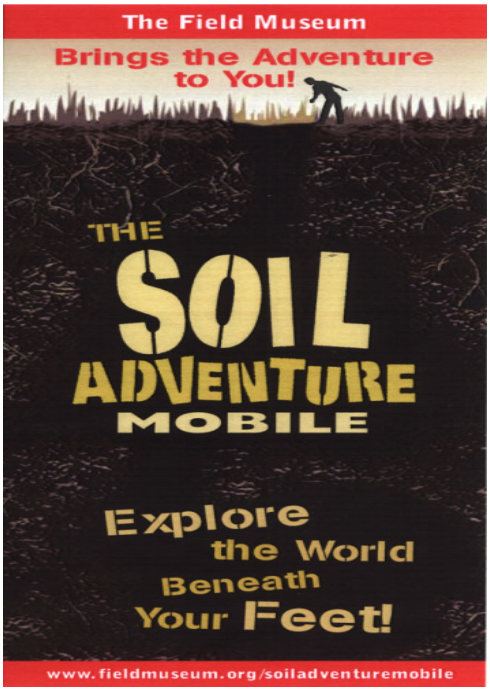
**A pre-conference Soils Geomorphology** field trip was hosted by Dena Marshall. The day-trip highlighted the anthropogenic soils in the reclaimed strip mine areas of Owen and Clay counties.

We viewed the differing types of reclamation processes and discussed the impacts of those on the soils potential to return to prime farmland status.

The field trip ended with at stop at the Cagle's Mill spillway cut where participants had a chance to view the various glacial depositions and the bedrock that underlies them. Carolyn Olsen remarked that the site had changed quite a bit since she had last seen it while working with Bob Ruhe.

## IAPSC SPONSORS S.A.M.

A new soil science program was added to the Pathway to Water Quality exhibit at the 2006 Indiana State Fair. IAPSC and the State Soil Conservation Board sponsored the Soil Adventure Mobile (SAM) for 2 days at the Fair.




SAM is a traveling exhibit from the Chicago Field Museum. It uses hands-on activities to explore the world beneath our feet and the role that soil plays in our lives. Visitors had the opportunity to feel soil textures, identify underground critters, and view soil life under a microscope.

SAM was developed as an extension to the 'Underground Adventure' exhibition at the Field Museum. Teachers can schedule SAM to come to their classroom or outdoor lab. For additional information see the website at: www.fieldmuseum.org/education/outreach_sam.htm

# THANK YOU

## INDIANA ASSOCIATION OF PROFESSIONAL SOIL CLASSIFIERS

**For your support of the Soil Awareness Mobile (SAM) at the 2006 Pathway to Water Quality**


Visitors of all ages at the Pathway to Water Quality enjoyed the opportunity to learn about soils. The display was very effective in bringing awareness to the importance of soil in our everyday lives.

*Pathway Steering Committee*

# NOTES FROM THE PRESIDENT

IAPSC has been involved in a number of activities promoting the soil science profession, providing professional development, and offering educational opportunities in 2006. Following are some of those activities:

- The Association once again had an educational booth at the HASTI Conference.
- IAPSC co-sponsored the Soil Adventure Mobile (SAM) at Pathway to Water Quality exhibit at the Indiana State Fair (see related article).
- Our annual Fall Tour was held at Potato Creek State Park on Sept. 15th with nearly 60 members and guests in attendance. An IRSS field exercise was held in conjunction with the Tour.
- AN IAPSC soil scientist survey was developed—results to be discussed at the Annual Meeting
- IAPSC supported the 2006 Purdue Invitational Soil Judging Contest with award certificates for participants.
- Many IAPSC members participated in Area and State soil judging contests
- The "Pedestal" newsletter is published 2 times annually—thanks Norm Stephens
- The IAPSC Annual Meeting is planned for Wednesday, January 24, 2007 – see enclosed agenda. A proposed amendment to the IAPSC Certification Program will be a major topic at the business meeting—see accompanying article

Lastly, I would like to thank this year's Executive Council – Paul McCarter, Dave Ralston, Dena Marshall, and Brad Lee. I have been involved in many organizations and you are the best bunch of board of directors that I have ever been involved with.

