ILLINOIS SOIL CLASSIFIERS ASSOCIATION

Winter 1994 Newsletter

HAVE YOU COMPLETED YOUR C.E.U.'S YET?

It sounds like something you might be asking your children when you find them watching television when you suspect that they still have homework to complete. But you have homework that is coming due soon too: All Certified Professional Soil Classifiers of record in 1991 have a five year recertification period that will come due January 1, 1996. Those classifiers who have not submitted their CEU's prior to that date will be subject to the provisions of Section 8 Renewal, Expiration, and Restoration or Certification part of the Standards for Certification of Professional Soil Classifiers by the Illinois Soil Classifiers Association.

To date approximately 40% of the certified classifiers subject to this deadline date have submitted their CEU's to the certification board for approval. Sixty percent still have their "homework" ahead of them. Since this is still a new system, not having done your "homework" yet may be to your advantage. The data that we did receive has allowed us to see where the "bugs" are and see if we can resolve them. To say the least, as with any new system, we are finding a number of problems with reporting.

The top three problems that we have noticed are as follows:

1. Some of the people who have reported are including the category letter and subcategory number under which they are claiming credit and some are not. Part of the trouble may have been due to the format of the form. Previous versions did not provide a space for this item. The version you just received from secretary Tonie Endres has been revised for this purpose. We would appreciate that both the Category and Subcategory Number be reported in the future to aid in giving you proper credit for your activities.

2. It appears that most of our members who are submitting their worksheets may be failing to report any activities under Category A6. Since this category deals with "technical field mapping; soil investigation" we would expect to see this on a majority of those reporting, since this is the primary activity of those who are doing soil classification work. Since this is the category with the most credit towards your CEU's, please be sure to review this closely and request all the credit you ar due.

3. There appears to be some confusion about reporting meetings. Some are reporting them in Category A and some in Category C. A few requested credit in both. Meetings should be reported in Category A if the purpose of the meeting included an activity intended to provide information/educate the participants in something directly related to soils classification. Meetings that contain the words "workshop, clinic, field day or conference" in their titles are the ones most likely to reported in this way. If the meeting is primarily intended to carry out the business functions of the organization, such as an annual meeting, without a significant information/education activity directly related to soil classification, then it should be reported in Category C. The best guide is probably to ask yourself, "What was the primary intent of the meeting?". In no case will the board grant credit for the same meeting in both categories.

Other more minor interpretation problems that have shown up are as follows:

1. CPSC Worksheet submitted without signature or date in the certification block at the end of the form. The board will not grant credit until the proper certification is provided.

2. ISCA committee activity should be reported as Category C6.

3. Two separate soils studies completed within the same reporting quarter are only eligible for 0.25 CEU credit in Category A6.

4. Tech, editor of a soil survey manuscript is eligible for 1.0 CEU credit per report in Category B1.

5. Two separate land judging contests in two different location on two different dates are eligible for 0.5 CEU each in Category D3.

6. Developing county soils hydric keys should be reported under Category B4.

7. ISCA activity chairmanships are eligible for CEU credit for each term served. Please be sure to show the dates of each term.

8. Presentations made at appropriate meetings should be reported under Category B8.

9. Co-authorship of suitability ratings guides for Illinois soils should be claimed in Category B4.

10. Development of SCS Technical Notes reviewed by others should be reported under Category B2.

11. Expert witness testimony at a public hearing on a soils associated problem should be reported as Category B3.

12. Wetland determination reports of findings, especially when made to the US Army Corp of Engineers should be reported as Category B5.

As you can see from the list, we have had a few "growing Pains" with the new system. We hope that those of you who have not submitted any "homework" to date will find this a useful guide when you start to fill in your program worksheets. To those who have already submitted worksheets on an annual basis, we hope that this will serve as a guide to clear up some of the past confusion.

If anyone has any suggestions for future revisions or clarification to the examples that you feel will be helpful please submit them to the Certification Board. Above all remember, don't procrastinate, YOUR HOMEWORK IS DUE PRIOR TO JANUARY 1, 1996.

1994 FARM PROGRESS SHOW

September 27-29 are the dates for the 1994 Farm Progress Show which will be held in McLean County near Bloomington. SCS and ISCA will be sponsoring a soil pit for the show and Mark Bramstedt will head the committee for the planning and operation of the pit.

The initial concept of the pit is to be similar to the 1991 FPS (which was so excellently conceived and directed by Ken Gotsch). It will be square or diamond shaped with a walk-through, self-guiding tour. Unfortunately, it appears that the pit will have to be located in Drummer soils. A suggestion for one wall of the pit is to implant large soil monoliths of different soils from around the state and reference the monoliths to a large map (or general soil map) of Illinois. Another suggestion was to implant soil monoliths of the candidates for State Soil and to include ballots for voting. We need suggestions for the other faces in the pit.

We also have signs from the 1993 ILICA Show that represent soil/landscape relationships and a soil profile. The signs will need only slight modification and touch-up for us to use. We would also like to add the ISCA and SCS logos.

A budget has been approved by both SCS and ISCA to cover some of the costs of supplies and materials needed. Ken was able to have most of the materials donated in 1991 and we will attempt to do the same.

We will need several volunteers to help with the planning, preparation, and staffing of the pit. We will also need assistance to collect and prepare the monoliths. Anyone willing to help with the event, contact Mark Bramstedt at the SCS A-2 office 815-937-3225 or at home 815-432-2378.

REMEMBER TO VOTE!!!!!

ISCA ANNUAL MEETING IN CHAMPAIGN

The 1994 ISCA Annual Meeting will be held Saturday March 26, 1994 in the loft of the Round Barn Steakhouse at 1900 Round Barn Road (see map). The topic for our keynote speaker will be: "GIS" on the Farm.

AGENDA

11:00 a.m.	Council Meeting
11:30 a.m.	Registration, Texture Contest & Voting for 1994 Officers
12:00 p.m.	Fried Chicken and Shrimp Stir Fry Luncheon
1:00 p.m.	Business Meeting & Election Results
1:45 p.m.	Keynote Address "GIS" on the Farm
2:30 p.m.	Adjourn

ANNUAL MEETING PRE-REGISTRATION

FEE: **$11.00 per person (includes luncheon)**

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

PHONE: _____

NUMBER ATTENDING: _____

TOTAL AMOUNT DUE: _____

Please mail check to: Chuck Frazee, Route #1 Box 14B, Divernon, IL 62530

Registration Deadline: March 14, 1994

CANDIDATE BIOGRAPHIES

Candidates for President-Elect

Doug Gaines

Doug has a BS in Agronomy form the University of Illinois. Doug has contracted with Clinton and Marion Counties as a Soil Scientist to help complete their Soil Surveys. He is presently a Staff Scientist with SCI Engineering where he is responsible for coordinating and performing Soil Permeability Evaluations for septic suitabilities, and Wetland Determinations. Doug is a CPSS with ARCPACS and a CPSC with Illinois Soil Classifiers Association.

Larry Gramm

Larry has an agricultural background He is a native of Gridley, Illinois in McLean County. and a May 1987 graduate from the University of Illinois with a B.S. in soil science.
In 1987-1988, he worked as a county soil scientist to complete the Mason County Soil Survey.
From 1988-1989, Larry worked as county soil scientist on the Woodford County Soil Survey
Since 1990 Larry worked as a CPSC for the Lake County Health Department and in 1992 served as Program Committee Chairman of ISCA.

Candidates for Vice President

Bill Kreznor

Bill has worked on a number of project soil surveys beginning in 1977 in Iroquois, Randolph, Jasper, and Edgar counties. He also served a brief stint with the Bureau of Indian Affairs in Arizona doing soil and rangeland inventory. He earned his MS in Agronomy from the University of Illinois in 1988. Since then, he has been self-employed as a consulting soil classifier in northeastern Illinois. He has been an ISCA member since 1978 and has been certified by ISCA since 1981. Bill has served on a number of ISCA committees and on the ISCA Certification Board.

Scott Wegman

Scott received a BS in Soil Science in 1987 from the University of Illinois. After graduation, he worked with the Pike, Tazewell, and Woodford County Soil Surveys. He also spent a year with the Lake County Health Department classifying soils for on-site septic systems and consulting with the public on septic issues. He is currently involved in soil classification for wetland delineations and wetland management with Environmental S/W, an environmental consulting firm. He is a CPSC with ISCA and a CPSS with ARCPACS.

Candidates for Secretary

Bruce J. Houghtby

Bruce graduated from the University of Illinois in 1978. Since that time I have been employed as a Soil Scientist with the Indiana Department of Natural Resources, Knox County, Coles County, Soil Conservation Service and for the past six years for a private consulting firm in northeastern Illinois. Bruce has been a full member of ISCA since 1988 and a CPSC since 1991. He has attended each annual meeting since 1989 and three of the short courses offered by ISCA.

Ward Lenz

Ward received his BS in forestry from Southern Illinois University. He worked as a researcher for Michigan Technological University for four years, and joined the McLean County Soil Survey in 1986. Since 1987, he has worked for the Soil Conservation Service. He is currently working on a Water Quality Project in Monroe County. He has been an active member of the ISCA since 1986. He has served on the Program Committee; Ethics, Membership and Certification Committee; the ad-hoc Committee on Certification Requirements, and two terms on the Certification Board. He is certified as a CPSC through ISCA, and as a CPSS/SC through ARCPACS.

MAILING LIST UPDATE

The ISCA Newsletter Committee attempts to maintain the official ISCA mailing list. This list includes name, address, home and work phone numbers, fax numbers, and an indication of whether or not you want your name, etc given out to allied agencies and organizations. I am attempting to redevelop this database because we are missing much information, particularly phone and fax numbers. Please fill out the information below and return it to: Pat Kelsey, ISCA Newsletter Editor, Morton Arboretum, Lisle, IL 60532. FAX (708) 719-2433. THANKS!!!

Name:_____

Address:_____

Address:_____

Home Phone:_____ Work Phone:_____

FAX Number:_____

_____ I do not want my name given out to other organizations or government agencies.

1994 ISCA BALLOT

President Elect -- Vote for One

____ Douglas Gaines
____ Larry Gramm

Vice President -- Vote for One

____ Bill Kreznor
____ Scott Wegman

Secretary -- Vote for One

____ Ward Lenz
____ Bruce Houghtby

If you can not attend the ISCA Annual Meeting, return your ballot prior to the meeting to:

Ken Gotsch
RR #3 Box 246
Shelbyville, IL 62565

Voting privileges are extended only to Full, Honorary Full, and Associate Members.

ILLINOIS SOIL CLASSIFIERS ASSOCIATION

Spring 1994 Newsletter

FROM THE PRESIDENT'S DESK

Steven E. Zwicker, CPSC
President, ISCA

As incoming ISCA President, I would like to thank Sam Indorante for an outstanding job as President last year. His appointment of Ad Hoc Committees on Legislation and on the Illinois Private Sewage Disposal Code, put ISCA at the heart of issues important to the public. The work of these committees over the past year has helped ISCA develop important working relationships with professionals in the engineering and public health fields. As a result, we will be working even closer with these professionals in the future--and the public will reap the benefits.

We just completed a very successful Annual Meeting a few weeks ago with over 40 members in attendance. Detailed reports given by each chairman of the standing committees attest to the numerous activities of our Association and the willingness of our membership to serve. A special thanks to Doug Gaines for putting the meeting together and attending to the many details! Our keynote address was given by Doug Harford, Harford Farms, Inc., and dealt with farm application of "spacial data" enhanced by "global positioning stations". Sophisticated electronic application of soils data at the farm level will likely identify new user needs regarding the collection and distribution of soil data by the NCSS.

