

PENNSOIL

August 2005

The Newsletter of the

Pennsylvania Association of Professional Soil Scientists

P.O. Box 61035, Harrisburg, PA 17106-1035

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USDA SOIL SCIENTISTS HONORED BY NATIONAL COOPERATIVE SOIL SURVEY

CORPUS CHRISTI, Texas,
May 24, 2005—USDA Natural
Resources Conservation Service
(NRCS) soil scientists received
national honors today from the
National Cooperative Soil Survey
(NCSS) at the NCSS National
Conference.

Anthony Khiel, NRCS,
Sevierville, Tenn., and Douglas Thomas, NRCS, Waynesville, N.C.,
were co-recipients of the NCSS Soil Scientist of the Year Award and
William "Rob" Knight, NRCS, Greensburg, Pa., received the
NCSS Soil Scientist Achievement Award. Ohio State University soil

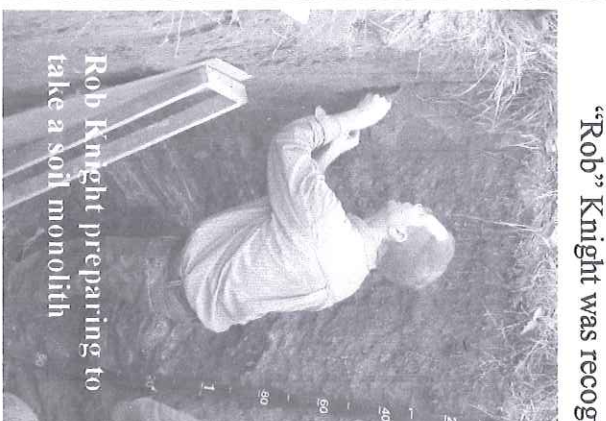
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science professor Dr. Neil Smeck received the NCSS Cooperator Achievement Award.

"I'm extremely proud of our soil science professionals and the quality of their work," said Bruce Knight, NRCS Chief. "The national soil survey truly is an example of cooperative conservation at its best."

Khiel and Thomas worked together as soil survey project leaders on the soil survey of the Great Smoky Mountains National Park, which covered more than 350,000 acres over two states.



Rob Knight preparing to take a soil monolith

"Rob" Knight was recognized for many years of work that produced high-quality soil survey products, applied technology and innovation for five soil surveys in Pennsylvania. He also completed four soil survey manuscripts covering more than 2 million acres while continually updating and maintaining soil surveys in 15 counties in southwestern Pennsylvania.

Smeck was honored for a lifetime of soil survey research that began in 1966 and produced numerous papers relating directly to classification and morphology of soils common in the Midwest states. He leads the Ohio State Soil Survey Program that is a strong partner in making soil surveys in Ohio.

The NCSS is a nationwide partnership of federal, regional, state and local agencies and institutions. This partnership works together to investigate, inventory, document, classify and interpret soils and to distribute, publish and promote the use of soils information. The work of NCSS is carried out on national, regional and state levels. NCSS has partnered with the federal government in support of soil work since 1899.

Editors Note: Rob will receive the award at the SSSA meetings in November in Salt Lake City, UT, a news article on Rob and the award can be read on:

<http://www.observer-reporter.com/284913625016647.bsp>

IMPORTANT NOTICE

PAPSS NEEDS YOUR CORRECT EMAIL ADDRESS

The PAPSS Secretary requests that each member take a few minutes to submit their email address if they are interested in receiving up to the minute email notifications in 2005-6. ALL members are asked to log onto the PAPSS website www.papss.org, and use the "Contact Us" button on the homepage to type in your name and current email address on the form. Be sure to submit the form once it is complete.

For your information, PAPSS emails never contain attachments. They always contain the word PAPSS in the subject line with a complete description of the email issues. And they are sent to disseminate timely soils information supplemental to the Pennsoils quarterly newsletter.

If you received an e-mail from PAPSS, such as the latest electronic announcement for the August 16 and 17 soils courses at DelVal, then your email address is current. If you did not receive this email, and want to receive future emails, then please let us know.

PAPSS to work with Soil Science Society of America to Certify Soil Scientists in Pennsylvania

I (Bruce Willman) have been in contact with Luther Smith to develop a plan to proceed with licensing/registration/certification in PA. I mentioned to him that a state program of licensing or registration is not likely at this time due to the legislative reluctance to add any registration programs. So we discussed pursuing a state certification.

