# ILLINOIS SOIL CLASSIFIERS ASSOCIATION

## ISCA WINTER 1998 NEWSLETTER




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### Dr. Joe B. Fehrenbacher - A Memorial Tribute 1915-1997

Kenneth R. Olson and Donald J. Fehrenbacher

Joe B. Fehrenbacher was born near Bogota, IL, on Nov. 5, 1915. Joe received a B.S. in Agriculture from the University of Illinois in 1938, a M.S. in Agronomy from the University of Illinois in 1940, and a Ph.D. in Agronomy from Purdue University in 1964.

In 1942 he worked for the U.S. Government Office of Scientific Research and Development studying defensive and offensive chemical warfare at Northwestern University in Evanston, IL. In May 1945, he was transferred to the University of Pittsburgh, where he joined a group of scientists working on the triggering mechanism of an atomic device.

In 1946, he returned to the University of Illinois where he worked on soil survey studies and soil mapping. He helped map the soils and co-authored the county soil survey reports for 9 Illinois counties including Lawrence, Williamson, Johnson, Wabash, Jersey, Pulaski, Alexander, Gallatin and Douglas. He was in charge of the Illinois soil survey program for the Agricultural Experiment Station from 1970 until his retirement in 1982. For 36 years Joe worked as a full-time partner in the Illinois and National Cooperative Soil Survey program. He continued to contribute part-time to the program, as needed, for an additional 15 years after his retirement.

Joe B. Fehrenbacher, 81, died October 18, 1997 in Savoy, Illinois. He leaves behind his wife of 56 years, Nell; his son Don, daughters Sharon and Delinia; four grandchildren; four step grandchildren; and one great grandson.

Dr. Fehrenbacher's research on the distribution and properties of loess and loess-derived soils has led to a better understanding of the pedological history and classification of these important soils in the Midwest. His work as leader of the soil survey program and his research in the Illinois Agricultural Experiment Station was instrumental in promoting better land use and management of the soils of Illinois. Investigations carried out by Dr. Fehrenbacher on the rooting characteristics of common farm crops, such as corn, soybeans, wheat, and hay, as related to soil properties and management practices has greatly improved the understanding of the factors affecting crop yields on the major soils of Illinois. His studies on land use and soil productivity were extended to the reclamaiton and restoration of surface-mined lands. He conducted studies on the genesis and amelioration of high-sodium in these problem soils and showed that they can be treated with gypsum to become productive soils for common farm crops.

Among other professional accomplishments, Dr. Fehrenbacher chaired the College of Agriculture U of I. Task Group that worked with the Illinois Department of Mines and Minerals to help establish standards for reclaiming land strip-mined of its coal. He served on the Agricultural Land Advisory Board of the Illinois Department of Revenue.

He belonged to Soil Science Society of America, American Agronomy Society, International Soil Science Society, Soil Conservation Society of America, American Association for the Advancement of Science, Council for Agricultural Science and Technology, Phi Kappa Phi, Sigma XI, Phi Eta

Sigma, Alpha Zeta, and Gamma Sigma Delta. He was both a charter and honorary member of the Illinois Soil Classifiers Association, which gave professional status to Illinois Soil Scientists. In 1974, Joe was elected a Fellow in both the American Society of Agronomy and the Soil Science Society of America. He was a life member of the U. of I. Alumni Association.

He was major professor to 12 M.S. and 8 Ph.D. students. Some of these students have been from foreign countries, including India where Dr. Fehrenbacher was on assignments in 1965 and 1970 helping to establish and improve soil survey programs at G.B. Pant University in Pantuagar, U.P. India.

For many years Dr. Fehrenbacher taught a graduate level advanced pedology coarse and co-taught an undergraduate land appraisal class. He published prolifically and was author or co-author of a book chapter, 40 refereed scientific journal articles and 54 research bulletins, extension circulars and technical reports related to soil genesis and classification, soil management, and land use. In addition, he authored or co-authored 19 non-technical articles and 8 soil survey reports for use by general public, land owners lationships of Hosmer silt loam. Soil Sci. Soc. Amer. Proc. 23:65-70.

Fehrenbacher, J.B., Wilding, L.P., Odell, R.T., and S.W. Melsted. 1963. Characteristics of solonetzic soils in Illinois. Soil Sci. Soc. Amer. Proc. 27:421-431.

Fehrenbacher, J.B., White, J.L., Beavers, A.H., and R.L. Jones. 1965. Loess composition in southeastern Illinois and southwestern Indiana. Soil Sci. Soc. Amer. Proc. 29:572-579.

Fehrenbacher, J.B., Walker, G.O., and H.L. Wascher. 1967. Soils of Illinois. University of Illinois, Agric. Exp. Station. in cooperation with USDA, SCS, Bull. 725. 47p.

Fehrenbacher, J.B. 1973. Loess stratigraphy, distribution and time of deposition in Illinois. Soil Sci. 115:176-182.

Fehrenbacher, J.B., Pope, R.A., Jansen, I.J., Alexander, J.D. and B.W. Ray. 1978. Soil productivity in Illinois. University of Illinois, Cooperative Extension Service in cooperation with USDA, SCS. Cir. 1156. 21p.

and land managers of the State. In 1978, he co-authored Circular 1156 (Productivity of Illinois Soils) which is still widely used for estimating long-term crop yields, land appraisal, and agricultural assessments. In 1967, Joe co-authored the "Soil of Illinois" bulletin, which was revised in 1984, and includes a detailed state association map that is still in high demand.

He served as Chairman of Division S-5 of the Soil Science Society of America in 1974 and as a member of many American Society of Agronomy and Soil Science Society of America committees. He was Co-chairman for the Chicago Area Mobile Workshop, planned in connection with the 11th Congress of the International Soil Science Society held in Alberta, Canada in 1978.

**Selected Publications by Dr. Fehrenbacher**

Fehrenbacher, J.B., and R.H. Rust. 1956. Corn root penetration in soils derived from various textures of Wisconsin age glacial till. Soil Sci. 83:369-378.

Grossman, R.B., Fehrenbacher, J.B., and A.H. Beavers. 1959. Fragipan soils of Illinois: I. General characterization and field re
Snarksi, R.R., Fehrenbacher, J.B., and J.J. Jansen. 1981. Physical and chemical characteristics of pre-mined soils and post-mine soil mixtures in Illinois. Soil Sci. Soc. Amer. J. 45:806-812.

Fehrenbacher, J.B., Olson, K.R., and I.J. Jansen. 1986. Loess thickness in Illinois. Soil Sci. 141:423-431.

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**NEW MEMBERS**

**Jeff Deniger** is an USDA-Natural Resources Conservation Services soil scientist at the Naperville MLRA Soil Survey update office. He currently is engaged in update activities in DeKalb and Kane Counties, and has been assigned to lead activities in DeKalb County. Previous assignments included project soil survey work in Warren, Fulton, Franklin, and Jefferson Counties. Jeff earned his B.S. in 1985 from the University of Wisconsin-Stevens Point, and like many grads form UW-Stevens Point, began his career as a county soil scientist. He resides in Warrenville, Illinois, and he joins ISCA as a Full Member.

**Tom Hanzely** joins ISCA as an Associate Member. He earned a B.S. degree from Northern Illinois

University in Geography-Natural Environmental Systems in 1995. He spent the summers of 1994 and 1995 as an intern in the Soil Characterization Laboratory at The Morton Arboretum. He now works with Patrick Kelsey as a Research Assistant in the Soil Characterization Laboratory at The Morton Arboretum. Tom has also helped to plan and execute field tours for the Soil Science Society of America and ISCA. He resides in Naperville, Illinois.

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**ILLINOIS COOPERATIVE SOIL SURVEY ANNUAL PLANNING CONFERENCE**
**September, 18, 1997**

**Meeting Minutes**

- NRCS State Soil Scientist, Bob McLeese, convened meeting at 9 am.
- Sixteen (16) participants in attendance

**Status Reports by Cooperators**

- NRCS (Bob McLeese) McLeese presented Status of Soil Surveys map, a Status of Digital Orthophotography map, a map of revised MLRA's for Illinois, and a map of Soil Survey Project Office Area of Responsibility, and discussed each. The FY 98 workload was reviewed. The 5 MLRA Project Offices are managing work in 37 counties.

- UI Ag Experiment Station (Ken Olson). The Experiment Station supports the MLRA concept but is concerned about Illinois being "served" by 2 Regional MLRA office (MO's). The alignment of MO boundaries "does not make sense'. Olson is currently updating crop yield estimates for Circular 1156. He is also reviewing Illinois' soil characterization data and studying the economics of conservation tillage systems

- IDOA (Terry Donohue) Donohue provided a summary of state appropriations for soil survey since 1981. $423,800 has been appropriated for FY 98, and increase of $80,000 from FY 97. More than $8 million state funds have been allocated for soil survey activities since 1981.

- ISGS (Leon Follmer) Follmer reported that ISGS support for geologic mapping has increased in the last year with the appointment of Chief Shilts.

- ISGS (Don Luman and Mike Barnhardt) Luman and Barnhardt discussed ISGS's Villa Grove quad and Vincennes quad pilot projects. These two quads were selected as pilots to demonstrate usefulness of 'up front' digital data for geologic mapping. Priority areas for 1998 are quads from Adams County, Kane County, southeast McHenry County, St. Clair/East St. Louis, Peoria County, and southern Illinois. USGS's digital orthophoto quads will serve as the base layer for future geologic mapping.

- Forest Service (Elizabeth Raikes) Forest Service is providing $41,700/year to Southern 7 project. Also funded digital orthophoto development with USGS for part of Southern 7. Forest Service's Information Needs Assessment show that soils information is critical for natural resource planning.

**Comments**

- Illinois EPA (A.G. Taylor) Taylor discussed large-scale livestock feedlot issue. There is efforts to identify "Environmentally Sensitive Areas" Soil and geology data are key criteria to identify these areas.

- USGS (Jennifer Sharpe and Terri Arnold) USGS supportive of soil survey MLRA concept.

- Office of Mines and Minerals (Jack Simpson) Reiterated need for new soil series for reclaimed mine land.

- NRCS's Indianapolis MLRA office (Gary Struben) Struben called for more partner interest, input, and participation in soil survey activities.

**Plan to Update and Digitize the Soil Survey of Illinois** (Bob McLeese) McLeese reviewed the August 1997 plan. Plan calls for all counties to be updated and digitized by 2005. The 1/3, 1/3, 1/3 cost share is expected for each project. Still need to hire 1 GIS Specialist and at least 2 soil scientists.

**National Aerial Photography Program (NAPP)** (Don Luman) Luman reported on NAPP as chair of Illinois Mapping Advisory Committee (IMAC). NAPP 1 was color infra-red and was flown in 1988; NAPP2 was flown in 1993, 1994, and 1995 with black and white film. NAPP3 will be flown between February 15 and April 15, 1998. Cost Share funding was provided by Illinois Department of

Transportation (Approximately $250,000). Effect to acquire CIR as part of NAPP3 failed.

**National Digital Orthophotography Program (NDOP)** (Don Luman) IMAC is calling a meeting within next few months to promote State Cost Share for NDOP program.

**SoilView** (Bob McLeese) McLeese discussed the prototype soil survey on CD-ROM, coined "SoilView". Enhancements to the software will be completed before McHenry and St. Clair Counties CD's are developed.

**Discussion**

- The cooperative soil survey needs a formal plan to disseminate published soil surveys. CES and SWCDs should take the lead.
- Illinois Cooperative Soil Survey partners concur that the state annual work planning conference be continued.
- Next year's conference – Thursday, September 17, 1998
- Meeting adjourned at 12 Noon.

**Attendees**

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|---|---|
| Terri Arnold | Mike Branhardt |
| Terry Donohue | Leon Follmer |
| Steve Jones | John S. Lohse |
| Don Luman | Bob McLeese |
| Steve Mozley | Ken R. Olson |
| Elizabeth Raikes | Jennifer Sharpe |
| Jack Simpson | Gary Struben |
| A.G. Taylor | Andrew Vitale |

Minutes by Bob McLeese
September, 18, 1997

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**WESTERN TRIP REPORT**
**Samuel J. Indorante**
**10/16/97 – 11/1/97**

This past October I had the opportunity to travel west with Jim Doolittle (NSSC) to help him provide geophysical assistance in California and Nevada. During our trip we also attended the annual meeting of the Soil Science Society of America in Anaheim to present our poster on our Illinois EM study. The trip lasted 15 days, and I consider it one of the highlights of my professional career. In summary, it was a busy and exciting two weeks. I met and worked with many soil scientist, and I had the opportunity to spread the word about Illinois' soil survey program and to learn new approaches that can be applied to Illinois' soil survey program.

It was a 4500-mile roundtrip and our first stop out west was Hutchinson, Kansas. We dropped off an EM31 electromagnetic conductivity meter at the NRCS Soil Survey Office and met with the soil survey staff. The staff is using EM technology to help them identify the "Permian Redbeds" as an aid to their soil mapping.

Next we traveled to the University of California-Riverside (UCR) to provide Ground Penetrating Radar (GPR) and EM assistance to Dr. Bob Graham (Professor of Soils) and his graduate students. Two days were spent in the San Dimas Experimental Forest and one day was spent in the San Jacinto Mountains. We used the EM and GPR to estimate thickness of soil material over granite bedrock.

One day was spent in the office with Dr. Graham and Jonathan Wald (M.S. Graduate Student). Dr. Graham recently received an NRCS grant to find ways to utilize NRCS's extensive soils database. As it turns out, Tom D'Avello and Dave Barker (Springfield GIS Specialist) developed a geospatial database for the Illinois subset of the NRCS database and the University of Illinois soils database. The approach was very affective, so I introduced Dr. Graham and Jonathan to Illinois' geospatial soils database via the Illinois NRCS home page. Jonathan is now working with Tom D'Avello. Tom is helping Jonathan develop a geospatial database for the California subset of the NRCS soils database. The work, which was first started in Illinois, will now have a nationwide application.

Dr. Graham was kind enough the set up a personal tour of the Agriculture Research Service (ARS) National Soil Salinity Laboratory on the campus of UCR. This was of particular interest to Jim and I, because this is the laboratory where Dr. Rhoades developed EM technology and the EM meter. We were unable to meet with Dr. Rhoades, but the two ARS Scientists Jim Poss and Margaret Grieve gave us an excellent tour of the facilities. They were impressed with the way Jim Doolittle has applied EM technology to sodium soils in the other parts of the U.S., and to other types of soil and environmental problems. NRCS presently has 6 EM meters in Illinois, and we are definitely leading in the

application of this technology to field soil survey investigations.

Jim and I next traveled to the Carrizo Plain and the to the Sierra Nevada Mountains (as part of the Soil Science Society of America's – Soil/Geomorphology Tour). Jim and I gave demonstrations on the use of EM technology in the Sodium Affected Soils Area of the Carrizo Plain and the use of GPR to determine soil depth in the granite areas of the Sierra Nevada's. The tour was attended by 40 scientists (including ISCA newsletter editor, Pat Kelsey) from around the world.

After many years of mapping and studying sodium-affected soils in Illinois, I finally had the opportunity to observe sodium-affected soils of the arid west. My experience in Illinois lead me to believe that the same processes that lead to the development of sodium soils in the more arid parts of the U.S. also occurred in the humid Midwest. Dr. Debbie Reid's presentation on the genesis of sodium soil in the Carrizo Plain, helped confirm that the processes of water recharge, flow through, and discharge are the common denominators for sodium soil development in both arid and humid climates. The concept of applying water recharge, flow though and discharge to help explain sodium soil genesis was first introduced by Dr. Jimmie Richardson (Professor of Soils, North Dakota State University).