As I view the year ahead, I see it as a year of "follow-up" and "follow-through" with on going items and those already identified. We are currently focused on assisting the Illinois Department of Public Health in revising Section 905 of the Private Sewage Disposal Code. Much work has gone into this effort. It will take perseverance on the part of the IDPH and ISCA to bring these efforts to a successful conclusion.

Wetlands will also need our attention. National interest in defining and identifying wetlands will provide us with opportunities to improve our own understanding of wetlands in addition to the general public's understanding. Five (5) interagency teams have just tested a number of hydric soil indicators throughout the state. Interaction among biologists, engineers, and soil scientists from many different agencies have opened the door for improved communications and understanding by all parties. Hydric soil workshops with interagency participation are being planned by ISCA for this fall--a workshop in the north and one in the south.

Items needing attention were outlined in the 1993 Summer issue of the Newsletter. Key items are:

1. Plan workshops which include participation from other disciplines.

2. Outline responsibilities for the Committee dealing with Legislation.

3. Have ISCA representatives meet on a regular basis with other professional organizations (i.e. Illinois Society of Professional Engineers, Illinois Chapter of American Society of Civil Engineers, AISWCD, Illinois Dept. of Ag.).

4. Increase membership participation in ISCA activities.

5. Increase our membership, especially from other organizations.

6. Make membership responsible for contact with State Representatives.

7. Work with Illinois colleges and universities on the development and maintenance of soil science curricula.

Our organization is definitely on the move. We are looking forward to an exciting year. Please help strengthen ISCA further by volunteering your time!

1994 ISCA OFFICERS

President	Steven E. Zwicker
President Elect	Douglas B. Gaines
Vice-President	William R. Kreznor
Secretary	Ward G. Lenz
Treasurer	Charles J. Frazee

1994 ISCA COMMITTEE MEMBERSHIPS

Constitution and By-Laws:
Bill Kreznor, chair
Bruce Putman
Gloria Westphal

Membership, Ethics, and Certification:
Mike Walker, chair
Bruce Houghtby
Charles Love
Steve Suhl

Public Relations and Education:
Don Fehrenbacher, chair
Ken Anderson
Pat Kelsey
Bruce Putman

Finance:
Bill Kreznor, chair
Bruce Houghtby
Scott Harding

Program:
Doug Gaines, chair
Bob Oja
Ward Lenz

Ad-Hoc Historic:
Lester Bushue, chair
Earl Voss, member
John Alexander

PROPOSED BY-LAW CHANGES

The following changes have been proposed by the ISCA Constitution and By-Laws Committee in cooperation with the Executive Council. The Council believes that the ad hoc Legislative Committee should be given permanent status within our By-Laws. It is believed such status will result in more timely and decisive action by our Association regarding legislative activity at all levels of government that may affect our members and our profession. The changes below serve to (1) rename the existing Constitution and By-Laws Committee under Article VIII, Section 1 and Section 4, and (2) describe the additional duties of that Committee relative to the legislative function under Article VIII, Section 4.c.

The proposed changes are formatted below in the usual fashion. Additions are underlined and deletions are lined out, giving the reader a "before and after" picture in one shot.

Under Article XIV, Section 2 of the ISCA Constitution, "By-Laws may be introduced or amended without prior notice at the Annual Meeting or any duly called special meeting of the Association by an affirmative vote of the majority of the eligible voters present." It is intended that the proposed changes below will be voted upon at our Summer Meeting on June 24-25 1994.

ARTICLE VIII - COMMITTEES

Section 1. The standing committees of the Association shall be:

a. Constitution, ~~and~~ By-Laws, and Legislative

b. Ethics, Certification, and Membership

c. Nominations

d. Public Relations and Education

e. Finance

f. Newsletter

Section 4. Constitution, ~~and~~ By-Laws, and Legislative Committee

a. The Constitution, ~~and~~ By-Laws, and Legislative Committee shall consist of not less than three Full Members, Honorary Full Members, or Associate

b. The duties of the Committee in relation to the Constitution and By-Laws shall consist of the following:

1. To maintain a continuing study of the Constitution and By-Laws of the Association and the application of the provisions thereof.

2. To receive and initiate proposed amendments to the Constitution and By-Laws of the Association

3. To study carefully all suggestions for revisions to the Constitution and By-Laws of the Association.

4. To initiate appropriate resolutions at the request of the Council.

5. To receive and study resolutions submitted to the Association and refer them to the proper committee for consideration.

c. The duties of the Committee in relation to legislation shall consist of the following:

1. To keep the Association informed of pending legislation or changes in laws pertaining to soil classification.

2. To technically review and analyze proposed legislation impacting soil classification and/or the Association.

3. To serve as liaison to legislators, lobbying groups, government agencies, and affiliated professional groups relative to existing or proposed legislation impacting soil classification and/or the Association.

1994 CERTIFICATION BOARD

The following individuals comprise the Certification Board for 1994. Scott Wegman and Emil Kubalek were appointed by ISCA President Steve Zwicker. Officers were elected at a Board meeting which followed the 1994 ISCA Annual Meeting.

Robert L. McLeese, Chairman
RR 1, Box 238
Monticello, IL 61856

Patrick D. Kelsey, Vice Chairman
711 Wilder Street
Aurora, IL 60506

Tonie J. Endres, Secretary/Treasurer
908 Jefferson, P.O. Box 686
Lawrenceville, IL 62439

Douglas B. Gaines
250 Coventry Place
Edwardsville, IL 62025

Emil E. Kubalek
3408 56th Street Place
Moline, IL 61265

Scott W. Wegman
1500 Jefferson Apt. C
Naperville, IL 60540

AVAILABLE POSITION

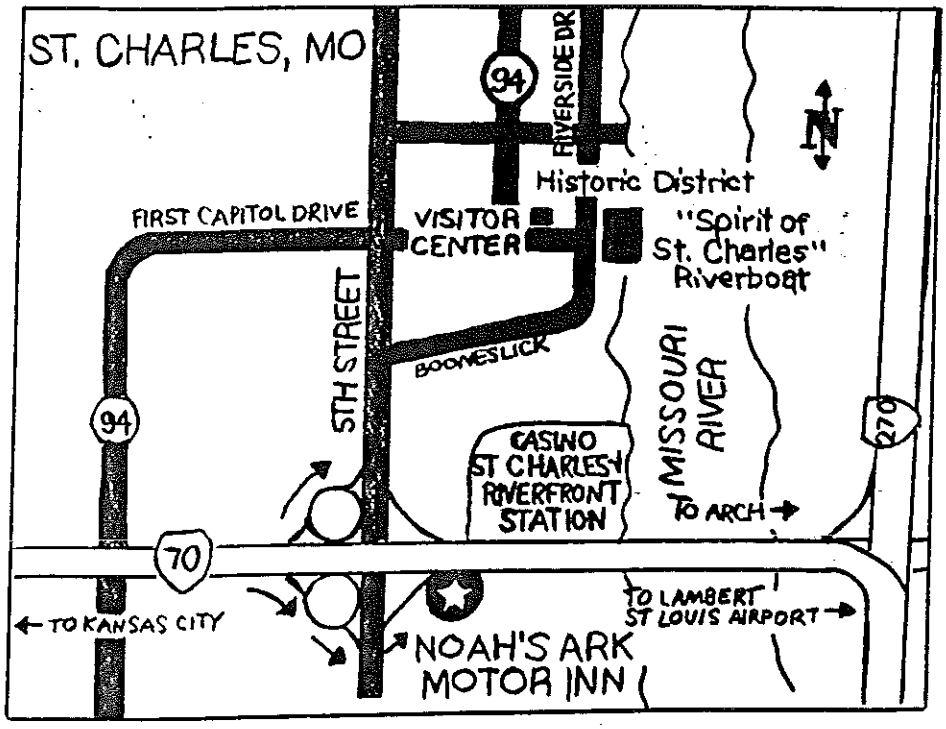
Soil Scientist. Glen Ellyn, Illinois environmental consulting firm has opening for an entry level soil scientist. Responsibilities will include soil classification as a part of a wetland delineation and assessment team, and development and production of wetland delineation reports. Other responsibilities involve monitoring wetland restoration activities and site inspections for erosion control and compliance with permit conditions. A B.S. in Soil Science with course work in soil classification, genesis and morphology is required. Soil survey experience is desirable. Competitive salary and an attractive benefits package. Submit a letter of application, resume, and official transcripts to Tom Slowinski, Environmental S/E, 751 Roosevelt Rd., Suite 7-110, Glen Ellyn, IL 60137; fax (708) 790-4083.

ILLINOIS SOIL CLASSIFIERS ASSOCIATION SUMMER MEETING JUNE 24 & 25, 1994

The summer meeting will be held at the Noah's Ark Motor Lodge (Best Western) in St. Charles, Missouri on June 24 & 25, 1994. A meeting with the Missouri Association of Professional Soil Scientists (MAPSS) concerning our procedures and review, etc. of professional certification will begin with registration and social time at 7:00 p.m. in meeting room 606 on the 24th. The meeting will run from 7:30 p.m. until 9:30 p.m. A block of rooms has been reserved at a rate of $39.13 for a single and $44.72 for a double (this includes tax). At 8:00 a.m. on the 25th we will leave from the hotel by car (we will not have busses) for a field trip to the Melvin Price Demonstration Area (maps will be available at the meeting). The tour will last from 9:00 a.m. to approximately 12:00 p.m. This is a wetlands reclamation project that has had high intensity soils mapping and an ongoing water table study to monitor any changes in the hydraulics and soils. A $5.00 registration fee will be required for the meeting and field trip. Registration **must** be received by June 17, 1994 to assure rooms. After this date they are not guaranteed.

BRING YOUR SPOUSE OR SIGNIFICANT OTHER and make it a weekend stay. The St. Charles & St. Louis area has many things to offer: take a trolley to the Old St. Charles historic district with its antique and specialty shops, see the Daniel Boone Home, St. Louis Zoo, Botanical Gardens, the Gateway Arch, local riverboats available for short cruises or gambling, local wineries and Anheuser Busch, the St. Louis Science Center, the Muny Opera (The King and I will be playing), all within 30 minutes or less of the hotel. Or just enjoy the pool, whirlpool, exercise room and sauna at the hotel (you can even go shopping). Call me at 618/656-1452 or 624-6969 for any additional information about the area.