It has been a pleasure,

John Bowen

## PROPOSED AMENDMENT TO THE CERTIFICATION PROGRAM

At the November 10, 2006 meeting of the IAPSC Executive Council, dissolution of the Certification Board was discussed. The Council unanimously favored the dissolution of the Certification Board; it was decided to give the membership an opportunity to discuss the issue at the Annual Meeting on January 24, 2007.

Reasons discussed by the Council to consider dissolution of the Certification Board included:
1) IAPSC Certification may not be recognized by the ISBH or by local health departments
2) IAPSC Certification may not carry as much weight as ARCPACS and IRSS Certification
3) The Board has not been active for several years; the terms of Board members has expired; and the Board has not performed duties as required by its by-laws
4) The Certification Board has essentially been inactive since establishment of IRSS certification

To dissolve the Certification Board or make Constitutional amendments to the Certification program requires a two-thirds affirmative vote of eligible voters at any annual meeting, provided the proposed amendment has been submitted to the membership at least two weeks before the meeting at which it is to be voted upon.
If the Certification Board is dissolved, all remaining monies are to be transferred at the direction of the Executive Council. In the event of dissolution, the Executive Council recommends that remaining monies be transferred to the General Fund

BE IT ADVISED TO ALL MEMBERS OF THE INDIANA ASSOCIATION OF PROFESSIONAL SOIL CLASSIFIERS THAT DUE NOTICE IS HEREBY GIVEN AT THE PRINTING OF THIS ISSUE OF THE "PEDESTAL" AND AT LEAST 2 WEEKS PRIOR TO THE IAPSC ANNUAL MEETING OF JANUARY 24, 2007 THAT THE FOLLOWING OPTIONS TO AMEND THE IAPSC CERTIFICATION BE CONSIDERED

POSSIBLE COURSES OF ACTION:

OPTION #1--We can decide to not do anything and continue the program as is done now.

OPTION #2--We can dissolve the certification program and transfer monies to the general fund. All certifications would be void from this time forward and the certification board would be dissolved.

OPTION #3--Or, we could keep the certification program but suspend the collection of the annual renewal fees and carry everyone that is currently certified on the records as certified forever more. The certification board could issue a certification card without an expiration date to all current certified members and then the board would be dissolved. No new members would be certified unless an amendment was passed at some future date to reactivate the program.

OPTION #4--Proposed action other than those expressed above

# LaPorte County Hosts 2006 State 4-H/FFA Soils Judging Career Development Event


The State 4-H/FFA Soils Career Development Event (CDE) took place on Saturday, November 4, 2006, and was hosted in the Community Building at the LaPorte County Fairgrounds. Once registered, some 346 4-H and FFA youth were bused to the Indiana Department of Correction Summit Farm near LaPorte. There the participants evaluated the soils in each of four separate pits dug specifically for the CDE, with backhoe services provided by the LaPorte County Highway Department.

LaPorte County did not have any participants in the Soils CDE since none of the county's school corporations offer agricultural sciences in their curricula.

The soils judgers competed as 4-H and FFA Junior, Senior or Masters Teams, each with three or four individual members. The top five scoring Senior 4-H and Senior FFA teams advance to the National Soils Evaluation Contest held annually in Oklahoma. Once a team reaches the national level, they may still compete at local, area, and state contests, but no longer qualify as a team to advance to the nationals, again.