In the Sierra Nevada's, Jim demonstrated the use of GPR to measure depth of soil material overlying the granite bedrock. Two of Dr. Graham's graduate students, Ken Hubbert and Kathy Rose are studying tree rooting depths and rooting patterns in these weathered granite bedrock soils. The focus of their research is the water supplying capacity of the granite. It appears as if the fractures in the bedrock are important pathways for root development and for supplying water to the trees. This situation seems to also occur in southern Illinois, were significant tree growth occurs on shallow to bedrock soils. In the future, we hope to have Dr. Graham visit southern Illinois to compare his western observations with Illinois'.

At the Soil Science Society of America (SSSA) annual meeting in Anaheim, California, we presented two posters. "Stratigraphic and Lithologic Patterns in the Shawnee Hills Determined by EM Induction" by S.J. Indorante, J.A. Doolittle, J.D. Bathgate, D.R. Williams, E.C. Workman, L.R. Follomer, and W.M., McCauley; and "A Comparison of EM and GPR Methods in Areas of Karst" by J.A. Doolittle and M.E., Collins. We attended many sessions, but the most interesting and controversial were the sessions on hydric soils and hydric soil indicators.
The last leg of our trip was a two-day stay in Las Vegas, Nevada. Jim and I provided Nevada NRCS and Terry Cook (NRCS Soil Scientist-retired) with geophysical assistance. Las Vegas is a rapidly expanding city, and to maximize the amount of land suitable for development, developers have broken up the petrocalcic horizon of the desert with dynamite. To measure the effectiveness, Jim made GPR runs on areas with a petrocalcic horizon and areas where the petrocalcic horizon was broken-up with dynamite charges. Preliminary results indicate that GPR may be useful in measuring the degree of soil disturbance. Urban areas are very interested in soils information and individuals that can provide soils expertise.

In conclusion I want to thank Bill Gradle, Bob McLeese, and Jim Culver (National Soil Survey Center, NSSC) for allowing me to travel west, and a special thanks to Jim Doolittle. It was a long road trip, but the experience was well worth it.

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**ISCA ANNUAL MEETING**

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| Date: | March 28, 1998 |
| Time: | 11:00am to 4:00pm |
| Location: | Alexander's Steak House<br>202 West Anthony Drive<br>Champaign, IL 61821 |

This year's annual meeting will be held at Alexander's Steak House in Champaign, Illinois (directions on last page) on March 28. Prices range between $11.95 and $16.95. Steaks, Shish Kabobs, Pork Chops, Fish, and Chicken will be the main entrée. A salad bar will also be available for an additional $2.00. Each person is will pay for their own lunch.

Don Luman and Mike Barnhardt, ISGS, will give presentations on GIS applications and new technologies they have incorporated into their research.

**Agenda**

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| 11:00am | Council Meeting |
| 12:00pm | Lunch |
| 2:00pm | Business Meeting |
| 2:30pm | Presentation by Don Luman and Mike Barnhardt |
| 4:00pm | Adjourn |

## 1997 ISCA TREASURER'S REPORT

Report for January 1, 1997 to December 31, 1997

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| Balance in Account – 01/01/97 | $10,703.94 |
| **Income:** | |
| Dues | $2,605.00 |
| Interest | 382.93 |
| Soil Cards | 6.55 |
| Annual Meeting | 494.00 |
| Coffee Cups | 75.96 |
| Summer Meeting | 75.00 |
| Hydric Soils Tour | 1,530.00 |
| | $5169.44 |
| **Expenses:** | |
| Administration | $387.04 |
| Annual Meeting Expense | 644.07 |
| Soil Survey Horizons | 832.00 |
| ummer Meeting Expense | 97.22 |
| Awards | 31.42 |
| ASA – Tour | 112.50 |
| Hydric Soils Tour | 403.65 |
| Memorial | 43.75 |
| Newsletter | 80.80 |
| Soil Health Display | 220.00 |
| | $2,852.45 |
| Ending Balance – 12/31/97 | $13,020.93 |

Charles J. Frazee, CPSC
Treasurer

## ARCPACS ADOPTS EXAM STANDARD

Beginning in January 1998, qualification as an ARCPACS Certified Professional Soil Scientist (CPSS) will require passing two examinations. Certification will require all of the following:

- A minimum of a B.S. degree in soils (or related field)
- 15 semester hours of soil science courses and 6 semesters hours of plant and soil biology courses (this is a very recent change from the old "alternate crops" core requirement)
- 5 years of experience
- Passing grades on the "Fundamentals of Soil Science Examination" and the "Professional Practice Soil Science Examination"

The Soil Science Society of America (SSSA), working with soil science licensing boards over the past 2 years, has developed both examinations. Many of the state licensing boards will require the same examinations.
The change to an exam standard for soils is an important step in gaining recognition for the ARCPACS soils program from local and state governments. The credentials for CPSS will soon mirror those of our colleagues in engineering and geology, which require exams. Requiring an exam strengthens the case for the CPSS to the included in statutes and administrative codes. The change was also important in keeping the ARCPACS Soils CPSS program in step with the soils licensing requirements in North Carolina, Minnesota, Virginia, New Hampshire, Maine and a pending program in Texas. Soil scientists who are currently CPSS or who apply by the end of 1997 will not have to take the exams.

All applicants in 1998 will have to pass both examinations to become certified soil scientists. Applicants can take the Fundamentals exam without experience, and graduating seniors are encouraged to begin the certification process just before or after graduation. To be eligible for the professional exam, applicants must demonstrate that they have 5 years of soil science work experience. Both exams are based on the Soil Science Performance Objectives developed by the SSSA. These performance objectives will be published early in the fall of 1997.

Soil scientists who attain APSS (Associate Professional Soil Scientist) status before 1998 will be able to move up to CPSS without taking the Professional Practice exam. The current method will be used for "grandparented" APSS's – 5 years of professional soil scientist experience for those with a B.S. degree and 3 years of professional soil scientist experience for those with a M.S. or Ph.D. The ARCPACS soils board will determine if the APSS's qualify for full certification when they apply for CPSS.

For information about ARCPACS soil science certification, phone Cleo Tindall at (608) 273-8090, ext. 315

## HILL PUSHES WAY INTO LANDMARK STATUS
**From**
**Peoria Journal Star**
**Frank Fuhrig**

**East Peoria** – Massive continental glaciers shaped the terrain of Illinois. Now, the small hill where a

geologist shaped theories of glaciation a century ago is becoming a national landmark.

The Farm Creek Section is nothing more than an isolated parcel along a creek that runs through a recreation area owned by the U.S. Army Corps of Engineers in Tazewell County.

In 1897, a 38-year-old scientist with the U.S. Geological Survey took a stroll through the countryside in Washington Township outside East Peoria. At the southern banks of Farm Creek, Frank Leverett came upon a tree-topped knoll about 100 feet high and the size of a baseball diamond.

No known record explains precisely why the Farm Creek Section caught Leverett's eye. But like most geologists, he likely would have started by making a small cut into the earth to examine the layers.

What he found made history, improving the understanding of how natural forces carved the surface of Illinois.

Earlier this month, the National Park Service declared the Farm Creek Section a National Historic Landmark, a designation that recognizes historic places found to have exceptional value to the nation.

"It's a little hill," said Joanne Kluessendorf, a research associate in the Geology Department at the University of Illinois at Champaign-Urbana, wrote the nomination for the Farm Creek Section the National Park Service.

"Leverett probably just walked off there one day and spotted a lot of important things there," she said. "No exposure in Illinois has attracted more attention from glacial geologists."

By the late 19th century, geologists had spent several decades studying continental glaciation during the Ice Ages. The theory of repeated advance and retreat of glaciers over the Midwest was widely accepted.

But scientists still debated the importance of those fluctuations. Were they short interruptions in a continual age of ice, or did the breaks represent prolonged intervals between glacial episodes?

"It was a real basic geological concept," Kluessendorf said

Leverett's discoveries at Farm Creek helped provide an answer.

Cutting into the soil, he observed layers of so-called fossil soil – buried, ancient, sediments demonstrating that periods of glacial withdrawal allowed significant vegetation to take hold. Leverett's discovery meant that the interglacial periods were long enough – centuries or even mellennia - to allow topsoil to develop from organic matter.

"The Farm Creek Section is the site that enabled him to make his reputation," said Harry Butowsky, a Park Service Historian who studied the landmark proposal. "Leverett is acknowledged to be the most important glacial geologist in the United States. He essentially created that field of glacial study.

"If I was walking by it, I'd think, 'There's a hill.' But if you're a trained geologist, you can read the layers in the soil."

A year after his first visit, Leverett returned with a field party of other prominent glacier specialists, including Thomas C. Chamberlin and Samuel Calvin, who photographed the site.

"The photograph looks exactly like it does today," Kluessendorf said.

In the 1920s and '30s, another geologist relied on the Farm Creek Section to settle a scientific debate.

Morris Leighton, state geologist at the time, focused on the hill to show that loess, a silty soil found in parts of the upper Midwest, was dropped commonly on bluffs and hilltops by wind. Previously, alternate theories existed that loess was water-deposited sediment.

During his work, Leighton wrote that the Farm Creek Section was "worth going far to see."

The hill is unusual in that it has escaped both natural weathering, agriculture and mining. In many locations, similar glacial geological features that would have held clues to earlier Ice Ages were scoured from the landscape by later glaciers.

The hill remains in pristine condition, Butowsky said. "It really hasn't changed at all since 1897," he said.

Even today, fossil soil research continues at the site by members of the Illinois State Geologic Survey.

"This is a dynamic research area," Kluessendorf said. "It's important to preserve sites."

The landmark designation will change little about the Farm Creek Section, which is open to the public as part of the Farmdale Recreation Area in a floodplain just outside East Peoria. Leverett's hill is accessible on foot or by dirt road.

A plaque will likely by erected to note the location's landmark status.

"It's a site important in the history of geology, in the science of geology," Butowsky said.

Farm Creek is the second geological site in Illinois to receive landmark status. The Mazon Creek Fossil Beds in Grundy County near Morris – one of the best locations in the world for fossil imprints form spineless, soft bodied animals – were designated by the National Park Service earlier this year.

Kluessendorf submitted the nomination for the Mazon site too. The Fossil Beds also were studies for landmark status by Butowsky, who specializes in the history of science. The Fossil Beds are the primary source for collecting specimens of Illinois' rare state fossil, the invertebrate Tully Monster.

From battlefields to laboratories, about 2,000 historical sites have been designated as federal landmarks around the country.

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**POSITION WANTED**

Susan Kauffman, M.S., Soil Science, Oregon State University, is looking for a soil related position in the Chicagoland Area. Main areas of knowledge are in nutrient cycling, Nitrogen availability, and cover crops. Susan also has experience in enzyme assays, microbial biomass, Kjeldahl distillation, and soil mapping as class work. Tangential experiences include; community development in Cambodia, clinical and research lab work in the health fields, and alternative school teaching in Chicago.

**Susan Kauffman**
**5217 N. Sawyer**
**Chicago, IL 60625**
**(773) 604-4773**
**Email kauffmas@aol.com**

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**POETRY MOMENT**

**The Future of Soil Scientists**
**By**
**Loyal M. Reinebach**

Some time in the future, who knows the day,
We'll lay down our augers and turn to clay.

Montmorillinite, Kaolinite, Illinte: who knows the kind?
In a few short years we'll be hard to find.

What once was our bodies so lively and gay,
Will be filled with root hairs running every which way.

Some want us to think that's the end of it all,
When it comes to man's future they're not on the ball.

We're a three-phase creature, mind, body, and soul,
The last phase I mentioned won't go in a hole.

In a few moments we go to be fed,
For physical life we eat daily bread.

The bread of life is the Lord Jesus, you know,
Take him as you Savior and to heaven you'll go.

The date on our program, January 20, 1964,
Dates back to the day he came to settle the score.

Shed his own precious blood for our sins on a tree.
So that by faith in him you and I can be free.

With these few words of wisdom form me.
I'll turn the meeting back to C.E.D.

➳ C.E.D. refers to veteran soil scientist and workshop chairman, Charles E. Downey, widely respected by fellow soil scientists in Illinois.

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**MCLEESE RECEIVES AWARD FOR GIS EFFORTS**
**From**
**Conservation and Your Community**
**Volume 2, Issue 2**

At the December GIS in Illinois 1997 Conference more than 350 participants joined the Geographic Information Systems Association in honoring NRCS's State Soil Scientist Robert McLeese for his

achievements and commitment to GIS progress and technology in Illinois. The Honors Committee presented the first Dahlberg Distinguished Achievement Award to McLeese for his tireless promotion and development of digital soil mapping and its prerequisite data, including USGS digital orthophotos and digital elevation models. The greatly accelerated though McLeese efforts. It would be unlikely that we would have seen this kind of progress without Bob's initiative. " The award was named for the late Dr. Richard Dahlberg, Professor Emeritus at Northern Illinois University and founder of the Illinois GIS Association. McLeese had met Dr. Dahlberg in 1970 and became reacquainted with him in 1987 when Dahlberg was Chair of the Illinois Mapping Advisory Committee. McLeese knew and respected Dr. Dahlberg, which made receiving this honorary award even more meaningful.

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## CANDIDATES FOR ISCA OFFICES

**For President-Elect**

**Ken Anderson** received his B.S. in 1986 from the University of Wisconsin-Steven Point. He had double Major in both Watershed Management and Natural Resource Management and a minor in Soil Science. In 1986, Ken started out as a County Soil Scientist in White County. He then, in 1987, moved to the Kane-DuPage Soil and Water Conservation District where he served as the Executive Director and a Resource Conservationist. In 1988, he became the Soil Scientist and Planner for Kane County. Since 1991, he has been the Manager of the Platting and Environmental Division of the Kane County Development Department. Ken is a Full member of the Illinois Soil Classifiers Association.

**Bill Kreznor** is a self-employed consultant in Woodstock, Illinois. He specializes in soil classification, soil interpretations, land-use planning, soil investigations for on-site septic systems, soil mapping, and hydric soil delineations. He received his M.S. in Agronomy (Pedology) from the University of Illinois and his B.S. in Forestry with a Soil Science Minor from the University of Wisconsin-Stevens Point. Bill was a County Soil Scientist in Iroquois County and an USDA-SCS Soil Scientist in Edgar, Jasper, and Randolph Counties. He also was a Soil Scientist for the Bureau of Indian Affairs in Gallup, New Mexico. Bill is certified both as a Professional Soil Classifier and by the Illinois Soil Classifiers Association.