SUMMER MEETING LOCATION MAP



Registration Fee -- $5.00 _____

Single Room -- $39.13/night _____ smoking or nonsmoking

Double Room -- $44.72/night _____ smoking or nonsmoking

Total Fee Paid _____

Name and organization (please print)_____ISCA
Please make checks payable to Illinois Soil Classifiers Association and send registration and/or room fee to:

Douglas B. Gaines CPSS/SC
ISCA Program Chair
250 Coventry
Edwardsville, Illinois 62025

ILLINOIS SOIL CLASSIFIERS ASSOCIATION
CERTIFIED PROFESSIONAL CLASSIFIERS
04/03/94

NAME	ADDRESS	CITY	STATE	ZIP	PHONE
JOHN D ALEXANDER	2607 MELROSE DR	CHAMPAIGN	IL	61820	217-356-4649
KENNETH N ANDERSON JR	472990 LASHER ROAD	ELBURN	IL	60119	708-557-2705
FRED L AWALT	800 GORDON	EFFINGHAM	IL	62401	217-342-4711
GERALD V BERNING	2811 BROWN ST	ALTON	IL	62002	618-465-9336
MARK W BRAMSTEDT	320 E LOCUST	WATSEKA	IL	60970	815-432-2378
PAUL E BROWN	ROUTE 1, BOX 186	PONTIAC	IL	61764	815-844-3035
LESTER J BUSHUE	1911 SCOTTSDALE DR	CHAMPAIGN	IL	61821	217-359-7447
ROBERT G DARMODY	1102 S GOODWIN AVE	URBANA	IL	61801	217-359-8501
JOHN C DOLL	1702 HARRINTON DR.	CHAMPAIGN	IL	61821	217-398-3040
TONIE J ENDRES	908 JEFFERSON, P.O.B.686	LAWRENCEVILLE	IL	62439	618-943-3181
DONALD J FEHRENBACHER	22 HERITAGE PLAZA, SUITE 107	BOURBONNAIS	IL	60914	815-937-3225
JOE B FEHRENBACHER	1616 SHERIDAN RD	CHAMPAIGN	IL	61821	271-356-6785
CHARLES J FRAZEE	RT 1, BOX 14B	DIVERNON	IL	62530	217-628-3518
DOUGLAS B GAINES	250 COVENTRY PL	EDWARDSVILLE	IL	62025	618-656-1452
LARRY L GRAMM	509 N MAIN ST	MT PROSPECT	IL	60056	708-398-3813
DANA R GRANTHAM	714 PALACE DR	PINCKNEYVILLE	IL	62274	618-357-2256
SCOTT D HARDING	121 E GRAND AVE	LAKE VILLA	IL	60046	708-356-6235
RICHARD G HOOTMAN	566 EDGEBROOK CT	CAROL STREAM	IL	60188	708-510-0170
JAMES K HORNICKEL	104 CORNELL DR	NORMAL	IL	61761	809-862-2500
BRUCE J HOUGHTBY	231 BALDWIN, P.O.B. 397	SHARON	WI	53585	414-736-9458
PATRICK D KELSEY	711 WILDER ST	AURORA	IL	60506	708-896-2909
LINUS M KIEFER	RR 3, BOX 177A	WATSEKA	IL	60970	815-432-5741
MARY A KLUZ	P.O. BOX 333	OREGON	IL	61061	815-732-4333
WILLIAM R KREZNOR	904 POWERS RD	WOODSTOCK	IL	60098	815-338-2362
EMIL E KUBALEK	3408 56TH STREET PLACE	MOLINE	IL	61265	309-797-3208
RANDALL A LEEPER	2120 SCHEEL ST, APT E	BELLEVILLE	IL	62221	618-235-3639
GARY WARD LENZ	5746 LRC ROAD	WATERLOO	IL	62298-6554	618-939-4986
MICHAEL E LILLY	214 DUBLIN COURT	BRANDON	MS	39042	601-992-2562
MARK E MATUSIAK	707 SECOND ST	ST CHARLES	IL	60174	708-513-6113
WM MATT McCAULEY	1028 BELLE VALLEY DR, NO. 12	BELLEVILLE	IL	62221	618-236-9460
ROBERT L McLEESE	RR 1, BOX 238	MONTICELLO	IL	61856	217-762-7697
LAURA L MERKEL	PO BOX 246	DEER TRAIL	CO	80105	303-769-4932
CLIFFORD C MILES	816 SOUTH BROWN AVE	TERRE HAUTE	IN	47803	812-235-2211
ROBERT P OJA	230 NORTH FIFTH AVE	WALWORTH	WI	53184	414-275-9625
ALLAN J PASTERIS	1156 LINCOLN AVE	BELOIT	WI	53511	608-362-9043
JOHN R PEARSE	RR 1, BOX 83	WEST UNION	IL	62477	217-279-3651
BRUCE R PUTMAN	1200 PORTAGE LANE	WOODSTOCK	IL	60098	815-338-6218
DAVID B RAHE	828 SOUTH OAK ST	HILLSBORO	IL	62049	217-532-6887
ROBERT B RHYNAS	1212 STONEBRIDGE DRIVE	HOWARDS GROVE	WI	53083	
J WILEY SCOTT	411 NORTH DORCHESTER DR	MAHOMET	IL	61853	217-586-4233
MARTHA E SHEPPARD	RR 2	PEARL	IL	62361	217-829-4409
RANDY E STALEY	RR 2 BOX 298	CLAY CITY	IN	47841	812-939-2774
STEVEN E SUHL	101 DEER CREED RD	ROCHESTER	IL	62563	217-498-8511
EARL E VOSS	4009 FARHILLS DR	CHAMPAIGN	IL	61821	217-352-3089
MICHAEL B WALKER	5519 FLEET ST	CHILLICOTHE	IL	61523	309-274-2728
DONALD L WALLACE	643 NORTH KANSAS	EDWARDSVILLE	IL	62025	618-656-8230
SCOTT W WEGMAN	1500 JEFFERSON, APT. C	NAPERVILLE	IL	60540	708-527-1886
BENNY J WEISS	755 WALNUT GROVE ROAD	HARRISBURG	IL	62946	618-252-4292
GLORIA J WESTPHAL	318 NORTH 5TH ST., BOX 832	SILVER LAKE	WI	53170	414-889-4062
ROGER D WINDHORN	USDA-SCS, 1902 FOX DRIVE	CHAMPAIGN	IL	61820	217-398-5280

ILLINOIS SOIL CLASSIFIERS ASSOCIATION

To: ISCA members
From: ISCA Ad Hoc Committee on Soil Suitability Chart, proposed amendments to Illinois Department of Public Health (IDPH) Private Sewage Disposal Code
Re: Revision of soil properties/soil suitability chart (Illustration M in Private Sewage Disposal Code amendments)
Date: 16 May 1994

The Ad Hoc Committee has completed the enclosed drafts of soil properties/soil suitability charts. This distribution to the ISCA membership is to solicit and consider a final round of comments before a final draft is prepared and submitted to Doug Ebelherr, Coordinator of the IDPH Private Sewage Disposal program. It is anticipated that this final draft will be incorporated into the amendments.

Two charts are enclosed. The first is a key for estimating loading rates (gallons/day/ft^2) of septic tank effluent based upon soil properties. The key is designed for use by the on-site investigator to arrive at a Soil Group. Each Soil Group is defined by its texture (y-axis of chart, numerically 1 through 9) and combinations of structure, consistence, and parent material (x-axis of chart, alphabetically A through N). For example, a soil layer formed in loess having a silty clay loam texture (<35% clay) with moderate subangular blocky structure and friable consistence is a member of Soil Group 6D. This layer would form the basis for design if it was the most limiting within the soil below the seepage device, and the estimated loading rate would be 0.62 g/d/ft^2.

The second chart is less technical and designed for use by sanitarians, septic system designers, local health department staff, etc. The Soil Group as determined by the on-site investigator can be plugged into this chart in order to arrive at a Design Group (Roman numerals I through XIII). The Design Group integrates estimated loading rate, estimated permeability, septic system size, and minimum vertical separation above limiting layers. To continue the example above, Soil Group 6D is included within Design Group VII. The seepage device would be designed at 325 ft^2/bedroom with a minimum 2-foot separation above a limiting layer.

The Ad Hoc Committee urges all ISCA members to carefully review the enclosed drafts and make written comments. All comments must be received by 8 June 1994. Our final draft must be submitted to the IDPH by the end of June 1994 for inclusion in the State Code. Please address all comments to:

Bill Kreznor, Chair
ISCA Ad Hoc Committee
904 Powers Road
Woodstock, IL 60098-2702

Those wishing to fax comments may do so at 815-338-8411.

KEY FOR DETERMINING ON-SITE SEWAGE EFFLUENT SUBSURFACE LOADING RATES ($g/d/ft^2$) FOR ILLINOIS SOILS[1] (ISCA draft 5/12/94)

Structure; Parent Material	Single grain; Granular; Platy[2]	Angular and Subangular Blocky; Prismatic Loess; Outwash						Till; Lacustrine			Structureless; Massive; Dense; Compact Loess; Outwash		Till[3]; Lacustrine	
		Weak		Moderate		Strong		Moderate; Strong						
Moist Consistence	lo vfr fr	vfr	fr	fr	fi	fr	fi	fr	fi	vfi	vfr	fr	vfr; fr	fi; vfi
Texture	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1. Fragmental; Ext. or Very gravelly sand; Coarse sand; Gravelly loamy sand	>1.00[4]	N/A[5]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2. Medium sand; Sand; Loamy coarse sand; Loamy sand; Coarse sandy loam	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	N/A	N/A	N/A
3. Fine sand; Loamy fine sand	0.84	0.91	0.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.91	0.84	N/A	N/A
4. Sandy loam; Fine sandy loam; Gravelly sandy loam; Gravelly loam; Gravelly silt loam	0.75	0.84	0.75	0.75	N/A	N/A	N/A	N/A	N/A	N/A	0.84	0.75	0.75	0.45[6]
5. Loam; Silt loam; Very fine sandy loam; Sandy clay loam; Silt; Very fine sand; Loamy very fine sand	0.62	0.75	0.69	0.75	0.69	N/A	N/A	0.62	0.52	0.45[6]	0.69	0.62	0.45[6]	0.00[6]
6. Silty clay loam (<35% c); Clay loam (<35% c)	0.52	N/A	N/A	0.62	0.52	0.69	0.52	0.45[6]	0.40[6]	0.27[6]	0.52	0.45[6]	0.27[6]	0.00[6]
7. Silty clay loam (>35% c); Clay loam (>35% c); Sandy clay (30-40% c)	0.45[6]	N/A	N/A	0.45[6]	0.40[6]	0.45[6]	0.27[6]	N/A	0.27[6]	0.20[6]	0.27[6]	0.20[6]	0.00[6]	0.00[6]
8. Sandy clay (>40% c); Silty clay	0.40[6]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.20[6]	0.00[6]	N/A	N/A	N/A	0.00[6]
9. Clay; Organics; Fragic; Fragipan; Lithic; Paralithic	---------- SOIL PROPERTIES HAVE VERY SEVERE LIMITATIONS; SUBSURFACE DISPOSAL NOT RECOMMENDED ----------													

FOOTNOTES:

1 Disturbed soils are highly variable and require special on-site investigations.

2 Moderate or strong platy structure for the soil textures in Group 5 have a loading rate of 0.40 $g/d/ft^2$. Platy structure caused by mechanical compaction has a loading rate of 0.00 $g/d/ft^2$.

3 Weakly structured BC horizons and basal glacial tills structured by geogenic processes have the same loading rates as structureless glacial till.

4 This soil group is estimated to have very rapid permeability and exceeds the maximum established rate in Section 905, Exhibit A, Illustration H of the Illinois Department of Public Health Private Sewage Disposal Code.

5 N/A means not applicable.

6 These soil groups are estimated to have moderately slow to very slow permeability and is less than the minimum established rate in Section 905, Exhibit A, Illustration H of the Illinois Department of Public Health Private Sewage Disposal Code.

DRAFT

DEPARTMENT OF PUBLIC HEALTH

Section 905 Appendix A
Illustration M Soil Suitability For On-Site Sewage Design

Loading Rates in Square Feet Per Bedroom
and Gallons/Square feet/Day

Design Group	Soil Group (Most Limiting Layer)	Minimum Separation To Limiting Layer(1)	Permeability Range	Size of System Residential Req. Absorption (ft^2/bedroom)	Size of System Institutional/Commercial Allowable Application Rate (GPD/ft^2)
I	1A	N/A	Very Rapid	N/A	N/A
II	2A; 2K	3 feet	Rapid	200	1.0
III	3B; 3K	3 feet	High Moderately Rapid	220	0.91
IV	3A; 3C; 3L; 4B; 4K	3 feet	Low Moderately Rapid	240	0.84
V	4A; 4C; 4D; 4L; 5B; 5D	3 feet	Very High Moderate	265	0.75
VI	5C; 5E; 6K; 6F	3 feet	High Moderate	290	0.69
VII	5A; 5H; 6L; 6D	2 feet	Moderate	325	0.62
VIII	4M; 5I; 6A; 6E; 6G; 6K	2 feet	Low Moderate	385	0.52
IX(2)	4N; 5J; 6M; 6H; 6L; 7A; 7D; 7F	2 feet	High Moderately Slow	445	0.45
X(2)	6I; 7E; 8A	2 feet	Low Moderately Slow	500	0.40
XI(2)	6J; 6M; 7G; 7I; 7K	2 feet	Slow	740	0.27
XII(2)	7J; 7L; 8I	2 feet	Very Slow	1000	0.20
XII(2)	5N; 6N; 7M; 7N; 8J; 8N	N/A	N/A	N/A	0.00
XIII	9	-------- SUBSURFACE DISPOSAL NOT RECOMMENDED ----------			

NOTES: (1) Limiting layers include Fragipans; Bedrock; Glacial Tills; Seasonal Watertable or other soil profile features that will materially affect the absorption of liquid from the disposal field.