SSSA is willing to help establish and administer a PA certification program. Some advantages identified are:

- SSSA can provide the tests and maintain a list of certified individuals (CPSSc and CPSC).
- This program and list can be recognized by the state and reference in regulations where qualified soil scientists should perform tasks.

- No administration costs anticipated to be borne by the state to provide the certification program or maintain the list of certified individuals.

As a result, we developed the following plan for this year.

1. I will develop a letter to the Secretary of DEP presenting the concept of a state certification, administered by SSSA, that can be reference in regulations and on forms where soil science tasks are required.
2. Request a meeting with Luther Smith to present the concept in more detail.
3. Report on the results of meetings with the state at the PAPPSS annual meeting (with Luther Smith) and obtain an organization consensus.

If anyone has any questions or suggestions/recommendations, please contact me.

Bruce P. Willman, CPSSC

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Pennsylvania Sewage Advisory Committee

Sewage Advisory Committee Actions 3/30/2005 (prepared by

Barbara Brown, Chairman):

1. Correction of October 6, 2004 MINUTES. The minutes were approved with one correction. Section e (Page 4) another sentence was added at the end of the paragraph: "The lower test pits are for soil evaluation only and are not used in the system design." (*Regarding the downslope soil evaluations for A/B Systems -BPPV*)
2. A suggestion to add attending members list to the minutes was also suggested so the member organizations can see if their representative is attending. No action taken.
3. A motion was made (and passed) to have the SAC Chair (Ms. Brown) and Vice Chair (Mr. Willman) prepare and send a letter, outlining the actions and tone of discussions at the SAC meeting to the Deputy Secretary and Secretary.
4. **COMMITTEE REPORTS**
 - a. **Regulation Committee** – Bruce Willman, Chair
2990A form rewrite (Appendix A) – Willman has received a number of suggestions regarding the rewriting of the soils form. The suggestions included area for Plot Plan, enlarged area for soil

profile, enlarged area for percolation test info. The form has not been completed. Jay Africa (DEP) stated he'd like to have the form ready for approval shortly. Bruce to get information to Jay.

(*Regarding the site investigation and percolation test report form - BPPV*)

b. **Bylaws Committee** – Gene Dice, Chair.

Motions approved to amend Bylaws to address issue of lack of quorum.

- i. Delete sentence in 2A "When the member organization fails to submit the name of their appointed member or alternate member for a new two year term, it shall be assumed that the current member and alternate member have been reappointed".

Section 7c. One third One-half of the members appointed to the Committee shall constitute a quorum. Since no one in attendance was sure if DEP Legal Council had reviewed proposal, it was approved conditionally on DEP Legal Council's review.

This proposal (Section 2a of the bylaws) passed, however it was pointed out that this should also be the case for Alternates Representatives. They fall under Section 3a of the bylaws which was not addressed in the proposal. A motion passed to send out notice of intent to change this will be sent to members and addressed at the next SAC meeting.

c. **Consistency/ Inconsistency Committee** – Sam D'Alessandro,

Chair

No Report

Base Planning Committee - Jim Symborski, Chair

No Report

d. **Alternate Technologies Committee** – Dwayne Mowery, Chair

No Report

e. **Continuing Education Committee** – Barb Brown, Chair

PSATS is to revise inconsistencies in acknowledgement forms in on line course and ASC regarding Free Access Gravity Sand Filters.

5. Milt Lauch retired from DEP on March 18, 2005, and Mr. Dana Ungket was introduced as Acting Chief, and indicated he would field questions regarding Alternate/Experimental Technologies due to the departure of Tom Franklin.
6. Last meeting SAC asked (by motion) that DEP SW region rescind a letter sent to municipalities in the region requiring maintenance ordinances in place before issuing permits for Alternate systems. This letter reversing the requirement has not been written or sent.

A Motion was made and passed, to have DEP SW Region or DEP Central Office send an official letter rescinding the initial letter. (*This requirement was sent in writing to all local agency SEO's but email was used to rescind the requirement – who got the email?*)

Clarification was requested on Timing of Operation & Maintenance agreements when Planning is required on project. Some Municipalities &

DEP Regions require executed O&M agreements at time of Planning. A recommendation was made that O&M agreements are part of permitting, not planning since the actual homeowners have not yet been identified. Planning could have O&M agreement forms included (but not executed until permit issuance.)