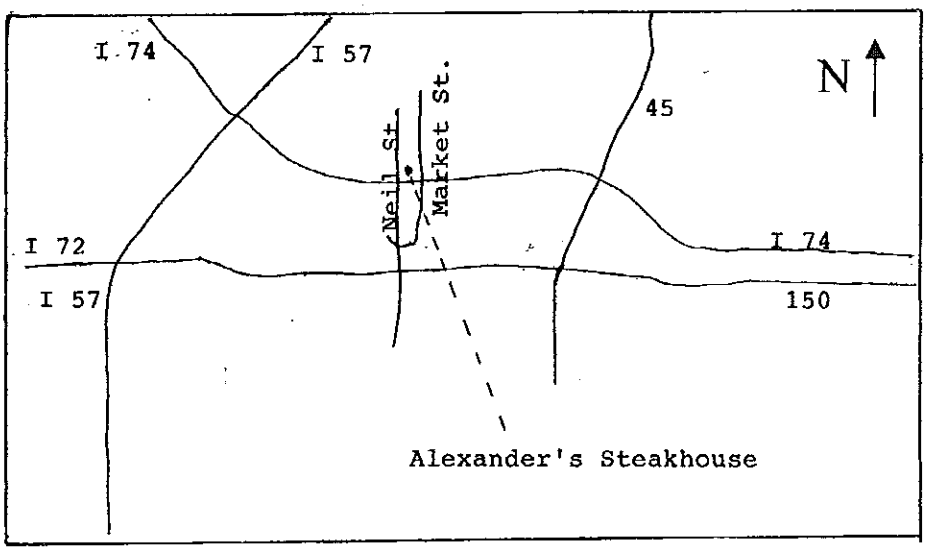
Committee recognized McLeese's strong support of other statewide GIS efforts by other organization, such as IMAC, ILGISA, and ILGIC and his generous donations to time and assistance. Richard Hilton, ILGISA President says, " The growth of the rich and multifaceted data sets throughout the state has been

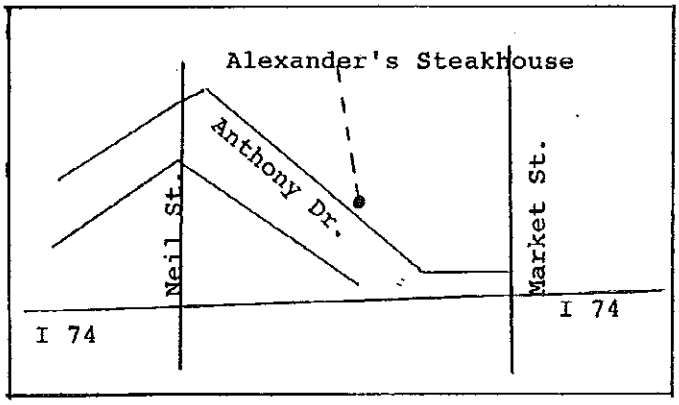
**For Vice President**

**Tom D'Avello** graduated from The Ohio State University where he received his B.S. in Agronomy. He began his career with SCS in eastern Ohio in 1981. He has also mapped in Florida and Montana. In 1988, he went back to school at Michigan Tech and received his M.S. in Forest Soils. After receiving his M.S., he went back to Ohio where he was a Survey Leader in Ross County. His experience with GIS during his M.S. studies is what brought him to Illinois in 1988 to serve as the GIS Specialist on the State Soils Staff. Tom is currently in charge of GIS activities including digitizing County Soil Surveys to be used with the GIS program "SoilView".

**Karla Hanson** is an alumnus of the University of Wisconsin-Stevens Point. She received her B.S. in Resource Management with a Minor in Soil Science in 1987. She started her career in 1988 in McLean County as a Soil Scientist. She has also worked as an USDA-SCS Soil Scientist in Woodford, Marshall, and Bureau Counties. Karla has also been an USDA-SCS Wetland Team Leader in Bloomington and Field Office Team Member in Bloomington and Freeport. Karla currently works in the USDA-NRCS Naperville Office were she is the Update Leader of the Will County Soil Survey and a team member for updates in DuPage, DeKalb, and Kane Counties. Karla is certified by the Illinois Soil Classifiers Association.

# Map to Alexander's Steakhouse
# 202 West Anthony Drive
# Champaign, Illinois



# ILLINOIS SOIL CLASSIFIERS ASSOCIATION

## 1998 SPRING NEWSLETTER


Newsletter Editor - Pat Kelsey (630) 719-2417
The Morton Arboretum
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**FROM THE PRESIDENT**
**"The Way I See It"**
**April 1998**

As we look ahead to the coming year in ISCA, I see several items that we all need to consider. First of all, please consider strongly becoming Certified through ISCA. I know there are folks within ISCA that meet all the requirements but simply haven't taken the time to put all the "gears in motion" to complete the process. We need you and you could benefit from ISCA certification. I also highly recommend becoming ARCPACS certified. These two programs provide excellent professional recognition and give the entire soil science profession strength.

Secondly, we must all make a real effort to stay as current as we can on news, legislation, developments, etc., dealing with our profession. Let others know what is going on out there so that we (ISCA) can respond if needed.

Thirdly, continually stress quality and self-improvement in all the work you do. Never have I seen the natural resource's profession (including farming) come under such close scrutiny and questioning. If the work we do continues to meet and exceed those "industry standards" imposed by the general public, we should have no problems.

Fourth, I encourage you to look for diversity in your jobs. In NRCS lately, we seem to have gotten "bogged down" in wetland determinations and mitigation. Many of the private contractors seem to be doing only septic determinations lately. The MARA folks may have decided they want to do more than transects on a daily basis. The point is, all of our jobs center around a required, somewhat rigid, task or two. But, look for and actively pursue those other jobs when they exist! It helps keep work fresh and exciting, and expands that base of knowledge.

Fifth, please help ISCA by contributing items of information for the quarterly Newsletter. If all the members wrote or submitted one article during the year, Pat would have more than he could print. (But, boy, would he be happy!).

Finally, we all need to remember to be positive about our jobs, our profession, and life. No matter what turn of events transpires, there is always life tomorrow to make amends and go on! To quote a really famous song of a few short years ago, "Don't worry, be happy!"

Roger Windhorn
ISCA President

**MINUTES FROM THE**
**23rd ANNUAL MEETING OF THE ILLINOIS SOIL CLASSIFIERS ASSOCIATION**
**March 28, 1998**
**Alexander's Steak House, Champaign, IL**

Presentation by Mike Barnhardt, Illinois State Geological Survey. Mr. Barnhardt discussed GIS applications, and new technologies the ISGS incorporates into their research.

President Gerald Berning called the business meeting to order at 2:00 p.m.

Secretary's Report - Minutes of the 22nd Annual Meeting held on March 22, 1997 were submitted by Bob Tegeler. Minutes were approved as submitted.

Treasurer's Report -Charles Frazee submitted the Treasurer's Report for January 1, 1997 through December 31, 1997. The treasurer's report was approved as submitted.

Certification Board - Mary Kluz
Mary reported that one new member was certified this past year, (Todd A. Soukup). Mary also reported the database is in the process of being modernized, to manage CEU'S. The Certification Exam is in the process of being updated. A future goal is to accurately define a soil classifier.

Constitution and By-Laws - Bruce Puttman
Bruce emphasized the need to assess the By-Laws concerning Soil Classifiers who do not live in Illinois but practice in Illinois. The main issue is whether they can serve on the Certification Board

Membership, Ethics, and Certification - Bill Kreznor,
Bill received six applications for membership during the past year. Bill also received two at today's council meeting.

Finance - Pat Kelsey
The audit for 1997 was completed. The 1998 Budget was prepared, and totaled $5,000. The budget includes support for the Illinois Department of Public Health Presentation scheduled this coming year.

Historic Committee - Lester Bushue
Lester requested any historical information members may want to submit. Lester also brought numerous photos of soil scientists for those in attendance, to view.

Newsletter - Pat Kelsey
Pat reported that three newsletters were printed last year. He also expressed the need for information that can be put in the newsletter.

Program - Ron Collman
Ron reported that programs were prepared for last years fall meeting and the current annual meeting. Assistance was provided by Pat Kelsey and Bob McLeese.

Public Relations and Education - Don Fehrenbacher
Don distributed his annual report, and discussed various items from it. Three workshops for *Soil Evaluation in the Illinois Private Sewage Code* were held last year.

Don is the primary ISCA representative on the *Advisory Commission on Private Sewage Disposal*. The alternate representative is Bill Kreznor. The commission was created by an amendment to the *Private Sewage Disposal Licensing Act*. The Advisory committee will discuss future amendments and technical items related to the code.

State Soil - Robert McLeese
Bob suggested trying to link the selection of the state soil with the 1999 Soil Survey Centennial activities. Centennial activities will occur throughout the year. Bob stressed the need for sponsors who will support a state soil.

Old Business - No old business.

New Business
The formation of an ad hoc committee to develop standards for high intensity, Order I Soil Surveys for Agricultural Land Mapping, was discussed.

Election results: President-Elect - Bill Kreznor
Vice President - Karla Hanson

Gerald Berning handed the gavel to incoming President Roger Windhorn

Roger listed his committee chairpersons. He urged members to become certified. He also urged committee chairpersons to select their committee members.

1998 ISCA Officers and Committee Chairpersons President - Roger Windhorn
Vice President - Karla Hanson
Treasurer - Charles Frazee
Secretary - Bob Tegeler
Past President - Jerry Berning
President-Elect - Bill Kreznor

Committees
Nominations - Jerry Berning
Finance - Karla Hanson
Newsletter - Pat Kelsey
Public Relations and Education - Don Fehrenbacher
Constitution, By-Laws, and Legislative - Wilbur Chrudimsky
Certification and Membership - Mark Matusiak

Ad Hoc Committees
State Soil - Bob McLeese
Historic - Lester Bushue
Program - Mark Bramstedt

Special Appointee to Advisory Committee on Private Sewage Disposal - Don Fehrenbacher

Certification Board Appointees:
Jim Hornickel
Earl Voss

Submitted by,
Robert Tegeler, Secretary

**MINUTES**
**ISCA Council Meeting**
**April 24, 1998**
**NRCS State Office, Champaign, IL**

People in attendance:
Roger Windhorn, President
Karla Hanson, Vice President

Bill Kreznor, President-Elect
Gerald Berning, Past President
Bob Tegeler, Secretary
Mark Matusiak, Chair, Membership, Ethics, and Certification Committee

The Council Meeting was called to order by President Roger Windhorn at 10: 15 a.m.

Secretary's Report - The report from the last Council Meeting was approved.
Treasurer's Report - No Report. It was noted that Soil Survey Horizons are sent once per year, in January.

Certification Board - No Report.

**OLD BUSINESS**
Roger Windhorn discussed a note from Pat Kelsey requesting newsletter items. Articles for the next newsletter are due May 15. Pat is looking for articles, including information concerning the new committee members. Certification stamps were also discussed. A notice will appear in the next newsletter concerning availability of rubber stamps. If enough certified members are interested in ordering stamps; a group order could be submitted. If a small number is interested, then individual orders could be sent by the members themselves.

**NEW BUSINESS**
The list of unpaid members for 1998 was discussed. Bob Tegeler will send a notice to these members, with a due date of June 1. If not paid by that date, they will no longer be members of ISCA.

Roger Windhorn will notify Pat Kelsey to order more ISCA stationary and envelopes. The need for more membership handbooks was discussed. Mark Matusiak will get 25 copies made. Once the handbook is updated to reflect the latest revisions, more copies will be made.

Bill Kreznor has drafted an amendment to the Certification Standards, concerning out-of-state members serving on the Certification Board. The Membership, Ethics, and Certification Committee will finalize the draft. It will then be sent out in an ISCA newsletter prior to the next ISCA Annual Meeting.

The rules for the Region 3 soil judging contest were handed out for comment. Illinois State University will be the host school. Approximately 12 soil pits will be needed, 4 for the contest and 6 to 8 for practice. The four pits for the contest need to be in one location, the practice pits can be located in the surrounding area, within driving distance. A shed will be needed for scoring the contest. ISCA members will not serve as official judges. Pat Kelsey volunteered to analyze soil samples, from the pits, for particle size data. The contest will be held over a 3-day period, October 8, 9, and 10. The 8th is the arrival date, the 9th is practice day, and the contest will be held on the 10th. ISCA members will be needed to explain the practice pits on the day of the contest. Someone will need to organize and schedule preparations for the event. Roger will contact Don Fehrenbacher and Bob McLeese to see if they are interested in assisting. Bob Tegeler will contact Jim Hornickel to see if he would be interested in assisting. Bill Kreznor will check on a possible site by Mahomet. Details will be firmed up at the next council meeting, including a decision on official judges and off limit areas. Roger will update Wilbur Chrudimsky.

Ideas for greater ISCA publicity, during the contest, were discussed. The goal is to provide ISCA information to the contest participants. An ISCA web page was discussed. Paige Mitchell from the Illinois NRCS State Office could be of assistance. The web page could contain the membership list, a membership handbook, etc. It was decided to establish an Ad Hoc Technology Committee consisting of Mark Matusiak, and possibly Ron Collman and Paige Mitchell. Ron and Paige will be contacted to see if they are interested in assisting. The Web page could contain the soil judging rules etc., for the October contest. Other publicity options include; an ISCA fact sheet to be included in the soil judging packet, and use of ISCA funds to increase contest awards. Mark Bramstedt will be contacted concerning the use of the ISCA sign from the Farm Progress Show. ISCA could also sponsor some aspect of the pre-contest meeting, social night, or part of the banquet.

ISCA fall IDPH meetings will be held in the field. Jerry Berning mentioned possible backhoe expenses, and the need for help with these meetings. More details will be coming. The meetings will be held in Edwardsville, the Peoria area, and the Rockford area.

Roger Windhorn discussed the Order I Standards Committee. Should the committee be a combined ISCA and NRCS effort or a separate effort? Bob McLeese is preparing the draft guidelines for a starting point. Bruce Putman, Pat Kelsey, Les Bushue and Roger Windhom are on the ISCA committee. Roger mentioned a meeting will occur in the near future. Any comments or suggestions should be sent to Roger or Bob McLeese. Volunteers are welcome on the committee, state wide representation is desired.

The policy for submitting ISCA articles to Agronomy News and other publications were discussed. Articles are usually submitted by the Public Relations and Education Committee. Roger will discuss with Don Fehrenbacher. Possibly a summary of a future annual meeting can be submitted to Agronomy News. A notice could also be submitted prior to the next summer meeting.

Photos for the archives and promotional activities were discussed. Someone needs to take photos at events such as the upcoming soil judging contest, and IDPH meetings. The upcoming Summer Meeting was discussed. It will be suggested to the Program Committee to possibly hold the summer meeting in conjunction with the soil judging contest on October 10 in the afternoon. The program could revolve around soil judging. Mark Bramstedt and Don Fehrenbacher will be contacted about the possibilities. Roger will update Pat Kelsey for an article in the newsletter.

An Annual Meeting date will be decided soon, possibly March 6, 1999.

State Soil was discussed. Bob Tegeler will try to obtain a list of states that have state soils, for reference. Bob McLeese is planning to continue the push for a state soil.

Future items were mentioned. The Soil Survey Centennial is in 1999, ISCA could prepare an exhibit for the centennial, in conjunction with NRCS or separately. Future IDPH meetings. The soil exhibit at the Field Museum in Chicago. The exhibit will run for five years, and it is possible that the exhibit could be tied in with the Centennial. Don Fehrenbacher and Mark Bramstedt will be assisting with efforts at the museum. More details will be coming concerning the grand opening. Possible joint meetings could be held with other states, the Corps of Engineers, The Nature Conservancy, or other entities.

The next Council Meeting is tentatively scheduled. for June 19, 1998, at 10:00 a.m., at the NRCS Bloomington Field Office.

Submitted by,
Robert Tegeler, Secretary

## ISCA NOTES

At the Council meeting in April, several items came up for discussion that I would like to share with all the Membership. First, we are strongly considering setting up a Webpage for ISCA. Since I don't know much about this, I'm asking for help from anyone out there who has experience with webpages or at least a strong interest. From what I have been told, we can approach this in one of two ways. One, we can put information about our organization on the Website, i.e. Membership Handbook, list of Members, Certified Members, etc., that only in need of updating once or twice a year, or two, we can take a more "active" approach and also list job openings, upcoming meetings and registrations, minutes from ISCA meetings, etc. These items would take constant monitoring so that any deadlines or dated-responses were acknowledged and taken care of. If you have any ideas or would like to serve as a Webpage-contact-person, please let me know.

Another item deals with publicity for ISCA and how to best "capture" the good work that we do. We would like to have more photos, news articles, etc. of events that we have sponsored or at least been involved in. I am asking all of you to remember to take your cameras with you, and submit your photos to us. We're going to attempt to start recording some of these events for our history and to help us document our work to use with state legislators in getting a State Soil adopted.