(2) Soils in this group exceed the recommended maximum percolation rate established in Section 905, Illustration H as suitable for subsurface seepage systems.

ILLINOIS SOIL CLASSIFIERS ASSOCIATION

Summer 1994 Newsletter

FROM THE PRESIDENT'S DESK

Steven E. Zwicker, CPSC
President, ISCA

Our summer Meeting in St.Charles, Missouri, hosted by the Missouri Association of Professional Soil Scientists (MAPSS) June 24-25, provided an excellent opportunity for members in both states to exchange information on certification standards and current issues in our profession. About 25 members were in attendance to hear excellent presentations made by certified ISCA members Doug Gaines, Bill Kreznor, Mark Matusiak, Bob McLeese, and Don Wallace on the history and mechanics of our certification program, and the benefits for professionals working in the public and private sector. Judging from the response by MAPSS members, our Illinois delegation felt like the seeds we planted will likely sprout and grow. The next morning was spent touring the new lock and dam at Alton and discussing the soils set aside for hydric studies adjacent to the lock and dam. ISCA Program Chairman, Doug Gaines, did an excellent job in making arrangements for the meeting.

The proposed by-law change as published in the ISCA Spring Newsletter passed unanimously at the Summer Meeting. The change added the word Legislative to the name of the Constitution and By-Laws Committee and added legislative duties for this committee.

The final draft of the ISCA proposed revisions to the state sewage code were mailed to the Illinois Department of Public Health on July 18, 1994, for review by staff members. Bill Kreznor's Ad Hoc Committee on Revision of the State Septic Code had done an outstanding job! Doug Ebelherr, Coordinator, IDPH, Private Sewage Program, reports that the climate looks good for adopting these revisions. It is not known just how much time this will take.

As we look ahead, we have an in-house hydric soil workshop planned for Friday, October 21, for ISCA members. Also don't forget the Central States Forest Soils Workshop October 11-13.

HYDRIC SOILS TESTING

Editor's Note: In April of this year, the proposed hydric soil indicators were tested across the country. Many in the Midwest, including this writer, were concerned about the applicability of the criteria for assessing Mollisols that have aquic moisture regimes and heretofore have been considered hydric. The concern that came out of the testing was somewhat different. In testing the proposed criteria, it was clear that many individuals from a wide range of backgrounds had difficulty in applying the criteria to the morphologic characteristics that they observed. This was due in part to the lack of basic pedologic understanding by some participants. What is of greater concern is that many of these people are regulators or technical representatives of agencies who make wetland determinations as well as providing counsel to private delineators. Soil classification is a complex

science that requires professional judgement in addition to learned skills. The take home lesson from the testing is that pedogists are clearly the choice for determining what soils are hydric.

HYDRIC SOIL TESTING LETTER TO CHRIS SMITH

The following is a report on the Hydric Indicator testing that was undertaken for the mesic and thermic soil temperature regimes of the Midwest. The first part of the report centers on some general observations about the philosophy and overall organization / content of the indicators. These observations are based upon: the state soil scientists reports, reports from other agencies, my own field observations on hydric testing trips, and upon working with the Indicators at COE FMDJW training sessions.

Reports have been received (5-13-94) from Indiana, Illinois, Iowa, Kansas, Missouri, Nebraska, Ohio, and South Dakota. Michigan, Minnesota, and North Dakota are doing their testing in the frigid zone.

It should be stressed that the Indicators are not intended to replace the definition of a hydric soil. At some point the NTCHS needs to "come to grip" with the definition, database, criteria, field indicators, and lack of a field criteria for hydric soils.

The Field Indicators as they now exist appear to never identify a non-hydric soil as being hydric. If this is the only intent of the Indicators than they do succeed. However, if they are to truly be a useful tool in delineating the hydric soil parameter of the wetland system they will need to be far less "conservative." It does little good when these indicators only work on the wettest part of the landscape, delineators spend 90 percent of their time trying to define the transitional zone between upland and wetland. If these indicators are intended to replace the 87 COE Manual indicators, many MOA agency representatives have indicated that they will not be used unless revised. We will need to progress with the indicators from the "wettest of the wet" to those that occur closer to the boundary with the upland. Perhaps some sort of rating scale could be developed. Present indicators identify hydric 99-100 percent of [the] time. Future indicators could be developed that identify hydric ? percent of the time.

It is important to stress the fact that the lack of an observable indicator (especially when restricted to 30 cm) does not necessarily mean the soil is not hydric. This is an especially significant point in the disturbed Mollisol region of the Midwest. I would strongly urge that the disclaimer statement that presently exists in the introduction (paragraph 6) of the Indicators be moved to the first paragraph. The conservative nature of these indicators results in most agriculturally disturbed hydric soils of the Midwest not having an observable indicator in the upper 30 cm.

Who are the customers? If the Indicators are intended to be applied by non-soil scientists they need a complete re-write. One of the goals of the interagency testing was to evaluate if they could be applied consistently by different individuals. It is apparent that many of the Indicators failed this portion of the test. The terms and wording borrow heavily from Soil Taxonomy, and they are open to different interpretation even by trained soil scientists. A positive aspect of using soils terminology is that it may insure that a soil scientist becomes involved (in most cases) at some level of the hydric

evaluation. Because the issue of wetlands / hydric soils is such a complex one, this attempt to "cookbook" the hydric soils parameter may be misdirected. One of the most positive aspects of the testing is that many of the other agency participants now have an appreciation of how complex the soil environment is and how it does not lend itself to a simple approach. If others now recognize the need for soils expertise, we have made a major stride forward.

Can position on the landscape be incorporated more strongly into the Indicators? It has been downplayed because it is not soil morphology and can not stand on its own as an indicator. This is true, however, do any of these indicators truly stand on their own? Position on the landscape is an integral part of soil genesis and can not be ignored. The soil environment always presents us with exceptions to every "model" and no doubt exceptions could be found for many of these Indicators. Landscape position and professional judgement should not be ignored.

A reoccurring issue for this region is the lack of indicators for Mollisols. Many of the Midwest's soils have a Mollic epipedon greater than 30 centimeters thick. The draft Saturated Hydric Soil Indicators do not work well (if at all) on these. In addition, many areas have been disturbed by agricultural activities and the indicators that may work in natural situations do not exist in agricultural areas. It appears the present draft Indicators have been principally developed for use by other agencies delineating obvious "natural" wetlands. Once the National Indicators have been finalized, the SCS needs to spend time compiling and formalizing regional indicators into useful tools for documenting hydric soils in agricultural areas.

Over the past few years much time and effort has been expended in the Midwest on developing regional indicators for Mollisols and agricultural areas. A logical progression is to sub-divide the Indicators by Land Resource Regions (or even MLRA's). This will require a major effort, however, the importance of having indicators that work on disturbed areas cannot be ignored. Because the wetlands issue has been given a very high priority by the Chief of the SCS, it is time that we focus our efforts on developing useful tools for people delineating wetlands on agricultural areas.

P. MICHAEL WHITED
Soil Scientist
MNTC, MS22

TECHNICAL REVIEW OF FIELD INDICATORS OF SATURATED HYDRIC SOILS MESIC TEMPERATURE REGIME (A FEW COMMENTS ON THERMIC)

MA1 Hydrogen Sulfide odor - Most have agreed this is a good indicators that did not need field testing. However, some have indicated they are unsure what the odor should be. I find it difficult to believe people have not been exposed to the "rotten egg" odor in high school chemistry or a pranksters stink bomb.

MA2 Gleyed hue - Does this zone need to be defined with a minimum thickness? Is there

further clarification needed for sandy soils that it is at < 15 cm. ? The questionnaire states that guidance is provided, however, the Indicators does not have the guidance.

MA3 Presence of muck in mineral surface - Why not just use the terminology "a mucky modified mineral surface texture"? See the attached (Chris only) discussion from Larry Ratliff (NSSC) concerning the use of the mucky modifier.

MO1 Classifies as Histosols - References Soil Taxonomy, however, most participants seem comfortable with this.

SANDY SOILS - Need to be defined somewhere.

MS1 Surface layer of muck, no root mat - People do not understand how a muck layer could exist on a sandy soil without a root mat.

MS2 Surface layer of muck, with root mat - Why does this have a color requirement and MS1 does not? Add mucky peat to this indicator (Nebraska). Add peat to this indicator for LRR H and M (Kansas).

MS3 Splotchy Albic Horizon - Language too technical, needs simplification. In addition, to be an indicator it needs to stand on its own or be deleted from the list.

MS4 Thickened dark surface - Taxonomy language too technical. In addition, no one tested. I have no experience with it. It does seem strange that the presence of a thin dark layer that is not thick enough to be mollic or has low base saturation can be hydric but a mollic is not (Indiana) ? May be a false indicator on some non-hydric soils that have horizons that are black colored but too thin or low in OC to be mollic (South Dakota).

TS5 Organic bodies - Not tested.

MS5 Depleted matrix - With the color requirements that are attached it seems redundant to say "depleted of iron".

MM1 Surface layer of muck - With a layer of muck this thick it would be logical that it doesn't matter what it overlies. Take the Taxonomy out! It has been suggested that the 10 cm. requirement is too thick. Documentation suggests that 5 cm. is thick enough in the mesic zone.

MM2 Depleted matrix - Again redundant and confusing to list color requirements plus say "depleted of iron." Part a. delete or let stand on its own. In TM2 it stands on its own, why not here? Add any hue with value 4 or more, chroma 1 or less with distinct or prominent redox accumulations (Ohio & Illinois). There are relict features, "deoxidized loess" in Iowa, that have this reduced matrix. Caution needs to be taken in describing the landscape and using professional judgement with all of the indicators.

MM3 Pore linings - Redundant to say distinct or prominent than list color requirements. Should

pore linings chroma 4 be allowed? Do we need to keep the 5 percent requirement, is 2 percent enough? Does this need a thickness requirement?

MM4 Redox concentrations - Is this 2 percent meant to include both nodules, concretions, and soft masses, or should "masses with" be deleted? What difference does size make if they are required to be > 2 percent of volume? It is more important to note if their boundaries are diffuse or abrupt. This is the one indicator than is most likely to give a false positive because of relict features.

MM5 Redox concentrations - Begs for simplification. Delete "on ped faces or ped interiors". Again it is redundant to specify "distinct or prominent" and than list color requirements for concentrations. Reduce the whole thing to "chroma 2 or less, redox concentrations chroma 5 or more". Do not understand the requirement for "black or reddish black ferromanganese stains" with the higher value. In addition, we have given the users specific color requirements in other indicators, but now they are supposed to interpret what is black or reddish black (not too difficult) ferromanganese stains (very difficult for non-soil scientist). "The 10 cm zone does need to be restricted to occurring in the upper 30 cm, if allowed to go deeper the indicators will fail" (Kansas).