- DEP's response- executed O&M agreements are not required for Planning. *Perhaps regional offices need to be better informed of this.*
8. A/B downslope areas. SAC asked DEP for clarification.

DEP - This was addressed in last SAC's meeting minutes Section e. 'The downslope area while evaluated is not treated as a horizontal isolation distance.' This has also been written out in a previous DEP policy memo. The area does not have to be onsite. **Some regional offices do not follow this procedure.**

9. Dave Jackson passed away. He was a SAC member and also a Board member on the SFO Certification Board. Two SAC members - Sam D'Alessandro and Allison Shuler - were nominated by SAC for recommendation to the Certification Board.

11. CHAPTER 71, 72 & 73 REVISIONS. Jay Africa requested comments regarding revisions to the Chapters be submitted. A Regulations subcommittee was charged with coordinating member comments on revisions, and have scheduled a meeting on May 18th at Rachael Carson Bldg to discuss comments. Additional members signed up to participate in the meeting. Clarification of O&M requirements in Alternate Systems Guidance (ASG) regarding peat filters. Currently every 6 months requirement is for electrical components, alarms, etc. even though dealing just with peat-style filter. (No electrical or alarms in peat filter systems.) Requirement is same as in 73.167 for IRIS systems.

DEP will look into this during rewrite of ASG document. No clarification received at SAC meeting. A motion was unanimously passed requesting SAC's review of the revisions before implementation.

Early Invitation

You have been invited! Mark Your Calendars
You are invited to a special preview of the 2005 Soils Exhibit at the Delaware Agricultural Museum in Dover.

The Delaware Agricultural Museum, along with the Natural Resources Conservation Service (NRCS) and our partners, will be host to a special open house for the new 'State Soils Exhibit' housed at the museum. The open house will be from **4-6 pm on October 5**, and refreshments will be served.

The NRCS and our partners have sponsored this exhibit as well as provided a workforce to conduct research, provide technical assistance, and also develop and construct displays and exhibits.

This will be an exclusive opportunity for you to see exhibit and meet

those who created, developed and implemented the exhibit. We invite you to attend this special event.

What: Delaware Soils Exhibit Open House
Where: Delaware Agricultural Museum

866 N. DuPont Hwy, Dover, DE
302.734.2618

When: **October 5, 2005 from 4-6**

For more information, please contact Stuart Lee or Diane Shields at 302.678.4160.

Year of Planet Earth Brochure

The brochure "Soil - Earth's Living Skin" can be downloaded from the IUSS website <http://www.iuss.org/pages/publications.htm>
The 16 page color brochure describes how soils are integral in global systems, including water, climate, nutrients and waste disposal.

Soil: Crucible of Life

Daniel Hillel*

What does the soil mean to us, what does it do for us, and what does it do for the entire system of life on earth? Considering the height of the atmosphere, the thickness of the earth's rock mantle, and the depth of the ocean, we note that the soil is an amazingly thin body, typically not much more than one yard thick and often less than that. Yet it is the crucible of terrestrial life, within which biological productivity is generated and sustained. It acts like a composite living entity, being home to a community of innumerable microscopic and macroscopic plants and animals. A mere fistful of soil typically contains billions of microorganisms, which perform the most vital functions of biochemistry. Another amazing attribute of the soil is its sponge-like porosity and its enormous internal surface area. That same fistful of soil may actually consist of several acres of active surface, upon which physicochemical processes take place continuously.

See the article at: <http://www.jnrise.org/pdf/2005/E05-0001E.pdf>

Professor Emeritus, Zichron Yaakov 30900, Israel. Received 29 Mar. 2005.

Editorial. *Corresponding author (d_hillel@netvision.net.il).

Published in J. Nat. Resour. Life Sci. Educ. 34:60-61 (2005).

<http://www.jnrise.org>

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677 S. Segoe Rd., Madison, WI 53711 USA

Soil Survey Horizons

To SSH authors, subscribers, and others, We are considering some changes in Soil Survey Horizons for the future and are requesting comments. Feel free to pass this message along to anyone that may have an interest.