The top five of twelve Senior 4-H teams included White River Valley, North Miami, Fairfield, Argos, and Southwood. The top five of 47 Senior FFA teams were North Miami, Hamilton Heights, Forest Park, Western Boone, and Hamilton Southeastern. Top ranked of 14 Junior teams were South Decatur FFA, Southwood, Hagerstown FFA, Woodlan Soilers, and Franklin. Of twelve Masters teams, the top five were Rochester FFA, Orleans FFA, North Miami FFA, Hagerstown FFA and Jasper Judgers.


The team scoring the most overall points was the Rochester FFA Masters team coached by Justin Pearson, who received a chrome plated spade from Randy Staley representing the Indiana Association of Professional Soil Classifiers.

This team also had three individuals who placed in the top ten (1st, 2nd and 10th) overall. Top 10 individuals as well as the top 5 teams in each category received special recognition and prizes, sponsored by Farm Credit Services, Purdue University Athletic Department, Purdue Agronomy Club and the Indiana State FFA Association. The top individual, Ben Overmyer of Rochester FFA, received a $500 scholarship from the Indiana Association of Soil and Water Conservation Districts.

Prior to Saturday, soils judging teams were invited to practice at three sites around the county prepared in a way similar to the official site. This gave teams, especially those from southern Indiana, a chance to become familiar to the glacial outwash soils in northern Indiana. Practice sites were hosted and prepared by LaPorte County Parks at Luhr Park and Creek Ridge Park and also Tony Ekovich Farm, Michigan City (backhoe services provided for the Ekovich farm by Falatovics Construction LLC).

The State Soils CDE was organized locally by Purdue University Cooperative Extension Service—LaPorte County office, with contest administration provided by Carl Broady and Kathryn Orvis of State 4-H Youth Development office and assistance from the current Indiana State FFA officers. Purdue Agronomy soils specialists Gary Steinhardt, Brad Lee, Phil Owens, and Darrell Schulze, along with soil scientists from USDA's Natural Resources Conservation Service and private consultants, provided technical oversight and reviewed results with the contestants following the contest.


For a complete listing of the individual and team results, go to the state 4-H web site: http://www.four-h.purdue.edu/cde/index.cfm and click on "Soils" under "Results." For pictures from the event, please contact the LaPorte County Extension office at 219-324-9407.

# Soil Scientist Ramblings and Other Things

When Curtis Turner demolished his flat roofed garage, it was evident that the existing concrete slab had some utility for another building project. The alternative was to smash the existing concrete and pay for a truck to haul it off. . . . Then reseed the area for lawn or lay down sod. Not a very easy job! Several converging factors were in mind when he decided to build the greenhouse.

1. There was available fairly inexpensive steel for the framework. . . Curt bought his structural steel from the local salvage yard at 16 cents a pound.

2. There was the possibility of taking the soil work to the greenhouse . . . (His wife kids feel that he is paying Indiana real estate taxes for all the dirt dragged in from the south.)

3. Three eigths thick tempered glass sheet was the real clincher because 12 sheets of 55 inch wide by 104 inch long glass were found for $20 a sheet. With his Visio software for design and his TK Solver for math calculations, he came up with
a plan.

4. The local auction provided such things as new Anderson French doors so that he could drive his lawn tractor in and store larger items. The fiberglass French doors were acquired for $17 and windows for, in some cases, $1.

5. The 2 x 2 steel and 1 x 2 connector framework left over from another project he cut in half lengthwise and welded 3/16" flat tension members along the bottom side, thereby getting two steel beams for the price of one.