MM6 Mollic with reduced colors below - Too conservative! What about 2.5Y (or redder), value 5 or more, chroma 2 or less with redox concentrations? This does need to be added (my observations, Illinois, and others). Why is the Thermic TM6 less restrictive? Include value of 4 and chroma of 1 or less with distinct or prominent redox concentrations below a mollic epipedon with chroma 1 or less (Ohio).

MM7 Calcium Carbonate Accumulation - Does this need a lower depth? How are non-soil scientists expected to recognize this zone of accumulation? Soil scientists have asked what the definition of "an accumulation of calcium..." actually means. It is unclear if it includes snail shells or if it has to be secondary carbonates, or concretions. Add 10YR hue, value 4 or more, chroma 1 or less with redox concentration (Illinois).

TM7 Mississippi Delta - Missouri tested and found this to work, color requirements do separate hydric from non-hydric.

MM8 Muck on the Prairie - Allow mucky peat (Nebraska)
Allow peat in LRR H and M (Kansas).

MM9 Vernal Pools - Not applicable.

MM10 Mollic with neutral hue (Proposed) - "We need this indicator!" (Illinois and others). Have received much positive feedback during testing and from MOA agency representatives at other meetings that this is the only indicator that works (exists) in the Midwest Mollisols. We may need to include redox concentrations that occur in the lower part of the mollic. Illinois, South Dakota, and Indiana have suggested adding 2/1 colors in the upper part. Because this is basically the Aquoll criteria 2/1 colors probably would work. If we go to a regional (LRR) indicator 2/1 colors would be added.

One thing that is not addressed very strongly is position on the landscape. The argument has been that landscape is not soils morphology. This is true, however the issue is one that should not be ignored, especially in the Prairie Pothole region. An approach that I have suggested is if a hydric soil indicator can be confirmed at a point on the landscape (pothole rim) than the remaining lower part of the depression is logically documented as a hydric soil even without the presence of an observable morphological indicator.

TAX ASSESSMENTS, SOIL SURVEYS & THE ROLE OF CLASSIFIERS

Charles C. Gilbert, Chairman
McDonough County Board
McDonough County Courthouse
Macomb, IL 61455

Dear Chairman Gilbert:

It has been brought to the attention of our organization that some landowners in McDonough County are having the soil maps of their land remapped at a more detailed scale for tax assessment appeals. As a representative of the Illinois Soil Classifiers Association (ISCA) I would like to first give some background information about our organization and then I would like to address some of the concerns our organization has with the remapping in your county.

The ISCA was established in 1975 as a non-profit association comprised of professional soil classifiers in public service, private industry, and education. The association is affiliated with the American Registry of Certified Professionals in Agronomy, Crops, and Soils (ARCPACS). The ISCA has three major objectives: 1) establish and maintain high standards of technical competence and ethical conduct in the profession of soil classifying; 2) promote high standards of education in soil science; and 3) promote the wise utilization and conservation of the soil resources of Illinois by encouraging the use of the soils information in land use planning.

The soil survey in McDonough County began in 1985 and the field work was completed in 1990. The soil maps in your county were prepared in the field by trained soil scientists with a minimum of a Bachelor of Science degree in soils and natural resources. The soil scientists examined numerous soil samples, conducted physical and chemical test, and made a map on an aerial photograph (at the required scale of 4" = 1 mile) while walking throughout the county. The rate of mapping was approximately 300 to 400 acres per field day.

The soil mapping in the county was subjected to several levels of quality review, including a minimum of three levels of field review to ensure that the survey meets National Cooperative Soil Survey (NCSS) standards and specifications for identifying, naming, and correlating soils, and mapping scale. The first level of county-wide review was by a very experienced Soil Conservation Service (SCS), soil survey project leader (Mike Walker), who was responsible for day-to-day leadership and supervision. The next level of county review was conducted by state soil and geology scientists from the Soil Conservation Service, University of Illinois, and the

Illinois State Geological Survey. The final review of the McDonough County Soil Survey was conducted in 1991 by a soil scientist from SCS's National Soil Survey Center in Lincoln NE.

As you can see, a county soil survey is field and labor intensive. A county soil survey is one of the most ground-truthed natural resource inventories in the world, and there are few natural resource inventories that are subjected to the rigorous review of a soil survey. The McDonough County Soil Survey is the best county-level soil map that modern technology can provide at the presently required scale (4" = 1 mile). Maps at a more detailed scale can be made (i.e. 8" = 1 mile or 53" = 1 mile) but the cost of the aerial photography at these detailed scales and the time needed to do the field work at these scales on a county wide basis would be prohibitive.

It is ISCA's understanding that maps of greater detail are being made on selected farms to be used to appeal the assessment of cropland. The following items must be considered if you are to allow these maps to be used for an appeal. The first and most important consideration is - does the map meet NCSS Standards for identifying, naming and correlating soils and have there been quality control checks similar to those outlined by the NCSS? The next consideration is the qualifications of the individual(s) doing the remapping. Does the person meet the qualifications for education and experience for producing a soil survey? Is the individual certified by ARCPACS or ISCA? The last consideration is the scale of the remapping. Would it be fair to remap part of the county in greater detail, but not all of it? If the mapping is done in greater detail is it drawn on aerial photography of the correct scale? A blow-up of an aerial photo on a copy machine is an unacceptable base map!

Another point to consider is what is to be gained from the more detailed maps? It is likely that the map at the more detailed scale will be similar, except that more inclusions (areas of soil that were too small to map at the standard scale of 4" = 1 mile) could be mapped. The question then is - if the mapped inclusion is not favorable for the tax appeal do you keep it off the soil map and only keep the inclusions that are favorable for the appeal? Also, does the Illinois Department of Revenue recognize soil maps at these detailed scales?

I hope this information is helpful in considering whether or not to accept these more detailed maps for appeals. Please let me know if you have any questions.

Sincerely,

Samuel J. Indorante, Ph.D., CPSS
Immediate Past President, ISCA
207 Bountiful Dr.
Fairview Heights, IL 62208
(618)-397-4953

cc: Doug Rosio, Supervisor of Assessments, McDonough Co.
Robert Thompson, Executive Director, McDonough Co. Farm Bureau
Steve Zwicker, USDA-SCS, Rock Falls, IL
Ron Hagaman, Ill. Dept. of Revenue, Springfield, IL

ARE YOU RECEIVING SOIL SURVEY HORIZONS ?

The Illinois Soil Classifiers Association pays for the subscription to Soil Survey Horizons for full and associate members as part of your dues assessment. If you are a full or associate member of the Illinois Soil Classifiers Association and are not receiving Soil Survey Horizons, please contact the treasurer, Charles Frazee. His address is R.R. 1, Box 14b, Divernon, IL 62530.

SOIL SCIENCE SOCIETIES IN THE U.S.

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Professional Soil Classifiers Association
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P.O. Box 84
Auburn, AL 36830

State Board of Registration for
Professional Soil Classifiers
Hillwood Office Center
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Suite 200-9 & 200-10
Montgomery, AL 36106-2686

ALASKA

Alaska/Yukon Society of
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P.O. Box 202761
Anchorage, AK 99520-2761

ARIZONA

None

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None

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Society of Soil Scientists of Southern New England (sss of SNE)
Dr. William R. Wright, President
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1405 South Harrison Road, Room 101
East Lansing, MI 48823-5202

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Minnesota Association of Professional Soil Scientists
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NEW MEXICO

New Mexico Soil Science Society (NMSS)
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NORTH CAROLINA

Soil Science Society of North Carolina
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Department of Soil Science
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ATTN: Dr. Robert Somers
2221 Devine Street, Suite 222
Columbia, SC 29205-2474
Phone 803-734-9100

SOUTH DAKOTA

Professional Soil Scientists Association
of South Dakota
James Millar
Soil Conservation Service
25-1/2 West 6th Avenue
Redfield, SD 57496
Brookings, SD 57007

Wayne Bachman, Secretary
Soil Conservation Service
200 4th Street, S.W.
Huron, SD 57350

TENNESSEE

Soil Scientist Association of
Tennessee
c/o Darwin L. Newton
675 U.S. Court House
801 Broadway
Nashville, TN 37203

TEXAS

Professional Soil Scientist Association
c/o Dr. B.L. Harris, Soils Specialist
Texas Agricultural Extension Service
348 Soil & Crop Science Building
Texas A & M University
College Station, TX 77843

UTAH

Utah Society of Soil
Scientists
Richard Jaros, President
P.O. Box 645
Cedar City, UT 84721-0645

VERMONT

Soil Science Society of New England
Dave Van Houten, President
15 Oakwood Lane
Essex Junction, VT 05452

VIRGINIA

The Virginia Association of
Professional Soil Scientists
(VAPSS)
P.O. Box 10337
Blacksburg, VA 24062

WASHINGTON

Washington Society of Professional
Soil Scientists
P.O. Box 30113
Spokane, WA 99223

WEST VIRGINIA

West Virginia Association of
Professional Soil Scientists
c/o Dr. Doug Boyer
USDA, Agricultural Research
Service
P.O. Box 867
Beckley, WV 25802-0867

WISCONSIN

Wisconsin Society of Professional Soil Scientists (WPSS)
Randall Gilbertson, President ('93)
RR 3, Box 3038
Spooner, WI 54801

Carl Wacker, President-Elect ('94)
4709 Sherwood Road
Madison, WI 53711

HOW TO ORDER THE SOIL SURVEY MANUAL: & THE KEYS TO SOIL TAXONOMY, 6TH EDITION

The Soil Survey Manual and the Keys to Taxonomy are available to customers who are not National Cooperative Soil Survey cooperators with the Soil Conservation Service. They are available through the Superintendent of Documents. To order by mail, write to :

Superintendent of Documents
Post Office Box 371954
Pittsburgh, Pennsylvania 15250-7954

To order by phone call: (202) 783-3238
By FAX, call: (202) 512-2250
(that's right, the mailing address is in Pittsburgh and the telephone numbers are in Washington, D.C.)

Information for ordering follows:

Soil Survey Manual
USDA Ag. Handbook #18
Stock Number: 001-000-04611-0
Price: $25.00 per copy

Keys to Soil Taxonomy, 6th Ed.
Stock Number: 001-000-04612-8
Price: $19.00 per copy

CENTRAL STATES FOREST/SOILS WORKSHOP & TOUR

October 11-13, 1994

Holiday Inn
Marion, IL
I-57 And IL. Rt. 13

Sponsored by:

IL Soil Classifiers Association
USDA, Soil Conservation Service
Shawnee Resource Conservation & Development
U.S. Fish & Wildlife Service
U.S. Forest Service, Shawnee National Forest
IL Dept. of Conservation
Southern IL University, Dept. of Forestry
University of IL, Forest Resource Center
The Nature Conservancy

15th Central States Forest/Soils Workshop & Tour
Oct. 11-13, 1994
Marion, IL

A Forest/Soils Workshop with meeting and field trips will be held in southern Illinois. Emphasis will be on soils-tree relationships.

Registration will be at the Holiday Inn in Marion (intersection of I-57 and Ill. Rt. 13) between 4:00 and 7:00 pm., Tuesday, October 11. The evening meeting will begin at 7:00 p.m. in the conference room.

The field trips will be all day Wednesday, October 12, and on Thursday morning, October 13. The workshop will end at noon, October 13.

The introductory meeting Tuesday evening will feature different speakers and a variety of natural history subjects with an emphasis on southern Illinois soils and vegetation.

The tours include visits to a diversity of habitats: a dry limestone barrens site, a Paleozoic bedrock sandstone glade, north- and south-facing slopes along a bedrock chute, a coastal plain gravel site, cypress swamps, bottomland forests, and reforestation projects. Open soils pits and soil cores will be shown.