Following are changes that are being strongly considered.

1. The page size can be increased to 8.5 X 11 inches. With the doubling of page size, we can publish more articles per issue. This will reduce the backlog, and speed time to publication for manuscripts. Currently, it is about 9 months for articles from the time we receive them until publication. We are limited to about 4 articles per issue. If the page size was increased, we could add additional features, such as new hires/retirements related to soils, etc.
2. Paper quality can be improved. Printing is currently performed in Madison at SSSA headquarters.
3. Color pages can be added. Each color page will cost extra, but if we maintain subscribers, we hope to add a color cover and one or two color pages per issue.
4. Cover can be redesigned. With the larger page size and color option, we can produce any design we would like, including photographs.
5. Currently, there is no copyright on SSH. As such, the staff at Madison is really uncertain to whom SSH belongs. It developed from a newsletter format among pedologists at the Univ. of WI, but SSSA agreed some time ago to assist in publishing SSH as a service. At this time, they would like to copyright SSH under the SSSA umbrella. This would be a similar situation to SSSJ. It would be in the interest of SSH to have a copyright, and is logical to have it belong to the staff at SSSA headquarters. If this copyright were to occur through them, it would provide SSH with a home and will help it to receive recognition as a publication of the SSSA. I do not know of any negative aspects of giving SSSA the copyright.
6. It was suggested that we could change to name from "Soil Survey Horizons" to "Soil Horizons" or possibly "Musings in Applied Soil Science" to broaden its scope and readership. We have recently sought to appeal to a wider range of readers in the soils community, not solely pedologists. This has been necessary since the number of subscribers has continued to fall, reflecting what appears to be a

decreasing number of pedologists related to soil survey. This name change may attract a wider readership. On the other hand, the name has a long established recognition. For traditions sake, we may not want to abandon this. If you have a suggestion for a better title, pass it along.

What are your thoughts?

Editor of Soil Survey Horizons

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2005 Pennsylvania State Envirothon

The 22nd Pennsylvania State Envirothon was held at Bloomsburg University and PPL Montour Preserve, near Danville in Montour County on May 23 and 24. High school students from 64 Pennsylvania counties participated in this year's event.

The Envirothon is designed to give students an opportunity to acquire and demonstrate a knowledge of environmental resources and their connection to each other and human activities. The students are challenged in the areas of aquatic ecology, forestry, soil / land use, wildlife, and a current environmental issue. The 2005 current environmental issue was managing cultural landscapes.

At the state level, the Envirothon is sponsored by Pennsylvania's sixty-six conservation districts, the State Conservation Commission, and the Pennsylvania Association of Conservation Districts. The program is managed by a board of directors representing those sponsors. Technical expertise is provided by the following agency partners: Department of Environmental Protection, Department of Conservation and Natural Resources, Pa Game Commission, PA Fish & Boat Commission, and the USDA Natural Resources Conservation Service. Financial sponsors of the 2005 Envirothon are Air Products and Chemicals, PPL Corporation, PA Outdoor Writers Association, Nestle Water North America, the PA Growing Greener Program.

The champions of the 2005 State Envirothon are from Penncrest High School in Delaware County. Team members include: Joe Walker, Aimee Davis, Michelle Henry, Emily Moberg, and Vic Janney. Team advisors are: Mark Samilenko and Chrissa Kuntz.

Second place was captured by the team from Blue Mountain High School in Schuylkill County. Teams finishing out the top five were North East High School, in Erie County; Future Hope Homelearners in Snyder County; and Center Area High School, Beaver County. For the first time ever, the PA Envirothon awarded scholarships to the first, second, and third place teams. The scholarships were sponsored by the PA Department of Agriculture in cooperation with the State Conservation Commission.

For more information on the Envirothon program, contact your local conservation district or contact the Pennsylvania Envirothon by phone (814) 623-7900 ext. 111, Email paenvirothon@pennswoods.net, or visit the website at www.envirothonpa.org.

Press release from: Canon U.S.A., Inc.