These were ten feet long. Installing the glass was the most difficult project. The glass weighed a “ton” and had to be carefully lifted into place with hinged brackets so as not to break the sheets. (About three sheets shattered into thousands of pieces.) He used a hinge jig at the eve so that the glass was positioned to slightly balance in favor of falling toward the roof side. The glass was lifted into in place and positioned using a semi truck nylon strap winch which made the job easier. Then he eased them down onto the steel roof trusses positioned about 33" apart. Silicon sealant was applied to the joints to make the inside water tight. The ends of the building turned out to be about 22 feet long by 22 feet wide. Wall glass was held in place by 8" steel stand offs bolted to the steel uprights. As things progressed windows were bought at the Saturday auction. The ends of the greenhouse consist of fiberglass and insulating foam RV window and door cutouts from an auction near Elkhart. These have a 1 ½" layer of styrofoam sandwiched between a layer of luan plywood and a layer of ¼ inch plywood coated with fiberglass on the outside. These were about 66" long by 29" inches wide and were cut with conventional skill saw and table saw. The unique feature of this greenhouse is that it has about 600 pounds of glaubers salt (sodium sulfate decahydrate) encased in hermetically sealed black polyethylene tubing, again bought at the action for about 50 cents a tube. Phase change occurs when the salt temperature surpasses 91.4 degrees F., changing the salt from solid to liquid. As it does this, it absorbs a large amount of heat which is released when the salt cools. A concrete floor poured over insulating panels for a 3 yard concrete heat sink mass to draw heat from in the winter. The concrete floor has a serpentine arrangement of hydronic plastic tubing embedded so as to transfer heat from the wood stove to the

concrete and eventually the house 20 feet away and passively to the building itself. Curt plans to extract the heat of vaporization from burning wood. This amounts to more than 500 BTUs of free energy per pound of flue gas water condensed. Such condensation will come from an arrangement of stainless steel tubing and glass heat exchanger fabricated out of box beams 4 x 8 inches across and 52" long, the stainless steel heat exchanger is designed to eliminate thermal shock to the glass tubes, even though they are made of tough borosilicate glass. These tubes are nothing more than used tanning salon light tubes with the ends knocked out and cleaned with the phosphor coating washed off with hydrochloric acid. The heat exchanger will use 69 of these 1 ½ inch tubes positioned horizontally. (In a previous heat exchanger during the Jimmy Carter era Curt was able to condense 15 gallons of water a day from a conventional home natural gas furnace when the outside temperature was 25 below zero F.) Curt's greenhouse/laboratory has electricity, and is wired for telephone and broadband internet connection.

# Steinyisms

**Collected by the students of Dr. Gary Steinhardt.**

I know a few things about some things.

The minute I do something stupid, the whole world converges.

Elf cookies with no elves…that's no fun. You can't nip their heads off.

The best way to learn a language is to take the dictionary to bed with you.

It's one thing when your mother says it's a bad habit, it's another when the surgeon general says it's gonna kill you.

Getting gussied up with "throw me in the bushes" cologne.

Spread a few pearls before the swine.

Don't let the bull fight twice.

Busier than a one-armed paper hanger.

Wipe the dust from our feet and then leave.

It's easier to take it off than knit it in the field.

Some of these were made rejects in a Soviet factory.

You've just encountered one of those splinters while sliding down the banister of life.

He who slings mud looses ground.

Don't be hoisted upon your own petard.

Logic is a systematic way of going wrong with confidence.

Not enough freight on the train of thought.

Eat the elephant one bite at a time.

Don't be the half that makes the top half possible.

Heigh-ho

Marching along like an Oom-Pah band.

Heartburn

Oma Oma

It may be many things, but good isn't one of them.

It's like arguing over two equally wrong answers.

It's enough to make you run naked through the streets.