We would like to see our membership contribute articles or news items to Agronomy News and Soil Survey Horizons. If you have been waiting for that perfect time to write up a report on your favorite work project, now would be the time.

Finally, we are tentatively setting a date of October 10 for our summer/fall meeting. Please mark your calendars. More details to follow.

Roger D. Windhorn, President

# ILLINOIS SOIL CLASSIFIERS ASSOCIATION

## 1998 FALL NEWSLETTER

| | |
|---|---|
| President - Roger Windhorn | (217) 398-5280 |
| President Elect - Bill Kreznor | (815) 338-2362 |
| Past President - Jerry Berning | (618) 456-9336 |
| Vice President - Karla Hanson | (630) 505-7808 |
| Secretary - Bob Tegeler | (217) 846-2783 |
| Treasurer - Chuck Frazee | (217) 628-3518 |
| Certification Board Chair - Mary Kluz | (815) 456-3333 |
| Certification Board Secretary - Steve Suhl | (217) 498-8511 |
| Newsletter Editor - Pat Kelsey | (630) 719-2417 |

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4100 Illinois Rt. 53
Lisle, IL 60532-1293
FAX (630) 719-2433
E-mail: pkelsey@mortonarb.org

## 1998 CERTIFICATION BOARD

The following individuals comprise the Certification Board for 1998. Jim Hornickle and Earl Voss were appointed by ISCA President Roger Windhorn. Officers were elected at the March 28, 1998, ISCA annual meeting.

Mary A. Kluz, Chair
1797 Iron Springs Roads
P.O. Box 385
Franklin Grove, IL 61031-0385

Scott Harding, Vice-Chair
9833 Lower Marine Road
Marine, IL 62061

Steven E. Suhl,
Secretary/Treasurer
101 Deer Creek Road
Rochester, IL 62563

Wm. Matt McCauley
1571 Club Road
Carterville, IL 62918

James K. Hornickle
104 Cornell Dr.
Normal, IL 61761

Earl Voss
4009 Fairhills Dr.
Champaign, IL 61821

Expiration of board members terms is during the Annual Meeting in the year:

1999 - Kluz, McCauley
2000 - Harding, Suhl
2001 - Hornickle, Voss

## IDPH PRIVATE SEWAGE CODE UPDATE

The postponement of the second phase of IDPH soils training for county health departments sponsored by ISCA and NRCS was discussed. Doug Ebelherr requested the delay until next year because of urgent discussions that were needed with the county health departments. Planning for the Edwardsville session was already completed by Jerry Berning, but the delay would not cause a problem.

The IDPH Advisory Commission was discussed. The first meeting was held on August 10, 1998. The make up of the Commission is fairly evenly balanced between environmental concerns and the septic and building industry. Procedural decisions were made. Major issues will come before the Commission members for voting to make recommendations to IDPH. For a recommendation to be made 13 of a possible 17 votes are required. A written dissenting opinion may be provided to the Department. There will be a minimum 30-day notice before a critical vote. It was suggested that Don Fehrenbacher contact Roger Windhorn in the case of an upcoming vote, so Roger could determine ISCA's stand on a particular issue by discussing it with the council. For minor issues, Fehrenbacher would vote on behalf of ISCA. Bill Kreznor will serve as the alternate representative for ISCA. Alternates can attend Commission meetings in place of the primary representative, they can bring issues and discuss them, but they are not allowed to vote.

The following is a list of Members of the Advisory Commission on Private Sewage Disposal (17 members).

**Illinois Association of Local Environmental Health Administrators**

Kolby Riggle — Vermilion, Co.

**Illinois Association of Public Health Administrators**

Maichle J. Bacon, Chair — Winnebago, Co.

**Illinois Association of Realtors**

Robert Wilkens — Peoria, Co.

**Illinois Environmental Council**

Rob Moore — Champaign, Co.

**Illinois Environmental Health Association**

Paul Chase — DuPage, Co.

**Illinois Environmental Protection Agency**

Tom McSwiggin — Sangamon, Co.

**Illinois Home Builders Association of Illinois**

| | |
|---|---|
| Jerry Conrad | Lake, Co. |

**Illinois Land Improvement Contractors Association**

| | |
|---|---|
| Billy Lane | Mason, Co. |

**Illinois On-Site Wastewater Association**

| | |
|---|---|
| Bruce Sims | Kane, Co. |

**Illinois Precast Concrete Association**

| | |
|---|---|
| Greg Wilburn | Clinton, Co. |

**Illinois Public Health Association**

| | |
|---|---|
| Tony Smithson | Lake, Co. |

**Illinois Soil Classifiers Association**

| | |
|---|---|
| Don Fehrenbacher | Will, Co. |

**Illinois State University**

| | |
|---|---|
| Tim Kelley | McLean, Co. |

**On-Site Wastewater Professionals of Illinois**

| | |
|---|---|
| Kurt Bihler | Will, Co. |
| Gerald Shea | Cook, Co. |
| Michael Tryson | McHenry, Co. |
| Larry VanSickle | Champaign, Co. |

Attached at the end of the ISCA Newsletter is a map of *Local Health Departments Which Perform the Private Sewage Program* (Page 11) and summary data of *Private Sewage Disposal Systems Installed* (Page 12) by region in Illinois.

Submitted by Don Fehrenbacher

## MINUTES

**ISCA Council Meeting**
**June 19, 1998**

Present:
Roger Windhorn, President — Karla Hanson, Vice President
Bill Kreznor, President-Elect — Gerald Berning, Past President
Charles Frazee, Treasurer — Bob Tegeler, Secretary
Mark Matusiak, Chair, Membership, Ethics, and Certification Committee

The Council Meeting was called to order by Vice President Karla Hanson at 10:20 AM. President Roger Windhorn joined the meeting at 10:25 AM.

Secretary's Report - Bob Tegeler
One correction was made to the minutes of the last council meeting. The Soil Survey Horizons subscriptions are sent in March not January. The report from the last Council Meeting was then approved. This correction has been made in the April 24 minutes kept in the Secretary's file. Bob reported that 23 dues reminders were sent, with 9 responding by paying their dues. Refunds will be sent to those who paid too much. Bob will contact the Committee Chairs to determine their committee members.

Treasurer's Report - Charles Frazee
Charles handed out the Treasurer's report showing a balance of $13,251.40 as of June 19, 1998. Six people had paid for the Soil Survey Horizons subscription themselves, they will receive a refund. The Treasurer's report was approved.

Certification Board - Roger discussed his phone conversation with Chairperson Mary Kluz. She has several ideas for the Soil Survey Centennial. She is interested in the possibility of ISCA hats. Mary mentioned that she has a supply of ISCA paper. She sent her list of committee members. They include: Mark Bramstedt, Vice Chair, Steve Suhl, Secretary/Treasurer, Tonie Endres, Scott Harding, and William McCauley.

Membership, Ethics, and Certification - Mark Matusiak
Mark's committee is reviewing 3 membership applications. He discussed comments from Bruce Houghtby on the draft amendment to the Certification Standards, concerning out of state members who practice in Illinois. This draft amendment would allow out of state members to serve on the Certification Committee, if the amendment is approved by ISCA members. The Final Draft will be mailed to Mary Kluz, Chairperson of the Certification Board.

**OLD BUSINESS**
Certification stamps - A notice will appear in the next newsletter concerning availability of stamps.

ISCA Web Page - Mark Matusiak discussed the information he had obtained to date, concerning server charges etc. A list of Web Page ideas was prepared, including:

Graphics - ISCA logo, a profile of the state soil
Text - ISCA Handbook, lists of ISCA members, lists of ISCA Certified members; ISCA Executive Council, Committee Chairs, Certification Board and their phone numbers, and the ISCA Brochure.

Mark Matusiak and Karla Hanson will continue to investigate costs, etc. If the webpage contains current information, a person will be needed to keep it current. Roger will contact Tom D'Avello to see if he is interested in assisting with the Web Page development. Bob reported that Ron Coffman would be interested in assisting.

IDPH meetings - Jerry Berning reported that money will need to be allocated for site preparation for the 3 fall IDPH meetings. A motion was made to allocate $200.00 per session, a total of $600.00. The motion passed, Approximately five ISCA volunteers are needed to assist with each meeting. Jerry will contact members to request their assistance. Roger will contact Steve Zwicker and Don Fehrenbacher about the progress of preparations for the other two locations.

Region 3 Soil Judging Contest - The contest will be held October 8,9, and 10. A possible site will be examined after the Council Meeting. Sites from high school soil judging contests, will be used for practice sites. Expenses for various items of the

contest, such as; backhoe, plaques or special award, and other facility needs were discussed. Other related concerns:

ISCA Liability during the contest

Locating sites, pulling cores for particle size analysis, use of a GPS receiver to locate sites

A representative of ISCA needs to attend the contest banquet or mixer

It was decided to present the ISCA Award to the Outstanding Illinois Collegiate Soil Judge at the contest, instead of at the ISCA Annual Meeting.

The greatest need for ISCA volunteers will be during the practice days, to discuss the soil profiles at the practice sites, and to assist with scoring the contest sites.

Order 1 Soil Survey - NRCS Draft Guidelines prepared by Bob McLeese, were handed out. The ISCA Ad Hoc Committee will now review and comment on the draft. The Ad Hoc Committee consists of Bruce Putman, Lester Bushue, Pat Kelsey, and Roger Windhorn. Charles Frazee and Jerry Berning will also review and comment.

ISCA Publicity - Ideas for publicity includes: hats, ISCA postcards, and T-shirts. Bob Tegeler will check out sources for ISCA hats, as well as hats for the Region 3 Soil Judging Contest.

ISCA Scrapbook - Roger urged the council members to take photos at ISCA events, and look for photos and information from past ISCA events.

Agronomy news - Roger will contact Don Fehrenbacher, ISCA Public Relations and Education Committee Chairperson, about having the list of ISCA Officers and other key items appear in Agronomy News.

Summer Meeting - The Summer Meeting will not be held in conjunction with the soil judging contest as previously planned. Roger will contact Mark Bramstedt, Program Committee Chairperson, about setting a different date.

Membership list - Steve Suhl, Secretary/Treasurer of the Certification Board, will be contacted to see if phone numbers can be added to the ISCA database; possibly by the preparer of the database. Bob Tegeler and Charles Frazee will continue to coordinate the membership list. The database structure will be obtained from Steve Suhl. Once the list of non-certified ISCA members is prepared, it will be sent to Mark Matusiak, Chairperson of Membership, Ethics, and Certification, for his review.

ISCA Handbook - Mark Matusiak reported that 25 copies have been prepared.

**NEW BUSINESS**

Summer Meeting - The Council decided to have the Summer Meeting sometime during the months of September or October. Mark Bramstedt will be contacted, so that a date can be determined by the Program Committee.

Annual Meeting - The date of March 6 was determined as the date for the next Annual Meeting. Mark Bramstedt will be informed of this date, so his committee can make the necessary program preparations.

Training - Mark Matusiak reported that Mark Bramstedt is working with the Nature Conservancy on possible joint meetings or training.

ISCA Workshops - ISCA will concentrate on the 3 IDPH meetings to be held this year, and the 3 to be held next year. Events for the Soil Survey Centennial will also be developed.

State Soil - Activities are on hold until after the fall election. Roger will obtain a hard copy list of states that have state soils.

The next Council Meeting is scheduled for August 20, 1998, at 10:00AM, at the NRCS State Office, Champaign.

The meeting adjourned at 12:00 noon.

Submitted by,
Robert Tegeler, Secretary

## MINUTES
### ISCA Council Meeting
### August 21, 1998

Present:
Roger Windhorn, President — Karla Hanson, Vice President
Bill Kreznor, President-Elect — Gerald Berning, Past President
Charles Frazee, Treasurer — Bob Tegeler, Secretary
Mark Bramstedt, Chairperson, Program Committee
Don Fehrenbacher, Chairperson, Public Relations and Education Committee
Bob McLeese, Chairperson, State Soil Committee

The Council Meeting was called to order by President Roger Windhorn at 10:10AM.

Secretary's Report - Bob Tegeler
The report from the last Council Meeting was approved as written.

Treasurer's Report - Charles Frazee
Charles handed out the Treasurer's report showing a balance of $13,265.09 as of August 19, 1998. The Treasurer's report was approved as written.

Certification Board - Mary Kluz, Chairperson
Roger Windhorn summarized Mary's report. No new applications for certification are pending as of August 8, 1998.

Secretary/Treasurer Steve Suhl has completed entry of the certified membership list into the database. A report of the list of certified members has been sent to President Windhorn. [The] addition [of] optional data fields are being considered for the database, such as, second address, phone, fax, and email address. Other suggestions are welcome. Mary suggested that these optional items not be made available to the public. The Certification Board's next meeting will address the possibility of setting more specific standards for certified soil classifiers. The goal is to unify the expectations of certified individuals, those working toward certification and the public, and to assure the fairness of the certification exam.

The Certified Members list will be sent to Pat Kelsey by August 31, for the next ISCA newsletter.

Ethics, Certification, and Membership Committee - No report

Newsletter Committee- Pat Kelsey, Chairperson
Roger Windhorn relayed Pat's report. Newsletter items are due by August 31. Pat has been working on the lab analysis for the pedons to be used in the upcoming soil judging contest. The analysis should be completed in time for the contest. ISCA may need to finance the organic carbon tests.

Public Relations and Education Chairperson and Special Appointee to Advisory Commission on Private Sewage Disposal - Don Fehrenbacher
Don handed out the list of individuals on the Advisory Commission on Private Sewage Disposal. He also handed out a map of Illinois indicating how each county is handling the private sewage program. Don discussed the need for ISCA Council input when voting issues come up on the Advisory Commission. These voting issues are recommendations by the Commission. Don will contact Roger Windhorn, and Roger will contact the Council when input is needed on an issue. The Council will determine if the particular issue needs to be discussed by the ISCA membership at large, or if the Council can make a recommendation. If ISCA wants to bring up an item for discussion by the Commission, then Don needs to be informed. Don mentioned that the Commission meets quarterly. He will be on the Standards Subcommittee.

A discussion ensued concerning Aeration systems. In most cases if a subsurface release is used, then an onsite is required; however, if the outlet is on the surface, then no onsite is required. Future policy issues to consider include: require maintenance of aeration systems, do not allow aeration with a surface outlet by lakes, and conduct an onsite to determine infiltration rates when surface outlets are used in aeration systems.

Constitution, By--Laws and Legislative Committee - No report

State Soil Committee - Robert McLeese, Chairperson
Bob reviewed an information sheet discussing the proposed Illinois State Soil. This sheet will be included in a State Soil information packet that will be prepared. A sponsor will be contacted after the fall elections. Committee members will need to contact legislators after the election, to discuss the State Soil. VoAg instructors will be contacted possibly this fall during soil judging contests to encourage them to contact legislators as well. It is hoped that the State Soil designation can be coordinated with the Soil Survey Centennial. A motion to allocate $400.00 for the State Soil effort was approved for, this fiscal year.

Program Committee - Mark Bramstedt, Chairperson
Program items were discussed in new business.

**OLD BUSINESS**
Certification stamps - A notice will appear in the next newsletter concerning availability of stamps.

ISCA hats - Bob Tegeler contacted two businesses for cost estimates on hats. A motion was approved for Bob to order 200 hats, with the embroidered logo and wording, with an adjustable leather strap. 100 hats will be dark green and 100 will be navy. Costs to ISCA members will be determined later. Bob will also work on a cost list for ISCA shirts.