A banquet Wednesday evening will be at the lodge at Giant City State Park south of Carbondale, Illinois.

NOTE: Sturdy field clothes and boots are recommended. Tours will take place rain or shine.

INFORMATION PACKETS

Information packets with maps, soil descriptions, information about the area, etc., will be handed out during registration.

AGENDA/ITINERARY

OCTOBER 11, TUESDAY

4:00 Registration----Holiday Inn lobby

7:00 Welcome and Meeting----Holiday Inn Meeting Room
Welcome----Louise Odegard, Supervisor, Shawnee National Forest

7:15 Overview of Geology of Southern Illinois----Dr. Stanley Harris, Prof. Emeritus, Southern IL Univ., SIUC

7:45 Overview of Soils of Southern IL----Bob McLeese, Soil Conservation Service, Champaign, IL

8:15 Break

8:30 Overview of Forests of Southern Illinois----Dr. James Fralish, Dept. of Forestry, Southern IL Univ., SIUC

9:00 Cultural and Natural History of Southern Illinois----Max Hutchison, The Nature Conservancy, Ullin, IL

9:30 Questions/Comments & Discussion

10:00 End of session

OCTOBER 12, WEDNESDAY

7:30 Buses Depart from Holiday Inn

8:15 Simpson Barrens, SNF Natural Area----featuring: barrens vegetation on limestone soils

9:00 Trigg Tower Glade, SNF----site with thin soils and stunted trees over sandstone bedrock

10:00 Hill Branch, Bell Smith Springs, SNF----scenic area with forests showing contracts between slopes of north and south aspect bordering a sandstone chute

11:45 Lunch----Forest Resource Center, Dixon Springs Agriculture Center, Discussion----FRC activities by Stephanie Brown and examination of a soils pit

1:30 Abandoned gravel pit----Coastal Plains gravels exposed beneath drouthy soils and barrens vegetation

2:30 Heron Pond----IDOC nature preserve with cypress swamps and floodplain soils

3:45 Cypress Creek Channel----IDOC natural areas with huge ancient cypress trees and swamp soils

4:45 Hogan Bottoms----FWS site with fine example of bottomland hardwoods and showing reforestation efforts of Cache Wetlands Joint Venture Project

6:00 Banquet----Giant City State Park Lodge----cowboy poetry by Dr. Phil Robertson, Department of Plant Biology, Southern IL Univ., SIUC

OCTOBER 13, THURSDAY

7:30 Buses Depart from Holiday Inn

8:45 State tree nursery at Jonesboro----Discussion of DOC's nursery program by Don Houseman and examination of plantations

9:30 Pine Hills Area----SNF Research Natural Area, several stops at sites representing upland and bottomland soils and vegetation

11:30 Brief stop at Oakwood Bottoms----examine bottomland forest management by SNF

12:00 End of tour

Transportation

Marion is served by Amtrak (out of Carbondale), Midway Express (out of the Southern Illinois Airport, Carbondale), and by TWA Express (out of the Williamson County airport, Marion). Taxis are available.

Marion may also be reached via the Marion Interchange of I-57.

Tour transportation will be via chartered bus. Bus loading and unloading will be at the Holiday Inn. Due to the limited parking room at some of the areas to visited, autos shoul not accompany the buses.

Lodging

Blocks of rooms have been reserved at the following motels. Reservations must be made directly with the motel of your choice before September 15,1994. All blocks of rooms will be released to the general public after these dates. You must indicate you are with the Central States Forest/Soils Workshop to qualify for the following rates.

Hotel	Single Rm	Double Rm
Holiday Inn (618) 997-2326	$45.00	$45.00
Best Inn (618) 997-9421	$35.88	$35.88
Comfort Inn (618) 993-6221	$35.00	$40.00

Meals----Refreshments

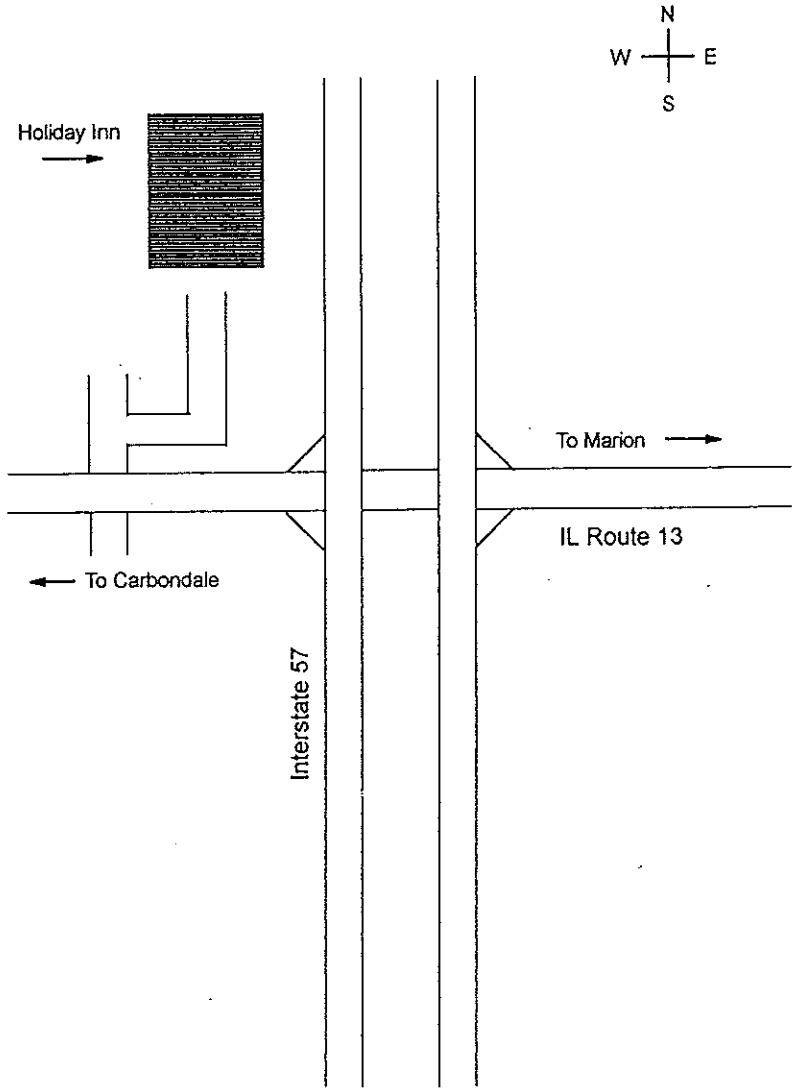
A box lunch and morning/afternoon coffee/snacks, (included in registration fee) will be provided during the field trip on October 12. Transportation to and from banquet location will be provided. Several restaurants are also located near the motels.

Questions? Contact

Dana Grantham
Soil Conservation Service
618-457-3648

Max Hutchison
The Nature Conservancy
618-634-2524

David Johnson
Illinois Department of Conservation
618-847-3781



Registration Form October 11-13, 1994

15th Central States Forest Soils Workshop Tour

The $40.00 registration fee includes workshop materials, 1 box lunch, banquet meal, morning and afternoon coffee/snack breaks and transportation for Workshop tours. Please make all checks payable to CENTRAL STATES FOREST SOIL COUNCIL.

Name:_____Fee $40.00 x_____ = _____

Mailing Address:_____Total Enclosed: $_____

City/State/Zip:_____

Home Phone ( )_____Work ( ) _____

Mail registration and fee to: Soil Conservation Service, Attn: Jean McConkey, 1902 Fox Drive, Champaign, IL, 61820

POSITION OPENING SOIL SCIENTIST

Duties to include:

- Onsite Soils Investigation for Septic System Suitability
- Provide natural resource information - both written and verbal
- Provide technical assistance with conservation related field work
- Assist with fund raising activities
- Attending meetings to represent soil work

Qualifications:

- B.S. Degree in Soil Science or related field with strong emphasis in soils
- Excellent written and oral communication skills
- Flexible and willing worker - team player

Salary commensurate with experience
Interested persons should send a resume and cover letter to:

Jackie Falkenstein
Boone County Soil & Water Conservation District
P.O. Box 218
Belvidere, IL 61008

TV DOCUMENTARY DISCUSSES SOILS AND FARMING

Steven Zwicker, Soil Scientist, SCS, (and ISCA President Extraordinaire) and Brad Harding, Associate Farm Director, WTVP-Peoria, will discuss, "The Role of Loess In Creating Rich Illinois Soils," and "Grain Farming", respectively , on a TV Documentary to be aired Sunday, September 25, at 4:30 P.M. on Peoria station WTVP Channel 47. For Chicago area viewers, the program will be aired Thursday, September 22, at 7:30 P.M. on KRTV Channel 11. The programming is part of a 6-part series entitled, Pride in Illinois.

ISCA PROVIDES EXPERTISE CONCERNING PROPOSED REVISION OF ILLINOIS DEPARTMENT OF PUBLIC HEALTH PRIVATE SEWAGE DISPOSAL CODE

Many of you are aware of the current effort toward amending the Illinois Department of Public Health Private Sewage Disposal Code. Some of you may have examined the amendments and submitted written comments. As I spode with a number of ISCA members about the amendments to the Code, I heard a common complaint, paraphrased as "We've got to do something about that table!" The table is the soil property/loading rate table properly known as "Soil Suitability For On-Site Sewage Design" or Illustration M in Appendix A of Sec. 905.

I'm sure any individuals addressed this table in their comments. Still, the ISCA Executive Council determined that a greater impact would be made if this specific item of the Code were taken up by our Association as a whole. In January 1994, ISCA President Sam Indorante asked me to assemble and chair an Ad Hoc Committee to critically review and, if necessary, revise Illustration M. The Committee members included Bob Darmody, Don Fehrenbacher, Emil Kubalik, Gloria Westphal, and Steve Zwicker. All Committee members are certified professionals with ISCA and represent public and private sector interests. The Committee has a working knowledge of soils statewide. It is knowledgeable of septic system design and installation, and state and local health department policies and procedures. Several of the Committee members have helped to develop or have used the approach of interpreting soil properties to estimate soil permeability and wastewater loading rates for a number of years. Most importantly, the Committee members truly believed in this approach and were willing to devote a lot of time and effort toward its use in Illinois.

I spoke with a number of ISCA members and solicited written and verbal comments specifically relating to Illustration M. With these comments in hand, the Committee met for the first time in February 1994, and in two subsequent meetings. Members of the Committee also corresponded frequently between meetings. I won't go into a detailed discussion of its deliberations here. The Committee considered those comments as well as published and unpublished studies relative to soil water movement as predicted by soil properties. It examined official soil series descriptions, soil interpretation records, and representative published Soil Survey Reports. It studied soil properties and estimated permeability or wastewater loading rate charts developed in Illinois counties and in neighboring states. As the Committee developed a statewide soil properties/wastewater loading rate table, it repeatedly tested that table using pedon descriptions selected from both published Soil Survey Reports and those prepared during on-site investigations of soil suitability for wastewater treatment.

The soils of Illinois vary greatly in their properties. One would reasonably expect a similar variety in the ability of Illinois soils to absorb and treat wastewater from septic tanks. The table developed by the Committee (entitled "Key For Determining On-Site Sewage Effluent Subsurface Loading Rates", and presented below) may appear somewhat imposing to the experienced soil classifier. One can only imagine

how it looks to a septic system designer, sanitarian, or a lay-user. As a result, the Committee felt compelled to develop a companion chart to serve as the ISCA proposal for Illustration M. This chart is less technical and designed for use by sanitarians, septic system designers, local health department staff, etc. It is in a vertical format for ease of publishing and clarity for use. The "Key ..." is intended for use by the on-site investigator to arrive at a Soil Group. Each Soil Group is defined by its texture (y-axis of table, numerically 1 through 9) and combinations of structure, consistence, and parent material (x-axis of table, alphabetically A through N). Illustration M, also presented below, matches the Soil Group with a Design Group (Roman numerals I through XIII) that integrates the estimated loading rate, estimated permeability, septic system size, and minimum vertical separation above limiting layers.