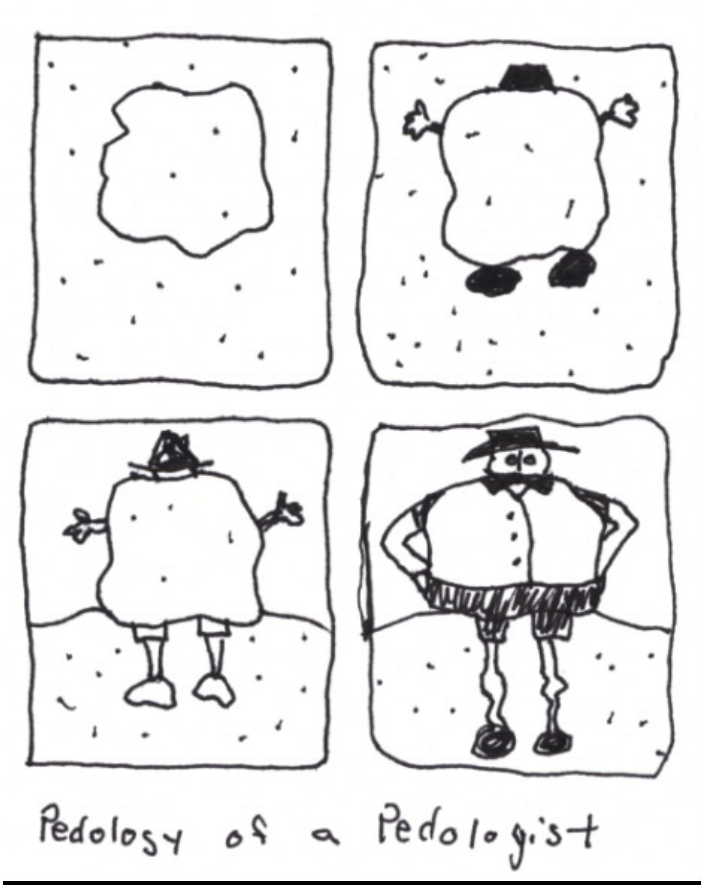
Strung out like the Monday wash.

No amount of planning can beat pure dumb luck.

# The Soil Scientist

by Jeff Olson, Soil Scientist, NRCS, Arkansas

*In the beginning came the heavens and earth,*
*Designed for us, for our inherent worth.*
*The beauty and splendor were beyond compare,*
*For us as a people to honor and share.*
*Since that time, it has been our stand,*
*To steward the earth, to work the land.*
*But the land got tired and needed a rest,*
*So we got wise and devised a test.*
*Alas, it was found not all soil was the same,*
*But what can be done to figure this game?*
*All through the years, we've hit and missed,*
*So then came along the soil scientist.*
*Arriving on the scene more than a century ago,*
*Mapping soils wherever called to go.*
*Not knowing what to be found over the next hill,*
*But blazing forward, always ready to drill.*
*A strong and free spirit, resolved to tomorrow,*
*Of serving in faith so many without regret or sorrow.*
*Discovering the soil one layer at a time,*
*Daily facing dust, sweat, weather, and grime.*
*Pushing forward, at times not sure why,*
*Then thinking of goals, they begin to cry.*
*It seems as though they'll never get done,*
*One day at a time, they follow the sun.*
*But then they realize when topping a knoll,*
*Acres are important, but not the main goal.*
*They follow a calling that few understand,*
*To discover for posterity the treasure of land.*
*Most will never know of the hours of toil,*
*Heartily dedicated to mapping their soil.*
*The fruition of their labor may never be seen,*
*But lives will be helped; their purpose and destiny.*
*So much is changing with computers and NASIS,*
*Even publication is beyond the speed of molasses;*
*PEDON, SSURGO, and of course digitizing,*
*Help to make our future even more energizing.*
*But there lies one certainty amongst all this change,*
*You'll find them in field, forest, swamp, and range;*
*They'll be needed forever, though sometimes ignored,*
*'Till a conservation team needs more wisdom aboard.*
*As our second century progresses from today,*
*Of one thing for sure they are proud to say;*
*"We've been a part of a winning team,"*
*Even Hugh Hammond Bennett would give us a gleam.*
*When their time on earth is finished and done,*
*With reflection of life's race that was ran and won;*
*Will likely include a request to roam,*
*For a visit to the soil on their way home.*




Whenever you dig a hole … everyone wants to know what you're doing!

Thank you to everyone for your Pedestal submissions.

Norm Stephens

Norm.stephens@in.usda.gov

**2007 WINTER MEETING REGISTRATION FORM**

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