Region 3 Soil Judging Contest - The contest will be held October 8, 9, and 10. Four soil Pits will be needed for the contest, and approximately eight pits for practice. Mark Bramstedt will serve as the Official Judge for the contest. The official judge scores all of the pits. Roger Windhorn, Bill Kreznor, and Karla Hanson volunteered to assist Mark if needed. No one from ISCA will be needed on the 8th, the Official Judge will discuss the scoring of the practice pits on the 9th. The contest will be held on the 10th, an ISCA representative will need to be present to answer possible scoring questions. The contest site has been selected, a shed is available on the site. Roger will prepare the "off limits" map, a map to the contest site, road signs, and make arrangements for other needed facilities. Mark Bramstedt will have the current ISCA sign modified for the contest, possibly with the ISCA logo. *Soil Regions of Illinois* post cards will be made available during the contest. Any liability during the contest is the host school's responsibility. Digging of the soil pits will need to be arranged. Award plaques and refreshments will be handled by the host school. The ISCA award for Outstanding Illinois Collegiate Soil Judge will be awarded at a later date.

The *Soil Regions of Illinois* post cards could also possibly be sold at the soil display in the Field Museum.

Order 1 Soil Survey Standards - The ISCA Ad Hoc Committee will meet with Bob McLeese on September 25 to provide ISCA input on the standards. Jerry Berning will talk to Dana Grantham about serving on the Standards Committee.

ISCA Web Page - Options and costs were discussed. Webmaster is a possibility, Roger Windhorn and Don Fehrenbacher will contact Pat Kelsey for input.

IDPH Meeting - The meetings scheduled this year in Edwardsville, Peoria, and Rockford, were postponed until next year.

ISCA Membership Database - Bob will work with Charles Frazee to download the membership database and combine with the Certification Board database. The combined membership list will be sent to Pat Kelsey for the upcoming newsletter.

Agronomy news - Don Fehrenbacher, ISCA Public Relations and Education Committee Chairperson, will examine the possibility of having the list of ISCA Officers and other key items appear in Agronomy News. Bob Tegeler will assist Don with this effort.

**NEW BUSINESS**

Summer Meeting - The Summer Meeting will be held on October 24. Roger Windhorn and Bob McLeese will determine a location. Roger and Mark Bramstedt will contact possible speakers.

Annual Meeting - The date of March 6 was determined as the date for the next Annual Meeting. A tour of the soil display in the Field Museum was discussed as a program possibility.

ISCA Brochure - It was decided to develop a new brochure. Mark Bramstedt and Don Fehrenbacher volunteered to work on the new brochure. They will contact Paige Mitchell from the NRCS State Office, for input.

Illinois Outstanding Soil Judge Award - It was suggested that the award should be presented at a meeting or function attended by the winner's peers.

ISCA Certification - A discussion ensued concerning ISCA members who are certified by ARCPACS, but not ISCA. Items discussed included; developing incentives to make ti more beneficial to be ISCA certified, and the possibility of re-opening the Grandfather clause for certification. No decisions were made at this time. These items will need to be discussed with the Certification Board.

The next Council Meeting is scheduled for Oct. 24, 1998, at 10:00AM, prior to the Summer Meeting.

The meeting adjourned at 12:35PM.

Submitted by,
Robert Tegeler , Secretary

## ISCA 1998 FALL MEETING

Saturday October, 24, 1998
Monticello Golf Club, 720 W Marion St.
Monticello, IL

Agenda

| | |
|---|---|
| 10:00 to 11:00 | ISCA Council Meeting |
| | ISCA Certification Board Meeting |
| 11:00 to 11:30 | Social Time |
| 11:30 to 12:30 | Lunch - Sandwich and Salad Buffet ($7.50) |
| 12:30 to 1:30 | Speakers - Precision Agriculture |
| 1:30 to 2:00 | ISCA Business Meeting |
| 2:00 | Adjourn - Golfing begins at 2:30 |

Directions to Golf Course. Once in Monticello, turn west at four way stop near McDonald's - four blocks to Golf Course.

If interested in attending the Fall Meeting, please fill out the attached Registration Form (Page10) and return it to Bob McLeese by October 19, 1998.

## SOIL DESCRIPTION
## SOIL COLOR CONTRAST

A compromise has been proposed to reconcile differences in classes of color contrast between the Soil Survey Manual and the Field Indicators for Hydric Soils in the United States. The proposal was prepared by an ad hoc committee composed of Mike Whited, Wetland Science Institute; and Doug Wysocki, Wade Hurt and Warren Lynn, National Soil Survey Center, and after review of comments from 50 soil scientists.

The proposal has been adopted as a provisional standard for the National Cooperative Soil Survey. The following tables (Page 7) define the contrast classes by Munsell notations and a key that guides application of the classes.

### Background

Definition: Contrast refers to the degree of visual distinction that is evident between associated colors. (Contrast is often not a simple comparison of one color with another but is a visual impression of the prominence of one color against a background commonly involving several colors.)

Standard: The standard for assigning descriptive soil color terms in the Cooperative Soil Survey is the Soil Survey Manual (SSM).

Problems:

1. The SSM has overlapping and vague definitions. Examples are:

A. Faint: *Commonly* same hue, *some* one hue difference.
B. Distinct: One hue *no more than* 1 chroma. Prominent: One hue *at least* 1 chroma

2. Once the National Technical Committee on Hydric Soils learned of the overlapping and vague definitions in the SSM, the first statement of the definition (for example, Faint - Evident only upon close examination.) was used to redefine color contrast based on examination of Munsell color chips and intent of the SSM for use in the Field Indicators of Hydric Soils (FIHS).

3. Concern was raised about having two sets of standards for defining color contrast. The options seemed to be: (a) Develop a common set of standard definitions, or (b) retain two sets of standard definitions, but use alternative descriptive terms for faint, distinct, and prominent to be used in the FIHS.

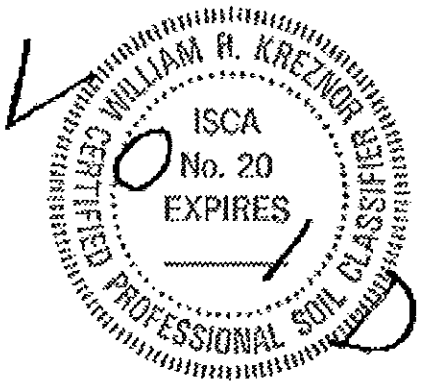
A point has been raised on the effect the proposed change will have on the use of the present and future profile description database (SDIS). There will be two definitions for each of the class names - faint, distinct, and prominent. The future user who extracts descriptions will not know which definitions apply except by knowledge of the date the change took effect and--the date the data were recorded in the database. It leaves an ambiguity that can be alleviated only by assigning new class names to replace faint, distinct, and prominent.

A point has been raised that it would be confusing to users to have two sets of classes and class names for very similar
properties.

## RUBBER STAMPS AVAILABLE FOR ISCA CPSC

Over the past year, there has been renewed interest among ISCA Certified Professional Soil Classifiers (CPSC) to buy rubber stamps. Some of you may recall that about six years ago, 8 of these stamps were purchased by CPSCs. I have used mine routinely for stamping reports of on-site investigations, and detailed soil maps. It looks sharp and adds a nice touch.

The rubber stamps will require the purchase of a separate ink pad at the CPSCs own cost. The stamps will also require the CPSC to "fill in" the expiration date upon each use. This will allow the stamp to be used perpetually as long as certification is maintained. You only need to replace it if you wear it out. Mine is six years old and continues to work fine. The actual size and design are shown below.




The Executive Council asked me to look into obtaining these stamps for our certified members. The cost is $23.95 each. This does not include tax, any shipping and handling costs ISCA must recoup, and instructions for use. The entire cost will by born by those ordering the stamps. Neither ISCA nor the Certification Board will subsidize this offering.

Any CPSC interested should send me the following information, or call me (Bill Kreznor) if you have any questions at (815) 338-2362.

Name: _____

The name to appear on Stamp:

_____

ISCA CPSC Certificate Number: _____
(Not Membership Cert. Number)

Address: _____

City, State, and Zip: _____

_____

Telephone Number: _____

**Tabular Key for Contrast Determination using Munsell® Notation (Revised: 05/98)**

**Hue is the same (Δ H = 0)**

| Δ Value | Δ Chroma | Contrast |
|---|---|---|
| 0 | ≤ 1 | Faint |
| 0 | 2 | Distinct |
| 0 | 3 | Distinct |
| 0 | ≥ 4 | Prominent |
| 1 | ≤ 1 | Faint |
| 1 | 2 | Distinct |
| 1 | 3 | Distinct |
| 1 | ≥ 4 | Prominent |
| ≤ 2 | ≤ 1 | Faint |
| ≤ 2 | 2 | Distinct |
| ≤ 2 | 3 | Distinct |
| ≤ 2 | ≥ 4 | Prominent |
| 3 | 1 | Distinct |
| 3 | 2 | Distinct |
| 3 | 3 | Distinct |
| 3 | ≥ 4 | Prominent |
| ≥ 4 | --- | Prominent |

**Hue is 1 page different (Δ H = 1)**

| Δ Value | Δ Chroma | Contrast |
|---|---|---|
| 0 | ≤ 1 | Faint |
| 0 | 2 | Distinct |
| 0 | ≥ 3 | Prominent |
| ≤ 1 | ≤ 1 | Faint |
| 1 | 2 | Distinct |
| 1 | ≥ 3 | Prominent |
| 2 | 1 | Distinct |
| 2 | 2 | Distinct |
| 2 | ≥ 3 | Prominent |
| ≥ 3 | --- | Prominent |

**Hue is 2 page different (Δ H = 2)**

| Δ Value | Δ Chroma | Contrast |
|---|---|---|
| 0 | 0 | Faint |
| 0 | 1 | Distinct |
| 0 | ≥ 2 | Prominent |
| 1 | 1 | Distinct |
| 1 | ≥ 2 | Prominent |
| ≥ 2 | — | Prominent |

If hue is ≥3 pages different (ΔH = 3) contrast is Prominent regardless of value or chroma

**Color contrast classes defined with symbols and Munsell® notation. (Revised: 05/98)**

| FAINT | DISTINCT | PROMINENT |
|---|---|---|
| Δh=0; Δv≤2 and Δc≤1 | Δh=0; Δv <4 and Δc >1 to <4 or Δv >2 to <4 and Δc <4 | Δh=0; Δv ≥4 or Δc ≥4 |
| Δh=1; Δv≤1 and Δc≤1 | Δh=1; Δv <3 and Δc >1 to <3 or Δv >1 to <3 and Δc <3 | Δh=1; Δv ≥3 or Δc ≥3 |
| Δh=2; Δv≤0 and Δc≤0 | Δh=2; Δv >0 to <2 and Δc >0 to <2 | Δh=2; Δv ≥2 or Δc ≥2 Δh=3; |

Δh = Difference in hue between two colors

Δh = 0 = Same Munsell® page (colors have the same hue)
Δh = 1 = One Munsell® page (2.5 units of hue in Munsell® notation, e.g., 10YR 7.5YR)
Δh = 2 = Two Munsell® pages (5.0 units of hue in Munsell® notation, e.g., 10YR to 5YR)

Δv = Difference in value between two colors (single units of value in Munsell® notation).

Δc = Difference in chroma between two colors (single units of chroma in Munsell® notation).

# 1998 ISCA MEMBERSHIP LIST

| Name | Address | City | State | Zip | Phone |
|---|---|---|---|---|---|
| John Alexander | 2607 Melrose Or. | Champaign | IL | 61820 | |
| **Kenneth Anderson, Jr.** | 47W990 Lasher Road | Elburn | IL | 60119 | (708) 232-3495 |
| **Gerald Berning** | 2811 Brown Street | Alton | IL | 62002 | (618) 465-9336 |
| **Mark Bramstedt** | USDA NRCS 1001 East Grant Street Suite A | Watseka | IL | 60970 | (815) 937-3269 |
| Jeff Brewbacker | PO Box 294 | Wisconsin Rapids | WI | 54495 | (715) 424-3445 |
| **Paul Brown** | 215 W. Washington Street | Pontiac | IL | 61764 | (815) 842-2042 |
| **Lester Bushue** | 1911 Scottsdale Drive | Champaign | IL | 61821 | (217) 359-7447 |
| Dale Calsyn | 117 Laurie Lane | Oswego | IL | 60543 | (630) 554-3965 |
| Paul Chase | 111 N. County Farm Rd. | Wheaton | IL | 60187 | |
| Wilbur Chrudimsky | 107 Veronica Way | Normal | IL | 61761 | |
| Chris Cochran | 4542 W. Lord Redman Loop | Tucson | AZ | 85741 | |
| Ron Collman | 629 Ohio | Quincy | IL | 62301 | |
| Tom Copehhaver | 20 W. Rosewood Lane | Round Lake Beach | IL | 60073 | (847) 265-6042 |
| Clement Coulombe | 90005 Ledge Lane | W. Olive | MI | | (616) 738-1585 |
| Tom D'Avello | 108 McKinley Dr. | Mahomet | IL | 68153 | (217) 586-5011 |
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| Jeff Deniger | 2 S. 621 Wembly | Warrenville | IL | 60555 | (630) 393-3713 |
| **John Doll** | 1702 Harrington Drive | Champaign | IL | 61821 | (217) 398-3040 |
| Darryl Einhold | Village of Barrington Hills | Barrington Hills | IL | 60010 | |
| **Tonie Endres** | Physical Science Bldg. Room 232 | Charleston | IL | 61920 | (217) 581-7873 |
| **Donald Fehrenbacher** | USDA NRCS 1201 S., Gouger Rd. | New Lenox | IL | 60451 | (815) 462-3106 |
| Bryan Fitch | 604 S. 8th St. | Herrin | IL | 62948 | (618) 942-5124 |
| Leon Follmer | 808 Vista Dr. | Savoy | IL | 61874 | (217) 359-2090 |
| **Charles Frazee** | 65 Gaffney Road | Divernon | IL | 62530 | (217) 628-3518 |
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| **Dana Grantham** | 9238 N. 15th Avenue | Butler | IL | 62015 | (217) 532-5285 |
| Gary Greenwood | 9026 Blue Ridge Road | Alton | IL | 62002 | (618) 372-3380 |
| Karla Hanson | 3022 Waters Edge Circle | Aurora | IL | 60504 | (630) 505-7819 |
| Tom Hanzely | 23 Forest Hill Dr. #103 | Glen Ellyn | IL | 60137 | (630) 469-2956 |
| **Scott Harding** | 9833 Lower Marine Road | Marine | IL | 62061 | (618) 624-6969 |
| Clayton Heffter | 826 Burnham Ln. | Batavia | IL | 60510 | (708) 879-3418 |
| Brooks Hoftey | 4833 Owen Center Rd. | Rockford | IL | 61101 | |
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| **Bruce Houghtby** | 4313A Crystal Lake Road | McHenry | IL | 60050 | (815) 344-4020 |
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| Don Johnson | 713 S. Lynn | Champaign | IL | 61820 | (217) 356-7437 |
| James Kapustiak | 9575 West Higgins Rd. | Rosemont | IL | 60018 | |
| Dennis Keene | 601 E. Pennsylvania | Urbana | IL | 61801 | (217) 337-1830 |
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| **Patrick Kelsey** | 711 Wilder Street | Aurora | IL | 60506 | (630) 896-2909 |
| Albert Klingelbiel | 2413 Countryside Dr. | Silver Springs | MD | 20905 | |
| **Mary Kluz** | 1797 Iron Springs Rd. Box 385 | Flanklin Grove | IL | 61031 | (815) 456-3333 |
| Michael Konen | NIU Dept of Geography | Dekalb | IL | 60115 | (815) 753-6849 |
| **William Kreznor** | 904 Powers Road | Woodstock | IL | 60098 | (815) 338-2362 |
| **Emil Kubalek** | 3408 56th Street Place | Moline | IL | 61265 | (309) 797-3208 |
| Michael Kuhn | 929 Hickory St. | Waukegan | IL | 60085 | (708) 249-1509 |
| Carol Latowski | 231 Baldwin, Box 397 | Sharon | WI | 53585 | (414) 736-9458 |
| **Randall Leeper** | 1012 N. 16th Street | Murphysboro | IL | 62966 | (618) 939-7545 |
| **Gary Lenz** | 5746 LRC Road | Waterloo | IL | 62298 | (618) 939-4986 |
| **Michael Lilly** | 214 Dublin Court | Brandon | MS | 39042 | (601) 965-5208 |