Pennsylvania Teens Take Top Honors At 2005 Canon Envirothon

Teams From 50 U.S. States And Canadian Provinces Competed At Environmental Education Competition

([CSRwire](#)) LAKE SUCCESS, NEW YORK - A five-member team of high school students from Media, Pennsylvania, is the winner of the 17th annual 2005 Canon Envirothon. The winning team was announced Saturday, July 23, during closing ceremonies of the weeklong North American environmental education competition held at Southwest Missouri State University in Springfield, Missouri.

At the Canon Envirothon, 250 teenage challengers from high schools and other organizations across the U.S. and Canada studied and competed on environmental issues and resource conservation, and received Canon scholarships and prizes that exceeded US\$75,000 in value.

The first place Pennsylvania team received a total of US\$25,000 in Canon scholarships along with photographic equipment for themselves and for their schools/organizations to use in science education. Texas (US\$20,000 and equipment) and Delaware (US\$15,000 and equipment) placed second and third, respectively.

Student scholarships can be used toward a four-year university, a two-year college, or trade school. Scholarship funds are paid directly to the university, college, or other school of a student's choice.

Fifty teams, 43 from the U.S. and seven from Canada, competed in the 2005 Canon Envirothon, North America's largest high school environmental education competition. Organized through the National Association of

Conservation Districts in the U.S. and The Canadian Forestry Association, the Canon Envirothon is the final competition in a series of contests beginning each spring that involve more than 500,000 teenagers throughout North America. For the first time this year, the program awarded diversity and underserved audience grants to seven states and one province to involve additional students in the competitions.

In written and field tests, and oral presentations, five-member teams from schools or organizations compete in preliminary rounds for the distinction of areas representing states and provinces at the Canon Envirothon. Key knowledge areas include soils/land use, forestry, aquatic ecology, wildlife and a current issue that changes annually. This year's current issue at Canon Envirothon addressed the management of cultural landscapes and focused on restoring the Wilson's Creek National Battlefield (U.S. Civil War) to its 1861 conditions.

Each team's knowledge was tested under the supervision of foresters, soil scientists and wildlife specialists. Teamwork, problem solving and oral presentation skills also were evaluated as each team offered a panel of judges an oral presentation containing recommendations for solving the environmental challenges at Wilson's Creek.

The 2006 competition will be held in Winnipeg, Manitoba, Canada, and the 2007 competition will be held in Geneva, New York.

Editors Note: As a soil scientist you can be involved with local Envirothons by contacting your County Conservation District Office

The teams at the 2005 Canon Envirothon:

- First Place:** Penncrest High School, Media, Pennsylvania
- Second Place:** The John Cooper School, Woodlands, Texas
- Third Place:** Wilmington Charter School, Wilmington, Delaware
- Fourth Place:** Fort Defiance High School, Fort Defiance, Virginia

MARS SPECTACULAR!

Submitted by Ray Shipp

The Red Planet is about to be spectacular! This month and next, Earth is catching up with Mars in an encounter that will culminate in the closest approach between the two planets in recorded history. The next time Mars may come this close is in 2287. Due to the way Jupiter's gravity tugs on Mars and perturbs its orbit, astronomers can only be certain that Mars has not come this close to Earth in the Last 5,000 years, but it may be as long as 60,000 years before it happens again.

The encounter will culminate on August 27th when Mars comes to within 34,649,589 miles of Earth and will be (next to the moon) the brightest object in the night sky. It will attain a magnitude of -2.9 and

will appear 25.11 arc seconds wide. At a modest 75-power magnification

Mars will look as large as the full moon to the naked eye. Mars will be easy to spot. At the beginning of August it will rise in the east at 10p.m. and reach its azimuth at about 3 a.m. By the end of August when the two planets are closest, Mars will rise at nightfall and reach its highest point in the sky at 12:30a.m. That's pretty convenient to see something that no human being has seen in recorded history. So, mark your calendar at the beginning of August to see Mars grow progressively brighter and brighter throughout the month. Share this with your children and grandchildren. NO ONE ALIVE TODAY WILL EVER SEE THIS AGAIN

Dr. Gary Petersen Retires from Penn State

Distinguished Professor of Soil and Land Resources / Co-Director, Office for Remote Sensing of Earth Resources

Gary W. Petersen retired on June 30, 2005 after a 40 year career at Penn State University. More than 100 coworkers, family, friends and PAPS members attended a retirement party for Dr. Gary Petersen, held in May near Penn State. Gary received his B.S., M.S. and Ph.D. degrees from the University of Wisconsin. He joined the Penn State Agronomy Department in 1965 as an Assistant