As an example, consider a soil layer formed in loess having silty clay loam texture (<35% clay) with moderate subangular blocky structure and friable consistence. The soil investigator should arrive at placement of such a layer in Soil Group 6D. This Soil Group is estimated to have a loading rate of 0.62 gallons/day/square foot. Soil Group 6D corresponds to a placement within Design Group VII of Illustration M. If the layer cited above is the most restrictive relative to the proposed depth of the seepage device (trench or bed bottom), that device would be designed at a residential rate 325 square feet per bedroom with a minimum 2-foot separation above a limiting layer, if present. The soil investigator describes each soil layer and assigns a Soil Group for each. That layer most restrictive relative to the proposed depth of the seepage device forms the basis for the septic system design. How does one determine the most restrictive layer in the soil profile? The most restrictive layer is that within 2 feet of the bottom of the seepage device for Design Groups VII through IX, and within 3 feet of the bottom of the seepage device for Design Groups I through VI. This allows for penetration of shallow restrictive layers so long as the underlying layers are less restrictive, are more than 2 or 3 feet (depending upon the Soil Group) above any limiting layer, and the depth of the seepage device is within that allowed by the Code.

Drafts of the two tables presented here were submitted to the ISCA membership at large for written comments in a special mailing in mid-May of 1994. The Committee would like to thank those of you who made the effort to review these tables and make comments. The Committee considered these comments in the final drafts. The final drafts were submitted to Mr. Doug Ebelherr, Coordinator of the Illinois Private Sewage Disposal Program, on 17 July 1994. We are hopeful that these tables will be incorporated into an amended Private Sewage Disposal Code.

In behalf of the Committee, I would like to thank those ISCA members who responded to its requests for review and comments. Thanks to Mark Bramstedt for help in the formatting and word processing of the "Key ...". Finally, I would like to thank each Committee member for their work toward the timely completion of this task.

Bill Kreznor, Vice-president and Ad Hoc Committee Chair

KEY FOR DETERMINING ON-SITE SEWAGE EFFLUENT SUBSURFACE LOADING RATES (g/d/sq.ft) FOR ILLINOIS SOILS (1) ISCA draft 6/14/94

Structure and Parent Material	Single grain; Granular; Platy(2)	Angular and Subangular Blocky; Prismatic									Structureless or Massive				
		Weak		Moderate		Strong		Moderate; Strong			Loess; Outwash		Till (3); Lacustrine		
Moist Consistence	lo vfr fr	lo vfr	fr fi	fr	fi	fr	fi	fr	fi	vfi	vfr	fr	vfr fr	fi	vfi
Texture	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1. Fragmental; Ext. or Very gravelly sand; Gravelly sand; Coarse sand; Gravelly loamy sand	>1.00 (4)	N/A (5)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2. Medium sand; Sand; Loamy coarse sand; Loamy sand; Coarse sandy loam	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	N/A	N/A	N/A	
3. Fine sand; Loamy fine sand	0.84	0.91	0.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.91	0.84	N/A	N/A	
4. Sandy loam; Fine sandy loam; Gravelly sandy loam; Gravelly loam; Gravelly silt loam	0.75	0.84	0.75	0.75	N/A	N/A	N/A	N/A	N/A	N/A	0.84	0.75	0.75	0.52	
5. Loam; Silt loam; Very fine sandy loam; Sandy clay loam; Silty; Very fine sand; Loamy very fine sand	0.62	0.75	0.69	0.75	0.69	N/A	N/A	0.62	0.52	0.45 (6)	0.69	0.52	0.45 (6)	0.27 (6)	
6. Silty clay loam (<35% c); Clay loam (<35% c)	0.52	N/A	0.45 (6)	0.62	0.52	0.69	0.52	0.45 (6)	0.40 (6)	0.27 (6)	0.52	0.45	0.27 (6)	0.00 (6)	
7. Silty clay loam (>35% c); Clay loam (>35% c) ; Sandy clay (<40% c)	0.45 (6)	N/A	N/A	0.45 (6)	0.40 (6)	0.45 (6)	0.40 (6)	N/A	0.27 (6)	0.20 (6)	0.27 (6)	0.20 (6)	0.00 (6)	0.00 (6)	
8. Sandy clay (>40% c) Silty clay	0.40 (6)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.20 (6)	0.00 (6)	N/A	N/A	N/A	0.00 (6)	
9. Clay; Organics; Fragic; Fragipan; Lithic; Paralithic	---------- SOIL PROPERTIES HAVE VERY SEVERE LIMITATIONS; SUBSURFACE DISPOSAL NOT RECOMMENDED ----------														

FOOTNOTES: (1)Disturbed soils are highly variable and require special on-site investigations.

(2)Moderate or strong platy structure for the soil textures in Group 5 have a loading rate of 0.40 g/d/ft . Platy structure having firm or very firm consistence and/or caused by mechanical compaction has a loading rate of 0.00 g/d/sq.ft.

(3)Weakly structured BC horizons and basal glacial tills structured by geogenic processes have the same loading rates as structureless glacial till.

(4)This soil group is estimated to have very rapid permeability and exceeds the maximum established rate in Section 905, Exhibit A, Illustration H of the Illinois Department of Public Health Private Sewage Disposal Code.

(5)N/A means not applicable.

(6)These soil groups are estimated to have moderately slow to very slow permeability and is less than the minimum established rate in Section 905, Exhibit A, Illustration H of the Illinois Department of Public Health Private Sewage Disposal Code.

DRAFT

DEPARTMENT OF PUBLIC HEALTH

Section 905 Appendix A
Illustration M Soil Suitability For On-Site Sewage Design

Loading Rates in Square Feet Per Bedroom
and Gallons/Square feet/Day

Design Group	Soil Group (Most Limiting Layer)	Minimum Separation To Limiting Layer(1)	Permeability Range	Size of System Residential Req. Absorption (ft^2/bedroom)	Size of System Institutional/Commercial Allowable Application Rate (GPD/ft^2)
I	1A	N/A	Very Rapid	N/A	N/A
II	2A; 2B; 2K	3 feet	Rapid	200	1.0
III	3B; 3K	3 feet	High Moderately Rapid	220	0.91
IV	3A; 3C; 3L; 4B; 4K	3 feet	Low Moderately Rapid	240	0.84
V	4A; 4C; 4D; 4L; 4M; 5B; 5D	3 feet	Very High Moderate	265	0.75
VI	5C; 5E; 5K; 6F	3 feet	High Moderate	290	0.69
VII	5A; 5H; 6D	2 feet	Moderate	325	0.62
VIII	4N; 5I; 5L; 6A; 6E; 6G: 6K	2 feet	Low Moderate	385	0.52
IX(2)	5J; 5M; 6C; 6H; 6L; 7A; 7D; 7F	2 feet	High Moderately Slow	445	0.45
X(2)	6I; 7E; 7G; 8A	2 feet	Low Moderately Slow	500	0.40
XI(2)	5N; 6J; 6M; 7I; 7K	2 feet	Slow	740	0.27
XII(2)	7J; 7L; 8I	2 feet	Very Slow	1000	0.20
XII(2)	6N; 7M; 7N; 8J; 8N	N/A	N/A	N/A	0.00
XIII	9	------- SUBSURFACE DISPOSAL NOT RECOMMENDED ----------			

NOTES: (1) Limiting layers include fragipans; bedrock; compact glacial tills; seasonal high water table or other soil profile features that will materially affect the absorption of liquid from the disposal field.

(2) Soils in this group are less than the minimum percolation rate established in Section 905, Illustration H as suitable for subsurface seepage systems.

rev.6/16/94

ILLINOIS SOIL CLASSIFIERS ASSOCIATION

FALL 1994 NEWSLETTER

NEWS....

Kudos to Dana Grantham and his crew for the excellent job they did on the Central States Forest Soils Workshop. More than 100 were in attendance for a great program, good food, lively discussion, and, of course, rain. Congratulations to ISCA's very own Sue Aszman, the "soil scientist" winner of the texture and tree id quiz.

ISCA hosted a hydric soils workshop in Lexington in October. Thanks to Don Fehrenbacher, Mark Bramstedt, Bob McLeese, and our guest, Greg Schellentragger.

The 1995 SSSA meetings will be held in St. Louis October 29-November 3. ISCA will be cooperating with the Society to host a wetlands, floodplains, and land-use tour. Divisions S-5 and S-10 are the co-sponsors of the field tour. Pat Kelsey, Sam Indoranie, and Bob McLeese will be working to develop the tour. If you would like to assist.... PLEASE contact Pat Kelsey at (708) 719-2417. Initial planning for the tour needs to be completed by mid-January.

Pat Kelsey is representing ISCA on the S577 Continuing Education for Soil Scientists Committee of SSSA. The committee will hold a hydric soils workshop at the 1995 SSSA meetings. Current plans are to link the workshop and field tour. S577 is looking for ways to encourage the practicing soil scientist to participate in the Society. ISCA is involved with the committee because of our long-standing ability to provide successful, effective workshops for the practitioner. We look forward to doing the same in St. Louis.

Dave "I used to be from Illinois" Hammer will host the Soils-Geomorphology Field Trip at the 1995 SSSA meetings. Dave gives a great field tour. Perhaps we (Sam) can entice him to cross the state line with the tour.....

COURSES OFFERED

GEOGRAPHY 465 Field Methods. Northern Illinois Univerisity. Instructor: P. Kelsey. This course focuses on the field identification and classification of soils. Emphasis will be placed on soil survey methods including NCSS, Intensive-scale soi l survey, statistical transect mapping, and preparation of surveys from field data. Thursdays 6:00 -8:40PM. January 19-May 11. For more information, contact NIU Dept. of Geography (815) 753-0631 or Registration & Records (815) 753-0681.

GEOLOGY 493 Groundwater Geophysics. Northern Illinois University. Instructor: P. Carpernter. For information, contact Phil Carpenter at (815) 753-1523

SOILS 304/VTS Soil Conservation and Management. University of Illinois. Instructor: K. Olson. Application of principles of soil conservation and management to the solution of land-use problems: influence of soil characteristics on erosion control, cropping intensity, water management, and land-use planning. Course will be offered by VTS at Decatur (Millikin Univ.), Peoria (Uof I Coll. of Medicine), Springfield (Springfield Extension Center), Quincy (Quincy Extension Center), and Edwardsville (SIU). For more information, contact William Sutton, Office of Statewide Programming at (618) 398-6917.

ILLINOIS' PROPER BASE^3 PROJECT: A DIGITAL ORTHOPHOTOGRAPHY PARTNERSHIP

BACKGROUND

In Illinois, information on ownership and natural resources are being independently maintained on separate computer and hardcopy systems by USDA agencies, other federal agencies, state and local government and private business. Information is rarely compatible between agencies due to development of information from different photographic bases as well as different scales.

PROPER BASE^3 would allow for a combined effort by many agencies and groups to join spatial information into one common data base through the use of one photobase. Each partner would be responsible for development and maintenance of their data layer. All partners would have access to the data layers.

THE CONCEPT

It has been said that "the three most important things to building a Geographic Information System (GIS) are proper base, proper base, proper base." Thus, PROPER BASE^3.

PROPER BASE^3 is based on the concept that one common photo landbase (digital orthophotography) will be used to register all layers of data. Soil survey, agricultural land use, property ownership, field boundaries, crop history, water, transportation, watersheds, public land survey, geology, etc. will all fit on the same photographic base framework. The various layers utilize one photobase.