| | | | | | |
|---|---|---|---|---|---|
| Charles Love | 2311 Fullerton Dr. | Indianapolis | IN | 46214 | (317) 243-2997 |
| Rex Mapes | 41 Highmeadows Circle | Powell | OH | 43065 | (618) 587-2313 |
| Scott Martin | 2031 Cochran Rd. | Murphysboro | IL | 62966 | (618) 587-2313 |
| Mark Matusiak | 707 S. Second St. | St. Charles | IL | 60174 | (630) 513-6113 |
| **William McCauley** | 1571 Club Road | Carterville | IL | 62918 | (618) 438-5872 |
| **Mark McClain** | 1300 Drawbridge Lane | Lafayette | IN | 47905 | (317) 449-1665 |
| **Robert McLeese** | 1076 Bucks Pond Road | Monticello | IL | 61856 | (217) 398-5286 |
| Pat McNulty | McHenry Co. Dept. of Health 2200 N Seminary Ave | Woodstock | IL | 60098 | (815) 334-4585 |
| **Laura Merkel** | 721 6th Street, PO Box 796 | Hugo | CO | 80821 | (719) 743-2642 |
| **Clifford Miles** | 816 S. Brown Avenue | Terra Haute | IN | 47803 | (812) 235-2211 |
| Vonda Miller | 206 18th Ave | Sterling | IL | 61081 | (815) 625-5168 |
| James Mulcahy | N 7842 Hillside Dr. | Whitewater | WI | 53190 | |
| Jeffrey Nichols | 1232 Country Lane | Lemont | IL | 60439 | (630) 257-6792 |
| **Robert Oja** | 1143 N. Seminary Ave, Box 168 | Woodstock | IL | 60098 | (815) 338-0099 |
| Ken Olson | 3009 Kyle | Urbana | IL | 61802 | (217) 384-4335 |
| Dale Parker | 6601 Grand Teton Plaza | Madison | WI | 53719 | |
| John Pasche | 25955 Flowerstone Dr. | Bonita Springs | FL | 34135 | (941) 992-4035 |
| **John Pearse** | RR 1, Box 83 | West Union | IL | 62477 | (618) 544-3914 |
| Don Phillips | R.R. 1, Box 14 | Shobonier | IL | 62885 | (618) 846-2202 |
| **Bruce Putman** | 1200 Portage Lane | Woodstock | IL | 60098 | (815) 338-6218 |
| **David Rahe** | 828 S. Oak Street | Hillsboro | IL | 62049 | (217) 532-6887 |
| Loyal Reinebach | 1022 S. 21st St. | Quincy | IL | 62301 | (217) 228-8758 |
| Richard Rust | 1922 Autumn | St. Paul | MN | 55113 | (612) 644-9514 |
| Larry Sabata | 3030 SE Aries Ave | Topeka | KS | 66605 | (785) 267-5091 |
| **J. Wiley Scott** | 411 N. Dorchester Drive | Mahomet | IL | 61853 | (217) 586-4233 |
| **Martha Sheppard** | RR2 | Pearl | IL | 62361 | (217 ) 829-4409 |
| Todd Soukup | PO Box 651 | Plainfield | IL | 60544 | (815) 439-6774 |
| **Randy Staley** | 8034 S. State Rd 157 | Clay City | IN | 47841 | (812) 939-2752 |
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| **Steven Suhl** | 101 Deer Creek Road | Rochester | IL | 62563 | (217) 498-8511 |
| **John Tandarich** | 53 W. Jackson Blvd, Suite 1015 | Chicago | IL | 60604 | (312) 922-0777 |
| Wm Tester | Box 655 | Tremont | IL | 61568 | (309) 925-5905 |
| Robert Tegeler | 124 Joan Dr. | Divernon | IL | 62530 | (217) 625-7603 |
| **Earl Voss** | 4009 Farhills Drive | Champaign | IL | 61821 | (217) 352-3089 |
| **Donald Walker** | 1641 E. County Road 1800 | Carthage | IL | 62321 | (217) 746-8601 |
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| Donald Wallace | 643 North Kansas | Edwardsville | IL | 62025 | |
| **Scott Wegman** | 2000 York Road, Suite I 1 2 | Oak Brook | IL | 60521 | (708) 990-0005 |
| **Benny Weiss** | 755 Walnut Grove Road | Harrisburg | IL | 62946 | (618) 252-4292 |
| **Gloria Westphal** | 31849 117th Street | Twin Lakes | WI | 53181 | (414) 862-2232 |
| **Roger Windhorn** | 1902 Fox Drive | Champaign | IL | 61820 | (217) 398-5280 |
| **Steven Zwicker** | 772 Mayfair Dr, RR 6 | Princeton | IL | 61356 | (815) 875-2279 |

** **Bold** represents Certified Professional Soil Classifiers

# ILLINOIS SOIL CLASSIFIERS ASSOCIATION
# 1998 FALL MEETING

**Monticello Golf Club**
**720 W. Marion St.**
**Monticello, IL**

## REGISTRATION FORM

Name: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone: _____

Fax: _____

email: _____

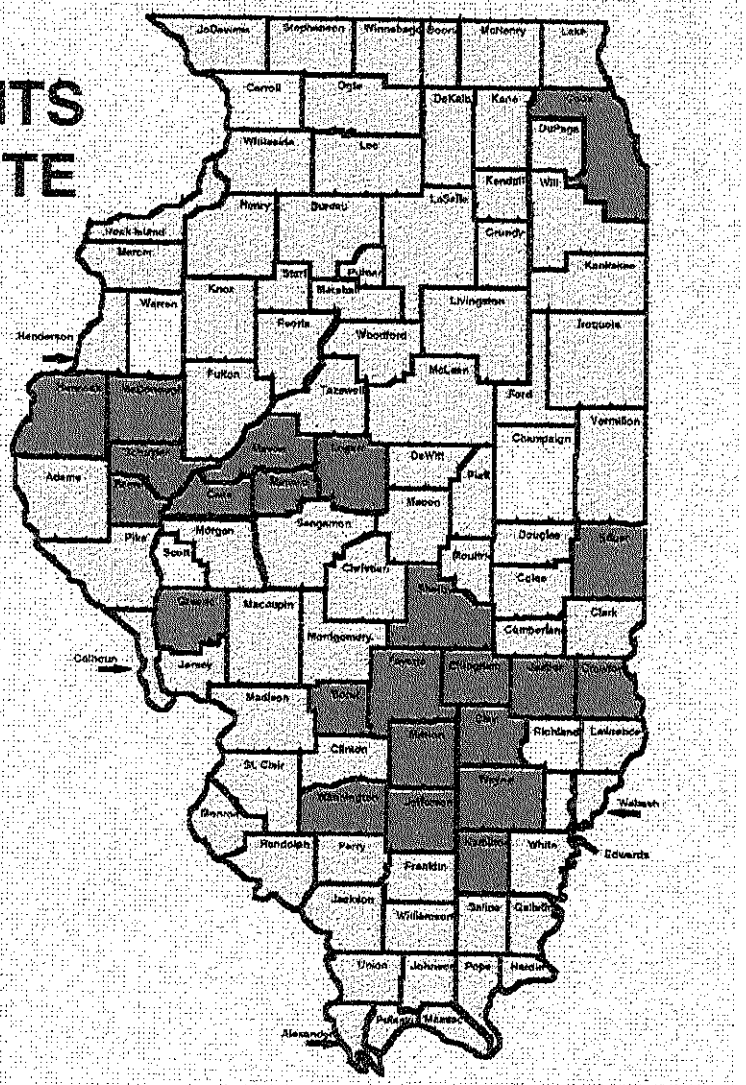
Do you plan on playing golf? (Green fees are $15.00)_____

Check for lunch ($7.50) enclosed _____

Send registration form and check to:
Bob McLeese
1076 Bucks Pond Rd.
Monticello, IL 61856

Return by October 19, 1998

# LOCAL HEALTH DEPARTMENTS WHICH PERFORM THE PRIVATE SEWAGE PROGRAM




## Explanation

- Counties conducting the program with an approved ordinance.
- Counties conducting the program as an agent of the Department.
- Counties where the program is conducted by the Department.

April 1998

9/98

# PRIVATE SEWAGE DISPOSAL SYSTEMS INSTALLED
Calendar Years 1996 vs 1997 (January thru December)

| | SEPTIC TO TANK | | | | | | | | AEROBIC TO UNIT | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Subsurface System Without Discharge | | | | | | | | |
| COUNTY NAME | Gravel System | Gravelless Pipe | Chamber | Seepage Bed | Buried Sand Filter | Recirc Sand Filter | Lagoon | Mound | Discharge w/o Disinf | Discharge w/Disinf | Gravel System | Gravelless Pipe | Chamber | Buried Sand Filter | Recirc Sand Filter | Lagoon | Mound | PRIVIES | TOTAL |
| **REGIONS** | | | | | | | | | | | | | | | | | | | |
| **ROCKFORD -1997** | 1320 | 38 | 5 | 46 | 22 | - | - | 16 | 1 | 49 | 25 | - | - | 4 | - | - | - | 4 | 1530 |
| 1996 | 1253 | 33 | 5 | 164 | 33 | - | - | 10 | 1 | 27 | 26 | 1 | - | 6 | - | - | - | - | 1559 |
| **PEORIA - 1997** | 708 | 484 | 184 | 107 | 510 | - | - | 1 | 17 | 471 | 4 | 1 | - | 2 | - | - | - | 2 | 2490 |
| -1996 | 895 | 569 | 30 | 122 | 558 | - | - | - | 24 | 552 | 9 | 13 | - | 1 | - | - | - | - | 2743 |
| **EDWARDSVILLE-1997** | 315 | 389 | 89 | 7 | 263 | - | 4 | - | 70 | 948 | 21 | 12 | 3 | 7 | - | - | - | 1 | 2129 |
| 1996 | 402 | 336 | 29 | 2 | 217 | - | 1 | - | 9 | 1038 | 7 | 12 | 4 | 6 | - | - | - | - | 2063 |
| **MARION -1997** | 111 | 34 | 29 | 2 | 225 | 1 | 240 | - | 218 | 1151 | 3 | 1 | - | 1 | - | - | - | 1 | 2017 |
| 1996 | 138 | 26 | - | 7 | 189 | - | 265 | - | 94 | 1105 | 1 | 2 | - | - | - | 3 | - | - | 1830 |
| **CHAMPAIGN -1997** | 308 | 382 | 176 | 3 | 170 | - | - | - | 17 | 674 | 2 | 19 | 19 | 2 | - | 15 | 5 | 7 | 1799 |
| 1996 | 365 | 428 | 82 | 63 | 190 | - | - | - | 146 | 480 | 8 | 38 | 2 | - | - | - | - | - | 1802 |
| **WEST CHICAGO -1997** | 1676 | 81 | 180 | 66 | 19 | - | - | 222 | 53 | 324 | 313 | 42 | 38 | 182 | 1 | - | 107 | - | 3304 |
| 1996 | 1910 | 55 | 66 | 74 | 16 | - | - | 60 | 19 | 322 | 368 | 36 | 6 | 37 | 2 | 2 | 57 | - | 3030 |
| **TOTALS 1997** | 4438 | 1408 | 663 | 231 | 1209 | 1 | 244 | 239 | 376 | 3617 | 368 | 75 | 60 | 198 | 1 | 15 | 112 | 14 | 13,269 |
| 1996 | 4963 | 1447 | 212 | 432 | 1203 | - | 266 | 70 | 293 | 3494 | 419 | 102 | 12 | 50 | 2 | 5 | 57 | - | 13,027 |

# ILLINOIS SOIL CLASSIFIERS ASSOCIATION

## 1998 WINTER NEWSLETTER



### ISCA CAPS

These caps were ordered to be both serviceable and to make the public more aware of who we are. All members (all classes) receive one cap FREE and the second or third can be purchased at a cost of $9.00 each. They are available in blue or green, and have a leather adjustable strap in the back. For your free hat and if you want to purchase more, please see one of the current Council Members.

### ISCA POLO SHIRTS

Does the thought of a nice comfortable polo shirt with the ISCA emblem proudly portrayed on the lapel make your heart proud? Well, we are thinking about ordering some of these for purchase by the members. We plan to have some examples on hand at the Annual Meeting. Be sure and be there to place you order. More detail to follow.

### DENIGER ADDED TO PLAN COMMISSION

Daily Herald, DuPage County

The Warrenville Plan Commission is back to full speed with the appointment of city resident Jeff Deniger to the panel.

The commission, which reviews all proposed residential and commercial developments before the city council far a final vote, has seen three resignations is recent months.

But with the appointments of Deniger and resident Tom Sinnott last month, the commission is back to its full complement of nine members.

Deniger's appointment, which was made by Mayor Vivian Lund and approved by the full city council on Monday, marks another step up the community service ladder for the 35-year-old. Deniger has been the president of the Summerlakes Homeowners Association since February.

"I'd like to do something a little different," he said. 'It's a step up to see how the city works."

Deniger was the only city resident to apply for the vacancy. Council members Linda Linford and Burt Minor said they encouraged him to apply for the post.

Minor is past-president of the Summerlakes Homeowners Association, and Linford said she knows Denier because he is her son's Cub Scout leader.

"It's so obvious to me that he cares for the community," Linford said. "He is always willing to go the extra mile. He doesn't have his own agenda. He just wants to do what's right for the city."

Deniger is a soil scientist for the Natural Resources and Conservation Service, a federal environmental agency.

"He seems like he's his own man,' Lund said. "He's certainly a qualified candidate."

Deniger said he wants to get in on the ground floor on planning for Cantera, a 650-acre commercial, residential and entertainment development near the East-West Tollway.

Though he said Cantera has been well planned so far, he wants to make sure future developments there are right for the city.

"I'm a little concerned about Cantera," he said. "I would like to see what's going on there firsthand."

Submitted by Karla Hanson

### THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS COMMITTEE MEMBERS

This is an update on the functions and current membership of the National Technical Committee for Hydric Soils (NTCHS). The major functions fo the NTCHS are:

1. Provide national leadership in the formulation, evaluation and application of the Hydric Soil definition, criteria and indicators.
2. Maintain the National List of Hydric Soils.
3. Respond to public comments concerning the Hydric Soil definition, criteria, lists and indicators.
4. Maintain the Hydric Soil technical standard.

There have been some recent changes in the membership of the NTCHS. Russell Pringle, Soil Scientist, NRCS, Baton

Rouge, LA has rotated off the committee. He will remain a member of the NTCHS Field Indicator Subcommittee. Richard Griffin, Prairie View A&M University, Prairie View, TX, has joined the committee. Bobby Ward, NRCS, Fort Worth, TX and Lenore Matula-Vasilas, NRCS, Baltimore, MD also have joined the committee. The current members of the NTCHS are listed below.