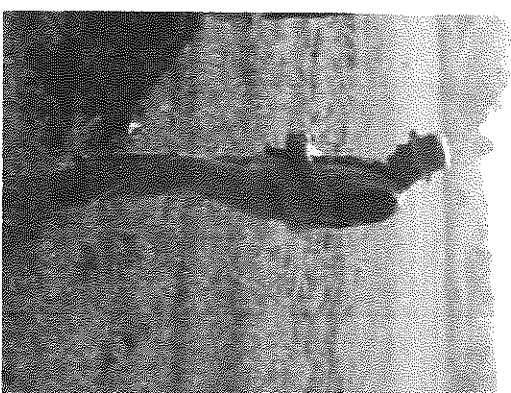


Professor and retired as a Distinguished Professor. During his career at Penn State, he worked in the areas of on-site waste disposal, land use planning, remote sensing and geospatial technologies. He also served as President of the Soil Science Society of America and is presently serving as the Vice-President of the International Union of Soil Scientists. During retirement Gary plans to continue teaching his class on Soil Morphology, Mapping and Land Use and to continue working on the World Congress of Soil Science. He also plans to continue with his consulting activities and to travel with his wife, Mary. He also plans to spend more time with his family, especially with his three grandsons (hopefully to help mold them into future soil scientists).. NRCS presented a plaque to Dr. Petersen in recognition of his contributions to the Pennsylvania Cooperative Soil Science

program and the education and inspiration of Soil Scientists and Conservationists in Pennsylvania.

Ned Ellenberger Retires from NRCS

On March 31, 2005 friends and coworkers of Ned joined him at the Jean Bonnet Tavern to celebrate his Soil Scientist career with NRCS and wish him the best in his retirement. Ned was one of Pennsylvania's most productive field mapping soil scientists, and worked on soil surveys throughout Pennsylvania during his long and productive career. In retirement he will be caring for his farm, supplying neighbors with fresh produce and completing the many woodworking projects he has in progress.



Les Rothermel Retires from DEP.

On February 18, 2005, Les Rothermel retired after 35 years with



Les is the first person on the left in the first row (the one who looks like Leonardo DiCaprio?). Jake is just behind him! This photo was from the PSU Agronomy Department circa 1966

Pennsylvania DEP. Les started as a Soil Scientist with DEP in 1970 and has been a Regional Soil Scientist in the Planning Section since 1986. He has served on the PAPSS Board, Keystone SWCS President and on the board of SCSA. Les will describe to anyone how much he enjoyed his Soil Science career. For the time being, Les said he will be "tending his orchard".

New from Soil Science Society of America SOCIETIES LAUNCH NEW STORE

We have a new searchable store featuring our books, teaching aids, CD collections, and apparel. Go online and explore it at:
www.societystore.org

FREE BOOKS

The Societies are making room for new book titles and are offering a number of older titles free to members for the cost of shipping. Select your preferred volumes and fax us the list along with your shipper number (Fed-Ex or DHL) and we will ship the books to you or your recipient. Find the order form and title list at: www.asa-cssa-sssa.org/publications/pdf/FreeTitleOffer.pdf

FREE TO MEMBERS ONLY

Science in Action is a free email service to keep you up to date on the latest published articles in 16 key topics. Learn more and subscribe at www.scienceinaction.org Save time, look smart.

SMITHSONIAN SITE REDESIGN

If you haven't viewed the Smithsonian Soils Exhibit Website lately, you should see it now. The site has a new look, including the latest news about the exhibit and state soil monoliths. Check out the redesigned site at: www.soils.org/smithsonian

SOILS EXAM

Sept. 2, 2005 is the registration deadline for the Soils Fundamentals Exam and the Soils Professional Practice Exam scheduled for Friday, Oct. 14, 2005. For info and to register online, go to:
www.soils.org/csse/

WORLD CONGRESS ABSTRACTS

Oral and poster abstracts for the 18th World Congress of Soil Science are due **Sept. 15, 2005**. The Congress will be held July 9-15, 2006 in Philadelphia, PA. Info at: www.18wcss.org
ASA-CSSA-SSA International Annual Meetings, Nov. 6-10, Salt Lake City, UT;
www.saltlake-2005.org