PROPER BASE^3 promotes the sharing of information between partners electronically, rather than manually. By maintaining information on one common map base, the partners reduce redundancy. Each partner will be responsible for developing and maintaining their data layer, but will have access to the common data layers from the partnership.

THE VISION

Common and shared databases for service to Illinois landowners.

THE BASE

The proposed common photobase is the USGS digital otheophoto quarter quad (DOQQ).

The USGS digital orthos meet National Map Accuracy Standards and National Aerial Photography Program (NAPP) Standards. NAPP is based on:

- Quarter-quad centered (3.75 by 3.75 minutes)
- 20,000 feet flying height
- 152.4 mm (6inch) focal length camera
- 1:12,000 scale
- UTM projection

- North American Datum 83
- 25 micron scan size (1 meter ground resolution)
- Ground survey or aerotriangulation ground control

THE COSTS

4,126 DOQQs at $600/DOQQ
$2.5 million

POTENTIAL PARTNERS

USDA Natural Resource Conservation Service
USDA Agricultural Stabilization and Conservation Service
USDA Farmers Home Administration
USDA Forest Service
U.S. Army Corps of Engineers
U.S. Fish & Wildlife Service
U.S. Environmental Protection Agency
U.S. Department of Defense
U.S. Department of Energy-- Argonne National Labs
Federal Emergency Management Agency
Illinois Department of Agriculture
Illinois Department of Conservation
Illinois Department of Energy & Natural Resources
Illinois Department of Revenue
Illinois Department of Transportation
Illinois Environmental Protection Agency
Illinois State Library
Illinois Association of County Officials
Association of Illinois Soil & Water Conservation Districts
Illinois Farm Bureau
County Boards
Municipal Governments
Utilities
State Universities
Agribusiness

THE BENEFITS Partnership benefits include:

- Better customer service
- Time savings
- Information consistency
- Improved economics
- Equity in service
- Elimination of duplication

FRAGIPANS AND ON-SITE WASTEWATER TREATMENT : ARE DEEP TRENCHES THE ANSWER?

Reprinted from SoilTech Vol. 2 No. 3.

This article presents contrasting viewpoints on how to design on-site septic systems in fragipan soils. SoilTech is not attempting to provide the "answer," but to stimulate thought, discussion and perhaps even some investigation.

Some readers will have knowledge, experience and opinions on this topic. SoilTech welcomes your responses.

Don't excavate below the pan.
Joe Blaine
Soil Scientist
Ozark Soil Evaluation Series

Editors Note: Joe mapped soils as a Soil & Water Conservation District employee before becoming a consultant specializing in on-site sewage treatment. He works primarily in Christian County.

Excavating below restrictive horizons such as fragipans is an inappropriate and unacceptable means of achieving wastewater treatment. It may accomplish disposal, at least in the short term, but it will not provide for adequate biological treatment and purification of effluent.

Aerobic biological treatment in soil requires an adequate rate of oxygen diffusion. This is the process by which oxygen in soil pores is replenished by oxygen from the atmosphere.

For absorption trenches that have been constructed below a fragipan there are three points to be aware of:
1. The fragipan not only restricts water movement but also air movement. The only significant area for air exchange is throughout the trench itself, which typically will be saturated with water in the lower non-restrictive portion, blocking aeration. Even if the lower portion of the trench is not saturated, at least two-thirds of the absorption field will essentially be inoperative due to the undisturbed fragipan.

2. The depth of a trench below a fragipan will predominately be greater than thirty inches, which is the maximum trench depth allowed by DNR's Title Ten Standards. This standard is due to the rapid decrease in the rate of oxygen diffusion and, therefore, a decrease in trench depth. This regulation is applicable even to soils ideally suited to wastewater treatment.

3. The soil below a fragipan is typically clayey and cherty to extremely cherty. This soil is believed by many soil scientists to be poorly suited for wastewater treatment even when it occurs closer to the surface, due to poor aeration under absorption field conditions.

The depth of the distribution pipe is of little significance for treatment. The overriding factor in absorption trench construction for treatment is depth of the trench bottom. The soil below and beside the lower portion of the trench is where the significant treatment takes place and where the need exists for proper aeration. Briefly exposing the effluent to air does not sufficiently oxygenate the effluent for aerobic decomposition.

Trench depths should be as shallow as possible for all soils. Oxygen diffusion and biological activity decrease rapidly below two feet in soils. In addition, many soils have permeability and/or drainage limitations below two feet.

Summary
Constructing trenches at excessive depths is an inappropriate and hazardous means of attempting to achieve wastewater disposal even in ideally suited soils. Placement below an impermeable layer into clayey material is even worse. Deep trenching is not an improvement in wastewater management. Utilizing deep trenches and excavating below fragipans are the dominant characteristics of the wastewater systems of the past several decades that are the source of our groundwater contamination today. Christian County, which has been a leader in wastewater management in the state, has recognized these hazards. Consequently, the typical trench depth in the county is twelve inches (for LPP and shallow placement systems) to twenty-four inches, and excavating below fragipans is strictly prohibited.

Deep trenches can work.
Fred Young
Soil Scientist

I discussed Joe's article in separate conversations with Nix Anderson (Missouri Dept. of Health), Randy Miles (pedologist, UMC) and Steve Anderson (soil physicist, UMC). What follows is a composite of opinions, including my own.

Oxygen diffusion
I question whether oxygen diffusion is really a rate-limiting process in well drained soils, even at depth. Nix and Randy believe that it can be; "The system's got to breathe!" says Nix. However, both Nix and Randy believe that backfilling trenches with porous material (i.e. gravel and sand) will provide for adequate oxygen diffusion even in deep trenches. Both perceive that backfilling with clayey, impermeable material will adversely affect oxygen diffusion.

We all agree that trenches backfilled with porous, well drained material will provide for sufficient oxygen diffusion, even though the fragipan remains undisturbed between trenches. Lateral diffusion is adequate. If you throw a tarp over a functioning system, will it fail? Probably not, because the system is open on the sides and "leaky". Fragipans are also cracked and leaky.

Biological Activity
Biological activity below a fragipan is extremely low in undisturbed soils. There are no roots, and no organic matter. Without biological activity, there can be no treatment of effluent. My conclusion was that treatment is minimal in deep trenches below fragipans because microbes, not oxygen, were limiting.

Nix points out that the effluent will bring in the microbes. The presence of effluent will quickly cause the microbial population to increase along the ped faces and pores that constitute the filtering system. Randy agrees.

Soil below the fragipan
Most soils with fragipans (e.g. Tonti, Captina, Wilderness, Creldon) are underlain with cherty to extremely cherty clay. However, this material is well structured, well drained and moderately permeable. It seems that effluent should pass through this material, without becoming stagnant and anaerobic.

How well does this material function as a filter field? Does it drain? If so, does it filter and treat the

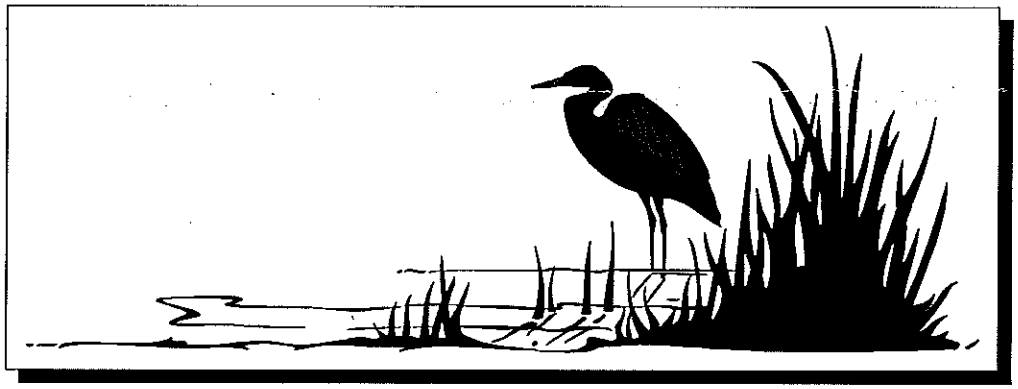
effluent? Are there enough oxygenated, microbially active surfaces in contact with effluent for sufficient time?

Deep trenches
Nix believes that deep trenches will work, if 1) the soil material at depth is suited, and 2) the trench is backfilled with permeable material. Randy agrees.

Nix feels strongly that a system on top of the fragipan will not work. Mounds, he says, always leak out the toe. Randy estimated that about 70 percent of the mounds he has seen are leaky, although he wonders about the quality of the effluent that is surfacing. Perhaps it has been sufficiently treated, in some cases.

Summary
Oxygen diffusion may be a limitation even in well drained soils. However, deep trenches that are backfilled with permeable material will provide for sufficient oxygen diffusion even below a fragipan. Biological activity will develop even deep in the soil in an aerobic system. The well drained, cherty clays that underlie most fragipans appear to allow effluent to percolate downward, but it is not clear if treatment is adequate.

Properly designed and constructed deep trenches below fragipans may be suitable for on-site waste treatment. Monitoring of effluent below such systems may be needed to resolve these issues.



HAPPY HOLIDAYS AND A PROSPEROUS NEW YEAR FROM ISCA!

NATIONAL SOCIETY OF CONSULTING SOIL SCIENTISTS
1995 ANNUAL CONVENTION

NSCSS
Opportunities & Emerging Technologies
January 25-28
at Coeur d'Alene, Idaho
The Coeur d'Alene Resort

WEDNESDAY, JANUARY 25
Morning
Business Seminars (Marketing, Advertising, Sales)
Watershed Hydrology Workshop
Afternoon
Business Seminars (Financing, Time Management, Negotiations)
CPESC and NSCSS Registry Exam
Evening
NW Chapter Reception
NSCSS Committee Meetings

THURSDAY, JANUARY 26
Morning
Revised Universal Soil Loss Equation Workshop
Stormwater, Erosion & Sediment Control Sessions
Soil Resources and Land Use Planning
Afternoon
Environmental Audits - ASTM Standards
Stormwater, Erosion & Sediment Control Sessions
General Soil/Environmental Issues
Evening
Exhibitors' Reception
Night Skiing, Dog Racing Park, or on-your-own

NOTE:
We will have a "Business Room" for all of us who can't "let go". It will have a fax, phones, copier, and work stations so you can call back to your office without standing in the hall.

FRIDAY, JANUARY 27
Morning
Soil & Waste Disposal/Bioremediation
Wetlands Update - Certification & Regulations
GPS/GIS Applications & Demonstration
Afternoon
NASIS Update
High Resolution & Alternative Surveys
Evening
NSCSS Reception

Have Fun Night

SATURDAY, JANUARY 28
Morning
Business Meeting
Committee Reports/Voting
Afternoon
Business Lunch Meeting
Board of Director's Meeting
Evening
Wind Down & Enjoy Yourself!
Night Skiing and...

SUNDAY, JANUARY 29
Ski Packages Available for 1,2, or 3 nights either at the Resort or on-the-mountain accommodations. You must contact (preferably by fax-208/263-7013) Pierre Bordenave to convey your interests. Ski package information will be sent only to those expressing interest.

Final Agenda will be sent to all registrants in early January & printed in the Annual Meeting Issue of Soils Profiles.

Breakfast & lunch packages will be available through the Coeur d'Alene Resort when you register in.

REGISTRATION
Attendance Options:
Full Program - Seminars, Presentations, Exhibits:

	Before January 10	After January 10
Member	$120	$140
Non-Member*	$155	$175
Student	$35	$50

OR

Single Day Only

Before January 10	After January 10
$75/day	$90/day

For further information:
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