Current membership:

Natural Resources Conservation Service:
Wade Hurt, Gainesville, FL
Lenore Matula-Vasilas, Baltimore, MD
Neil Peterson, Boise, ID
Bobby Ward, Fort Worth, TX
Michael Whited, Lincoln, NE

Universities:
Del Fanning, University of Maryland, College Park, MD
Stephen Faulkner, Louisiana State University, Baton Rouge, LA
Richard Griffin, Prairie View A&M University, Prairie View, TX
Herb Huddlestion, Oregon State University Corvallis, OR
Chien-Lu Ping, University of Alaska, Fairbanks, AK
Jimmie Richardson, North Dakota State University, Fargo, ND
Wayne Skaggs, North Carolina State University, Raleigh, NC

Wetland Memorandum of Agreement (MOA) Agencies:
Porter Reed, Jr., US Fish and Wildlife Service, St. Petersburg, FL
Jerry Ragus, US Forest Service, Atlanta, GA
William Sipple, US Environmental Protection Agency, Washington, DC
Russell Theriot, US Army Corps of Engineers, Vicksburg, MS
William Volk, USDI Bureau of Land Management, Billings, MT

We welcome those who have recently joined the NTCHS and thank them for volunteering their time and expertise. We also thank all current and past members for their contributions to this important effort.

Maurice J. Mausbach, Deputy Chief
Soil Survey and Resource Assessment

## AMERICAN SIZE LIMITS FOR SOIL SEPARATES

Historical Notes - Ohio Pedologist

The present size limits with a few exceptions originated rather accidentally during the last 25 years of the 19th century. At the time, there was much interest in methods of mechanical analysis, both in this country and Europe, but little in the size limits. The earliest American report I have seen was on methods by E.W. Hilgard of California 1873. He published 8 more reports prior to 1900. Descriptions of methods were also offered by others, 21 in this country and even more in Europe. The latter are not covered in this note.
An early set of size limits, which included most of our present ones, was published in 1886 by Thomas B. Osborne in a comparison of several methods. This was in the annual report of the Connecticut Agricultural Experiment Station. Osborne added more on mechanical analysis in 7 later annual reports.

In his procedure, Osborne passed samples successively through screens with openings of 3, 1, 0.5, and 0.25 mm, using water to wash materials though the finest mesh. He made additional separations at 0.1, 0.05, and 0.01 mm by sedimentation in water in a beaker. He called particles smaller than 0.01 mm clay. Sizes of particles were checked with a microscope.

Five years later, Whitney made mechanical analysis of the "type soils" of Maryland, setting apart 8 separates. He used most of the size limits outlined by Osborne but chose an upper limit of 2 mm and split the fraction below 0.01 mm at 0.005 mm, labeling material between 0.005 and 0.001 mm clay.

Shortly afterward in Minnesota, Snyder used a number of the same size limits for "fine earth" defined as particles smaller than 0.05 mm. He also made a separation at 0.005 mm but called all of the material below that limit clay.
A year or so later, Whitney published a procedure for mechanical analysis in which he used the following labels and size limits in mm: fine gravel 2.0-1.0, coarse sand 1.0-0.5, medium sand 0.5-0.25, fine sand 0.25-0.10, very fine sand 0.10-0.05, coarse silt 0.05-0.01, fine silt 0.01-0.005, clay 0.005-0.001. Early in the present century, U.S. Dept. Agriculture Bureau of Soils dropped the subdivision of the silt fraction and the lower limit for clay. Those size limits and names prevailed in this country for about 30 years. During the 1930s, the name "fine gravel" was replaced by "very coarse sand" and the limit between silt and clay was changed from 0.005 to 0.002 mm.

One exception to the general lack of discussion of size limits was a plea by C.G. Hopkins of Illinois for basing them on a scientific foundation. From correspondence with Osborne of Connecticut he quotes: "Working out the beaker method of soil analysis, I employed the limits of the various grades with reference simply to convenience in using my eyepiece micrometer. I have always thought that the various grains should be determined by a careful consideration of the various conditions involved in the problem of proper mechanical analyses of soil and have been surprised to see that the arbitrary limits employed by me have been followed by others in applying the method in practice."
Hopkins next proposes that the size limits for soil separates begin with an upper limit of 1 mm (gravel would be larger) and go down in steps of the square root of 10. Ratios of the average diameters of separates would then be the same for every adjacent pair. Moreover, a sample with uniform distribution of particle sizes would in this system consist of equal proportions of all separates. So far as I know, the proposal drew no takers.

For whatever reason, the size limits keyed to the eyepiece micrometer in Osborne's microscope spread rather quickly and have provided most of the limits adopted in the USA. They were easily remembered because most happened to match

denominations in American currency from the dollar to the nickel.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## EXTENSION OF NATIONWIDE PERMIT NUMBER 26

U.S. Army Corps of Engineers

As part of the October 14, 1998, Federal Register supplemental notice concerning additional restrictions proposed for the Nationwide Permit Program, the U.S. Army Corps of Engineers announce that the expiration date of Nationwide Permit number 26 (NWP26) was extended until September 15, 1999.

**Projects which were authorized under NWP26 by the Chicago District with an expiration date of December 13, 1998 are automatically extended to September 15, 1999.** There is no need for individuals to request a written extension for a specific project since this extension is automatic and applies to all NWP26 authorizations.

Environmental and engineering consultants should provide a copy of this notice to clientele who have recently been authorized under NWP26 by the Chicago District. If you have any questions, please contact Michael Jewell of the Regulatory Branch by telephone at (312) 353-6400, extension # 4030, or e-mail at michael.s.jewell@usace.army.mil.

Index of Nationwide Permits, Conditions, Further Information, and Definitions:

Proposed New Nationwide Permits
- A. Residential, Commercial, and Institutional Activities.
- B. Master Planned Development Activities
- C. Stromwater Management Facilities
- D. Passive Recreational Facilities.
- E. Mining Activities
- F. Reshaping Existing Drainage Ditches

Nationwide Permits Proposed to be modified
- 3. Maintenance.
- 7. Outfall Structures and Maintenance.
- 12. Utility Activities.
- 14. Linear Transportation Crossings.
- 27. Stream and Wetland Restoration Activities.
- 40. Agricultural Activities.

Nationwide Permit Conditions
General Conditions:
1. Navigation
2. Proper maintenance
3. Soil Erosion and Sediment Controls
4. Aquatic Life Movements
5. Equipment
6. Regional and Case-by-Case Conditions
7. Wild and Scenic Rivers
8. Tribal Rights
9. Water Quality*
10. Coastal Zone Management
11. Endangered Species
12. Historic Properties
13. Notification*
14. Compliance Certification
15. Multiple Use of Nationwide Permits.
16. Subdivisions*
17. Water Supply Intakes
18. Shellfish Production
19. Suitable Material*

## PROPOSED REGIONAL CONDITIONS

The Chicago District of the U.S. Army Corps of Engineers is examining establishing regional conditions for proposed and existing Nationwide Permits to ensure that the effects of the Nationwide Permit Program on the aquatic environment are minimal, both individually and cumulatively. Below are regional conditions currently being considered by the District. Comments on these possible regional conditions, as well as suggestions for additional regional conditions, are being solicited from the public at this time (see page 3 of this notice for where to send written comments).

Proposed New Nationwide Permits
- A. Residential, Commercial and Institutional Activities
  - Require "Notification" in all cases
  - Reduce acreage thresholds
- B. Master Planned Development Activities
  - Suspend permit
- C. Stormwater Management Facilities
  - Suspend permit
- D. Passive Recreational Facilities
  - Require "Notification" in all cases
  - Limit types of recreational facilities under permit
  - Require compensatory mitigation
- E. Mining Activities
  - Suspend permit
- F. Reshaping existing drainage ditches
  - Require notification in all cases
  - Limit area of disturbance

Nationwide Permits Proposed To Be Modified

3. Maintenance
   - Require "Notification" in all cases
12. Utility Activities
   - Require "Notification" in all cases
   - Reduce acreage thresholds
   - Require compensatory mitigation

14. Linear Transportation Crossings
   - Require "Notification" in all cases
   - Reduce acreage thresholds
   - Require compensatory mitigation

Other Nationwide Permits (Not Proposed To Be Modified)

13. Bank Stabilization
   - Require notification in all cases
18. Minor Discharges
   - Limit area of disturbance
33. Temporary Construction, Access and Dewatering
   - Notification must include a wetland delineation
   - Require use of non-erosive materials for water diversion or dewatering

All Existing and Proposed Nationwide Permits

- Prohibit specific activities, in certain types of wetlands
- Require that no lot lines occur in wetlands
- Require upland buffers adjacent to waters of the United States, including wetlands
- Require that no in-stream stormwater detention facilities be constructed within the limits of existing waterways, including adjacent wetlands
- Require that natural areas on adjacent properties not be indirectly impacted
- Require consistency with local/regional watershed plan(s)

**COMMENTS ON DRAFT STANDARDS AND SPECIFICATIONS FOR HIGH INTENSITY SOIL SURVEY FOR AGRICULTURE IN ILLINOIS.**

Dear Committee Members,

Case Corporation's FarmOne organization appreciates the opportunity to provide comments on your draft standards document (revised June 1998). Our overall impression of the draft standards is very positive. Case Corporation's Advanced Farming Systems (AFS) group feels that the time is right for the development of these minimum standards for high intensity soil survey in agriculture. We feel that your draft document appropriately emphasizes two key areas - the handling of point data and qualified professional interpretation of high spatial resolution soil information. All "site specific" agricultural processes that have the potential to be done on a sub-field level require the proposed level of detail in soil information to be successful. There are several potential service providers to the agricultural community that may take advantage of high intensity soil surveys. It is critical that this high resolution soil information base is developed in a consistent manner across the state so that all of these service providers will be able to provide a similar level of service. We applaud the committee's efforts in this matter, and would like to make the following recommendations:

1. In section 3 (Map Base) we would strongly recommend that the committee consider the addition of "high accuracy" topographic data as a data layer that would be used in conjunction with aerial photography. The topographic map is a valuable piece of information when interpreting soil spatial variability at the proposed scales in accordance to soil-landscape models. We realize that topographic maps are mentioned in section 11 for cases where it is available, but it is our opinion that "high accuracy" topographic information is critical for a successful high intensity soil survey for agriculture (HISSA). One-foot contour information should be a minimum standard.

2. Under sections 8 and 9 we would recommend that the source of the taxa, map unit description, and other primary reference material be documented in the final report (e.g., MLRA office vs. NRCS Internet site - date/revision number of the information as well).

3. Another concern is found in section 12 (Point Data). We would recommend that the point data georeferencing process be done for each collected point so anyone would be able to return within one meter of the original coring site (within 50 years or more of data capture). There are several methods that could be used to achieve this from existing global positing system technology to tape measurements from a known, permanent monument (i.e., not property stakes, fence posts, etc.). Detailed information about the georeferencing approach used is key for accurate spatial registration of the point data. This spatial information can be used in the interpolation of soil attribute surfaces, and in the modeling of soil/plant systems. We would like to emphasize that if a dissimilar inclusion soil is sampled, the point data is recorded (including georeferencing information) and that an additional sample be taken at that site. Sampling density should be sufficient if there is at least one sample point per delineated map unit.

4. In a finer point for section 12, we would recommend that the statement "... personal judgement of the soil scientist ... " be changed to "... professional judgement of the soil scientist" to emphasize the need for certified professionals in conducting the HISSAs.

5. In section 14 (Product/Report) we would like to suggest several potential interpretations of the soil data as examples of what growers may find relevant for helping with management decisions: tillage recommendations, erosion/residue management, nutrient leaching/management, productivity estimates, and "marginal land" identification and interpretation. Particularly valuable interpretations would include information about management limitations. Interpretation of hydraulic parameters would be very useful as well (e.g., Ksat, AWHC, Bulk Density) - see comment #6.

6. In Appendix C we would recommend the addition of soil structure information (by horizon) to aid in the

estimation of Ksat and AWHC parameters. We'd also like to see two lines of information added to the worksheet: one which provides information about the party which paid for the collection of the information and a second which details the property owner's information (in case the two differ). It is our opinion that it is very important to identify the owner of this information. This product will probably be a relatively costly one, data ownership needs to be clear. For example, if a tenant purchases this service, he/she should be able to sell access to the information to the property owner. It would also be beneficial to have the soil scientist's signature and date on each point data worksheet.

7. In Appendix B there is no indication on the legend of symbols that may be used to delineate (approximate) property lines or subsurface tile drainage. The ability to identify the location of artificial subsurface drainage may add significant value to the final HISSA product.

Thank you for this opportunity to comment on the committee's draft standards. We would like to discuss with the committee two additional ideas that we have for the use of this HISSA information:

1. With the potential for increased involvement of the EPA in agriculture, and a resultant need for certified management plans, we feel that a grower that has access to HISSA information about his/her field should be able to increase the level of chemical use where the HISSA information indicates it would be appropriate. Those growers that build their plans on 2nd order soil survey information would not have this much latitude in their management plans. Chemical use would be constrained to the most limiting soil series that occupies a "significant" portion of a soil map unit.

2. The identification of 'marginal lands' in the HISSA process would provide the information base to enable a logical national farm economic policy: provide subsides to growers to farm "marginal lands" in non-surplus years.

Steve Faivre, Director
FarmOne Advanced Farming Systems
Case Corporation

## COMMENTS ON HIGH INTENSITY SOIL SURVEY DRAFT FOR ILLINOIS

Mark Stelford of the Case Corporation indicated that you were the person collecting comments on the DRAFT - Standards and Specifications for High Intensity Soil Survey for Agriculture in Illinois document. My position with Pioneer Hi-Bred Int'l. Inc. is Precision Farming Agronomist so most of my comments come from that bias, although I do have a Ph.D. in Soil Science.

1) Since these standards and specifications apply to private soil survey professionals, the question of data ownership may not be an issue. However, in the precision farming world, this is a prominent, if not a potentially contentious issue for some. It has always been our stance, that the person who paid for the work is the owner of the data. Later use of that information must be done with the approval of the original customer, even though the land surveyed may have passed to a new owner or manager. This is, of course, only our opinion. In the section on Data Sharing (15.), I don't understand why the Soil Classifier needs to "concur" in order to provide data to the NRCS MLRA, or anyone else. To me it's like requesting a copy of your medical records from one doctor in order to get a second opinion from another doctor. The first doctor doesn't have the option to "concur" or not.

2) In Section 3, page 4 (Map Base), I would suggest that a georeferenced map base be required. This attribute would be essential if the soil survey was ever to be used within a GIS for most any precision farming analysis. Providing a un-georeferenced soil map (especially for a high intensity survey) in this day and age would be like Ford or Chevrolet selling a luxury car without a radio, even though it was a "preferred" option. Even if the original customer isn't a precision farmer, they may well wish to adopt precision farming techniques in the future, or may want to "sell" the document to a future tenant or purchaser who is a precision farmer.

3) Just a minor question about the % inclusions listed in Section 9 - Map Units. It seemed to me that up to 25% inclusions in a high intensity soil survey was a bit high. My perception is that precision farmers want better resolution soil surveys to use directly in their GPS-based management systems. Avoiding inclusions in the original 2nd Order soil map will probably be the main reason why land managers will want to invest in high intensity soil surveys in the first place. Maybe I was just hoping that we could get well below the 15-25% extent for inclusions.