The Pennsylvania Tours for the July 2006 World Congress of Soil Science NEED VOLUNTEERS

Now is the time to sign up to help with the Pennsylvania Mid Conference Tours. Eight Tours within Pennsylvania need Soil Scientists to volunteer to help. The tours can be seen on:
http://www.ext.colostate.edu/aes/tours/day_tours.html
and the person to contact is listed with the tour. Volunteers will not have to pay for the tour. They will help either at the sites or on the bus trips. Help is also needed to finalize some of the tour routes to see scientific, historic, and cultural sites along the way.

2005 Field Conference of Pennsylvania Geologists

**October 13 - 15, 2005
West Middlesex, PA**

The Announcement and Registration forms for the 2005 Field Conference of Pennsylvania Geologists, headquartered at Sharon, PA (Mercer County), are available on the Field Conference web site at <http://www.paonline.com/gfleeger/fcpcg/photos.htm>.

The Field Trip will look at some exposures of glacial sediments in Crawford and Lawrence Counties, discussing not only the stratigraphy, but the sedimentology of glacial deposition as well. There have been conflicting interpretations of the glacial history around Pymatuning Reservoir. We will look at the evidence at a key section, and also look at the evidence of how the glacial sediments were deposited. We will visit a 70-foot section of glacial sediments in Mercer County, and try to decide how many glaciations are represented there, as well as look at some complex weathering patterns. A third glacial stop will look at some complicated glaciolacustrine sedimentation in the French Creek valley.

The other emphasis of this year's Field Conference is the stratigraphy of the lower Allegheny and upper Pottsville Groups in Beaver, Lawrence, and Mercer Counties. This area is the type locality for a number of stratigraphic units in this part of the section (Connoquenessing Sandstone, Quakertown coal, Mercer limestones and coals, Homewood Sandstone, and Vanport Limestone), primarily by I.C. White while mapping the area for the Second Pennsylvania Geological Survey in the

1870s. We will visit two of these important sections that were used to define the stratigraphy in the upper Portsville Group and compare them to two large and more complete modern exposures of the same sequence. We will also look at an anomalous section of multiple thrust faults and folds in the Mercer Formation, and an outcrop of Vanport Limestone. Pre-registration due **SEPTEMBER 23**. ---Gary M Fieeger, Pennsylvania Geological Survey Phone: (717) 702-2045

Mark your Calendars for the PAPSS Fall Meeting November 11 & 12, 2005

Scranton area, organized by Laurel Mueller, Soil Services Company, Inc.(570-924-3694)

Technical Field Session Saturday November 12, 2005

"Soils of King Joe's Mountain" Roaring Brook Township, Lackawanna County, PA(east of Scranton)

The Session will include topics that only a Soil Scientist could call "FUN"--

Brushing up on Soil Taxonomy (bring your "Keys"); Improving your Soil Profile Descriptions; Soil survey mapping challenges in Northeast PA; Acidity - bring your pH measuring devices!; Podzolization process; Glacial deposits; Periglacial formations; Loess as a parent material; Influence of man and agronomic practices on the soils of Penn's Woods; What did our soils look like before plowing, liming, stone clearing, compaction; Theories about humus and earthworms, and more. We may even include a hole digging contest!

There will be a workshop Friday night on "Contracting your services as a Soil Scientist Consultant", with information about the National Society of Consulting Soil Scientists (NSCCS)

Also included will be a Smithsonian Soils Exhibit Design Committee update

The Pennsylvania Association of Professional Soil Scientists and the Pennsylvania On-Site Wastewater Recycling Association

Present in cooperation with
Delaware Valley College

Short Courses on

Saturated Hydraulic Conductivity
as a Site Evaluation Tool
Tuesday August 16, 2005

and

Redoximorphic Features, Soil Wetness
and Water Table Relationships
Wednesday August 17, 2005

Saturated Hydraulic Conductivity as a Site Evaluation Tool

Tuesday August 16, 2005
Delaware Valley College
Doylestown, Pennsylvania

About the Course

Participants will gain a working knowledge of in situ and laboratory methods for measuring saturated hydraulic conductivity (Ksat) in this one-day short course. Participants will be able to properly measure Ksat in the unsaturated zone (above the water table) using commercially available permeameters and be introduced to various models and approaches for calculating the Ksat values based on field measured data and interpreting the results for on-site system design professionals.

How You Will Benefit

1. Develop a working knowledge of field and laboratory methods for measuring Ksat.
2. Know the protocol for assessing on-site system loading rates based upon hydraulic conductivity measurements.
3. Learn to be able to measure Ksat above the water table using the Compact Constant-Head Permeameter.
4. Learn to interpret Ksat measurements for on-site system design professionals.

Agenda

Soil Water Flow Principles

- ☐ Darcy's Law
- ☐ Saturated and unsaturated Flow

Measuring Saturated Hydraulic Conductivity

- ☐ Field methods (below & above a water table)
- ☐ Laboratory methods (Constant-head / Falling-head)

Calculating Ksat

- ☐ Field data integrity
- ☐ Models for calculations

Using Ksat to Determine Suitability and Loading Rate

- ☐ How many measurements and where?
- ☐ Determining the least permeable soil horizons
- ☐ Selecting appropriate horizons and depths for measurements

- ☐ Interpretation of Ksat data

- ☐ Recommending a system loading rate to design professionals
- #### Field Studies (if time available)

- ☐ Determining the number and locations of Ksat measurements
- ☐ Operational procedures for the Compact Constant-Head Permeameter

- ☐ Hands-on field practice

Calculations and Interpretations

- ☐ Calculating Ksat from field study
- ☐ Interpreting the results

Instructor

Aziz Amoozegar, PhD North Carolina State University

Course Information

Fee: \$90

Class Time: 8:30am-4:30pm

Redoximorphic Features, Soil Wetness & Water Table Relationships

Wednesday, August 17, 2005
Delaware Valley College
Doylestown, Pennsylvania

About the Course

Soil color is frequently used to determine soil wetness conditions. However, oftentimes, there are additional interpretations that can be made when actual water table monitoring data is available at a site. This one-day short course describes soil color, redoximorphic features, their causes, and interrelationships between redoximorphic features with both saturation and reduction in the soil profile. In addition, this short course illustrates field methodologies and interpretation of water table monitoring data gathered through such monitoring networks.

How You Will Benefit

1. Understand the fundamental principles of site monitoring.
2. Become familiar with several methods of data interpretation.
3. Learn how to install site-monitoring instruments in the field in order to collect the most accurate data.

Agenda

Defining the Needs

- ☐ Hydrology
- ☐ Drainage
- ☐ Lithochromic colors
- ☐ Redox reactions

Monitoring Principles and Procedures

- ☐ Rainfall
- ☐ Temperature
- ☐ Redox
- ☐ Wells and piezometers

Interpretations

- ☐ Site evaluation
- ☐ Interpretation methods
- ☐ Classroom exercises

Field Exercise (if time available)

- ☐ Installation of materials
- ☐ Field review

Instructor

David Lindbo, PhD North Carolina State University

Course Information

Fee: \$90

Class Time: 8:30am-4:30pm

Registration Information

Registration includes lunch, break refreshments, and handout materials

Day One: Saturated Hydraulic Conductivity as a Site Evaluation Tool

\$90 / person

Day Two: Redoximorphic Features, Soil Wetness & Water Table Relationships

\$90 / person

Registration for both days

\$150 / person

Complete the enclosed form and return by **August 9, 2005**

Seating is limited so please register early

Any questions call Joseph A. Valentine @ 267-784-6873

Visit the PAPSS web site www.PAPSS.org

SHORT COURSE
Registration Form

Name: _____

Firm/Organization: _____

Address: _____

Work Phone: _____

Fax: _____

Email: _____

Course Title: _____

Saturated Hydraulic Conductivity as a Site Evaluation Tool

Fee \$90

Redoximorphic Features, Soil Wetness & Water Table

Relationships

Fee \$90

Mail form and check payable to "PAPPS"

PAPSS / POWRA Short Courses

c/o DelVal Soil and Environmental Consultants, Inc.

4050 Skyron Drive, Suite A1

Doylestown, PA 18901

Any questions please contact Joseph A. Valentine @ 267-784-6873

Email: jvalentine@delvalsoil.com

30th Anniversary

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2005