4) Let me just play the devil's advocate here for a moment. I question whether the "soil-landscape model" and the techniques described in the NSSH,
SSM, and Soil Taxonomy, alone, are adequate for creating maps with sufficient resolution for use in precision farming. This is regardless of the scale that is used in creating the soil map. Let's make it both high intensity, AND high quality. What is needed is a more quantitative inventory of spatial site attributes that affect crop yield variation and other crop management parameters. Map unit names, symbols, and map unit descriptions (as mentioned in Section 5) are very general classes of information which are only indirectly related to crop yield variation. With no additional information, we still have to make the map user into a soil scientist before they can make detailed use of the map information. Some of the more quantitative spatial data layers that would be most useful are mentioned in Section 11 - Soil Survey Augmentation. These include remotely sensed images, DEM's, EM profiles, etc. As a bare minimum, I would suggest that the high intensity soil survey should contain a bare soil photo, a map of the topography (+/- 1 foot accuracy or better), and an EM profile. Later, when economical sensors for soil texture, organic matter, soil nutrients, and other soil properties are available, perhaps they could be included too. Please don't get me wrong, I am a strong believer in Soil Surveys. But I think that

in the future, quantitative soil information in a spatial context will be what will be most useful to the user.

Please let me know if I can provide any further clarification of these comments. I can be reached at (515) 334-6999 or doergeta@phibred.com. Thank you for the opportunity to provide input on this draft document.

Tom Doerge
Pioneer Hi-Bred International, Inc.

## SOIL DRAINAGE CLASS ISSUE PAPER

*DEFINITIONS:*

1. Drainage Class – This class pieces major emphasis on the relative wetness of the soil under natural conditions as it pertains to wetness due to a water table. (Page 293. Soil Survey Manual - 1993)

2. Natural Drainage Class - refers to the frequency and duration of the wet periods under conditions similar to those under which the soil developed. Alteration of the water regime by man, either through drainage or irrigation, is not a consideration unless the alterations have significantly changed the morphology of the soil. (Page 98, Soil Survey Manual, 1993)

3. Drainage Class - identifies the natural drainage condition of the soil. It refers to the frequency and duration of wet periods. (Page 618-8, National Soil Survey Handbook, 1996)

*SIGNIFICANCE:*

Drainage classes provide a guide to the limitations and potentials of the soil for field crops, forestry, range, wildlife and recreational uses. The class roughly indicates the degree, frequency, and duration of wetness, which are factors in rating soils for various uses. (Page 618-8, National Soil Survey Handbook, 1996)

*BACKGROUND:*

Drainage classes have a long history in the evolution of the soil survey program in Region 10. As an example, the 1939 soil survey of Kanabec County, Minnesota, by the Bureau of Chemistry and Soils refers to soils as being either well drained or poorly drained.

Each state within Region 10 in the past has assigned drainage classes to the series that have originated in their state. The drainage classes generally were assigned using guides available at the time, observable soil response, field documentation including morphology and limited piezometer data, and past precedence. The drainage classes assigned generally related to land use limitations and potentials, especially for agronomic purposes.

*CURRENT SITUATION AND INCONSISTENCIES*

There are currently noticeable inconsistencies in the drainage classes between soils with similar saturation depths and duration. These inconsistencies may have evolved from different interpretation of guidelines between states, past bias or precedence or other reasons.

A query of drainage classes and saturation depths (in feet) from the Region 10 3SD data set shows the inconsistencies. The following are some examples:

Moderately well drained soils
0.50 to 1.50
1.00 to 2.00
1.50 to 2.50
2.00 to 3.00
2.00 to 4.00
2.00 to 5.00
2.50 to 6.00
3.00 to 6.00
4.00 to 6.00

Somewhat poorly drained soils
1.00 to 3.50
1.00 to 6.00
1.00 to 3.00
1.50 to 4.00
1.50 to 5.00
2.00 to 3.00
2.00 to 4.00
2.00 to 5.00
2.00 to 6.00

Poorly drained soils
+.50 to 1.00
+.50 to 2.00
0.00 to 1.00
0.50 to 1.00
1.00 to 1.50
1.00 to 2.00
1.00 to 2.50
1.00 to 3.00
3.00 to 4.00

With this overlap of drainage classes and saturation depths, users cannot get a clear, meaningful and consistent interpretation of soil moisture status between regions, states or counties from only the drainage class term. Because of this situation it is apparent that some improvement is needed to rectify this current situation and make meaningful interpretations for users.

*PROPOSAL*

An alternate method to communicate drainage classes to users is to report depth and duration of soil saturation using soil moisture status data in NASIS formerly referred to as water table depth. (Page 618-39, National Soil Survey Handbook, 1996) The soil moisture status has three classes, dry moist and wet. Soil moisture status is part of the data in the National Soil Information System (NASIS) database. The status is recorded by depth for each month of the year. The data is based on soil morphology, piezometer data, observed soil response, and other information.

Using soil moisture data-wet from NASIS would help overcome the limitations and inconsistencies of the naming of drainage classes by soil series. This new method could help

overcome the past bias and interpretation differences that evolved between states over long periods of time. Many attempts have been made to make drainage class interpretations consistent across the country but have typically been unable to resolve all inconsistencies.

A rating system called the "Soil Moisture Index" (SMI) is proposed to allow a consistent and systematic procedure for describing soil saturation depth and duration on landscapes. The Soil Moisture Index numbers are on a scale of 1 to 10 with wetness limitations increasing as the numerical index number increases. This is similar in concept to the von Post scale used to categorize the degree of decomposition in organic soils. In that ranking system the degree of decomposition increases as the index number increases. It is also similar in concept to the current wind erodibility groups and capability classes. SMI numbers are assigned taking into account soil saturation depth and duration with links to soil taxonomy.

The following are the premises that go along with this rating system:

1. *This system does not have a bias towards the growing season or agricultural crops.* The moisture status wet is used regardless of its time of occurrence. If the soil moisture status during the growing season is important, a simple NASIS query can be used to determine that information and print a report.
2. *This system is not geographically biased.* If the wettest time of the year is January in Texas and June in North Dakota, the rating system does not make a differentiation. In either case, a septic tank drainfield may fail due to excessive wetness, therefore the SMI number may be the same for the same depth and duration, regardless of its time of occurrence.
3. *The soil taxonomy links are to assure consistency with saturation.* The reference to soil taxonomy is used as a link/reference since taxonomy uses specific depth to saturation in its classification scheme. Depth of saturation in the taxonomic keys and SMI numbers need to be consistent and compatible.
4. *This system is not intended to do away with the drainage class term.* It is meant to help focus on the depth and duration that is in NASIS and to facilitate the communication of that data to the user.

Definitions: (from Soil Survey Manual – October 1993)

| | |
|---|---|
| Very Shallow - < 25cm | Very Transitory - < 1 month |
| Shallow - 25-50cm | Transitory - 1-3 months |
| Moderately Deep - 50cm - 1m | Common - 3-6 months |
| Deep - 1.0-1.5m | Persistent 6-12 months |
| Very Deep - > 1.5m | Permanent - Present continuously |

| SMI Rating | Depth and Duration of Saturation * | Soil Taxonomy Link \ Reference |
|---|---|---|
| 1 | Saturation is very deep AWC is ≤ 15 cm in the upper 1.5 meters | Typically Udic, Ustic, Xeric or Typic subgroup class |
| 2 | Saturation is very deep AWC is ≥ 15 cm in the upper 1.5 meters | Typically Udic, Ustic, Xeric or Typic subgroup class |
| 3 | Saturation is deep and is transitory though permanent | Typically Udic, Ustic, Xeric or Typic subgroup class |
| 4 | Saturation is moderately deep and from is transitory through persistent and is perched | Typically Oxyaquic subgroup class may include some aquic subgroup class |
| 5 | Saturation is moderately deep and is transitory through permanent | Typically Oxyaquic subgroup class may include some aquic subgroup class |
| 6 | Saturation is shallow and is transitory through persistent and is perched | Typically Aquic or Oxyaquic subgroup class |
| 7 | Saturation is shallow and is transitory through permanent | Typically Aquic, Aeric, Udollic or Oxyaquic subgroup class of aquic suborders |
| 8 | Saturation is very shallow and is transitory through persistent and is perched | Typically aquic suborder but includes some aquic subgroup class |
| 9 | Not ponded or ponded for very transitory periods. Saturation is very shallow and is transitory through permanent | Typically Aquic suborder class or Histisols |
| 10 | Ponded up to 1 meter above the surface for transitory through permanent periods and saturation is very shallow and transitory through permanent | Aquic suborder class or Histisols |

** Rating is based on the upper range of saturation, i.e. a range of 15 cm to 45 cm would be rated on the 15 cm depth.*

Al Giencke, Soil Data Quality Specialist

## CONCERNS WITH KEYS TO SOIL TAXONOMY, 8th EDITION, 1998

Concern #1

In the 7th edition of the keys to the Inceptisols there are 2 subgroups, Fluventic Umbric and Umbric Dystrochrepts that were omitted in the 8th edition. These subgroups included soils with a dark colored ochric epipedon and also soils with a mollic or umbric epipedon less than 25 cm thick in mesic or warmer temperature regimes. In the 8th edition the soils with a mollic or umbric epipedon less than 25 cm thick in mesic or warmer temperature regimes will classify in the Fluventic Humic and Humic subgroups along with the other soils with a mollic or umbric epipedon (Umbrepts in the 7th edition). The remaining soils (soils with a dark colored ochric epipedon) will classify in the Fluventic or Typic subgroup of either Dystrudepts or Dystroxerepts along with other soils that have an ochric epipedon.

There are 39 series classified in the Umbric Dystrochrepts and 3 in the Fluventic Umbric Dystrochrepts. Except for those that have a mollic or umbric epipedon, these soils will now classify in the Fluventic or Typic subgroup of either Dystrudepts or Dystroxerepts. Meadows (VA) and Unaka (TN) are examples of series with a mollic or umbric epipedon less than 25 cm thick. In the 8th edition these soils would classify in a Humic subgroup of Dystrudepts along with some soils that previously were Umbrepts.

Should the soils that have a dark colored ochric epipedon remain in the Fluventic or Typic subgroups or should separate subgroups be proposed? If separate subgroups are proposed what should be the name of the subgroup? Soils with a mollic or umbric epipedon are combined in the Fluventic Humic and Humic subgroups. Since the soils that have a mollic or umbric epipedon will now classify in a Humic subgroup, I would hesitate to use either Mollic or Umbric for soils that have a dark colored ochric epipedon. This could be misleading. What would you think of using the name Humochric (Hum-ochric)? See concern #3, which is closely related.

Concern #2

There are soils that have a layer of organic soil materials at the surface that is too thin for a histic epipedon and the next underlying layer is mineral soil materials that is too thin for a mollic or umbric epipedon. These layers combined can range up to 40 cm thick. It is known to occur in the Aqualfs, Aquepts and Aquults. I am not aware of any in the other Aqu-suborders. Examples of series in which the typical pedon has this kind of epipedon are: in the Aqualfs: Capitola (WI), in the Aquepts: Menlo (CT), Scarboro (MA), Waucedah (MI), Whately (NE), Witbeck (MI) and Veedum (WI) and in the Aquults: Scoggin (FL).

The typical pedons of the Scoggin, Waucedah, Whately and Witbeck series are examples of series that have this kind of epipedon 25 cm or more thick. In the Waucedah and Witbeck series it is stated "it is assumed that the surface layer, when mixed to 25 cm, meets the minimum requirements for organic carbon," and therefore, is a histic epipedon. According to the definition of the histic epipedon, mixing to meet the criteria can only occur if there is an Ap horizon. These pedons do not have an Ap horizon. This kind of epipedon is an ochric epipedon. However, if this epipedon were drained and cultivated the 2 layers would be mixed and in a very short time would probably be an umbric epipedon (minimal thickness). It is my feeling that a soil with this kind of epipedon, particularly if the combined thickness is 25 cm or more, belongs with soils that have a mollic or umbric epipedon. Do you agree?

If this kind of epipedon is included in-groups that have a mollic or umbric epipedon, what should the minimum thickness be; 25 cm, 20 cm or 18 cm? The typical pedons of the Capitola and Veedum series have this kind of epipedon but the combined thickness of the 2 layers is only 18 cm. This is about the thinnest that these 2 layers combined can be. It seems rather thin but the mollic and umbric epipedons can also be this thin. The typical pedon of the Menlo series has a combined thickness of 20 cm. What should be the minimum thickness'?

If this concept is adopted, should definition of the epipedons be changed or should the keys be changed? I feel that the definitions of the epipedons should not be changed. This provision would then be made in the keys to great groups and subgroups only where this kind of epipedon occurs. Do you agree?

Concern #3

As a result of changes in the 8th edition of the Keys, in some Mollic subgroups the mollic and dark colored ochric epipedons with a high base saturation are combined and in some Umbric subgroups the umbric end dark colored ochric epipedons with a low base saturation are combined. This occurs in the Aqualfs. In some other Mollic and Umbric subgroups only the mollic or umbric epipedons, respectively, are allowed. The dark colored ochric epipedons then end up in other subgroups with the lighter colored ochric epipedons. This occurs in the Udepts and Xerepts. It is my feeling that we should not combine them both ways. We need to be consistent. If any of these are combined which way should they be?

Previously to the 8th edition some Mollic and Umbric subgroups had soils with dark colored ochric epipedons which other Mollic and Umbric subgroups had soils with only mollic or umbric epipedons. But, rarely if ever, were the dark colored ochric epipedons and the mollic or umbric epipedon combined in the same subgroup. It is my feeling that they should never be combined. What do you think?

In nearly all if not all subgroups, the Histic subgroups have only a histic epipedon and the Melanic subgroups leave only a melanic epipedon. It is my feeling that the Mollic and Umbric subgroups should likewise be restrict to having a mollic or umbric epipedon, respectively. Do you agree?

Where there is a combination of 2 or more of these epipedons; histic, melanic, mollic and umbric, in the same great group or subgroup the Hum - prefix is generally is used. It is also used in the Oxisols, Spodosols and Ultisols where there is an organic carbon requirement in the upper part of the pedon regardless of the kind of epipedon present. I have no problem

with these uses of the Hum - prefix if it is used consistently this way throughout the keys. It is already used this way in most, but not all, groups.

If the Mollic and Umbric names are restrict to soils that hive a mollic or umbric epipedon, respectively, we then have 2 remaining options. Option #1: combine the soils that have all ochric epipedon, dark colored or otherwise, together. Then the kind of ochric epipedon would then be a series separation. Option #2: separate soils with the dark colored ochric epipedon from those with other ochric epipedons. This is the way it generally is in the 7th edition. I prefer option #2. What is your preference?
If option #2 is selected, soils with either a mollic or umbric epipedon and the dark colored ochric epipedons will be vying for the same subgroup names, Mollic and Umbric. So, if we keep them in separate subgroups, we will need some other names for the subgroups with dark colored ochric epipedons. I have already suggested using tile name Humochric for soils with a dark colored ochric epipedons and the full range of other characteristics. See concern #1 above.

In some places the dark colored ochric epipedon are further divided by base saturation. Is this necessary? If so, then I would suggest the names Molochric and Umbrochric. Molochric would be used for soils with a dark colored ochric epipedon that have a high base saturation and Umbrochric would be used for soils with a dark colored ochric epipedon that have a low base saturation. Is this needed?

In summary,

1. The Hist-, Melan-, Moll- and Umbr- prefixes will be used where the group is restricted to only one epipedon; either histic, melanic, mollic or umbric, respectively.
2. The Hum- prefix will be used where there is any combination of 2 or more of these epipedons: histic, melanic, mollic and umbric epipedons or where there is an organic carbon requirement in the upper part of the pedon.
3. The Humochric (and if needed, Molochric and Umbrochric) will be used for subgroups with soils that have a dark colored ochric epipedon.

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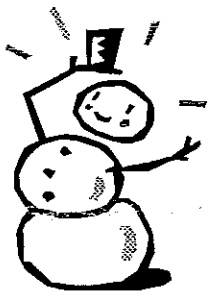

*Happy Holidays*
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