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Ohio Pedologist

Http://www3.uakron.edu/geology/aop/

President's Message

Well, it looks like we survived the winter. I can't remember the last time I had to shovel snow off my roof, but maybe that's just my bad memory kicking in. Anyway, spring couldn't come too soon to suit me.

The meeting with the Sanitarians on March 25 was a great success. Listening to Doctors Slater and Tyler made me realize how much we all probably need more training like this to keep current with the latest thinking and research. The AOP Executive Council is looking into more training like this that we can use not only to keep current, but to also keep those CEU's coming in. If you have any suggestions for topics for training that is needed by the membership, let us know.

The Certification Board has been working on establishing the criteria for determining the number of CEU's to be obtained for the training courses we take. A report of their work on this and other items will appear in our next newsletter.

The summer picnic is not that far off, and Steve Prebonick has been working hard on this for us. It looks like the picnic will be in the east this year, probably including a side trip the wives are going to love. The date and location of the picnic will appear elsewhere in the newsletter.

A soils exhibit is being developed for the Smithsonian Institution by a national association of professional soil science organizations, and we have been asked to be involved. The display is to include 50 soil monoliths, one for each state soil. They are expecting millions of people to see this exhibit since it will be set up for several years in a high traffic area near the Hope Diamond exhibit. A request for financial aid amounting to several thousand dollars has been made, and corporate donations are being sought. If you have any suggestions on how to help fund this project, let someone on the Executive Council know about it ASAP. I don't think we will have another chance to further the cause of soil science in this way again in our careers, or maybe our lifetime.

Happy Spring!

Dan

Inside this issue:

2002 Directory of Officers

Dan Lemaster, President
Steve Prebonick, President-elect
Jeff Glanville, Past President
Kathy Sasowsky, Secretary
George Derringer, Treasurer
Steve Miller, Newsletter editor
Frank Calhoun, Academic Rep.
Gordon Gilmore, Federal Rep.
Todd Houser, Private Rep.
Steve Hamilton, State Rep.

Association News

Events

July 26, 2003—AOP Summer Picnic

Jean Caudill (left) delivering an excellent presentation on the future of soil investigations and on-site septic systems at AOP's Winter Meeting. Thanks to Jean for providing an excellent presentation.

Executive Council 2003, listed left to right: Todd Houser, Gordon Gilmore, Steve Miller, Steve Prebonick, Dan Lemaster, George Derringer, Jeff Glanville, Kathy Sasowski, and one-third of Steve Hamilton.

Executive Council 2002, listed left to right: Steve Prebonick, Jeff Glanville, Steve Miller, Jon Reedstrom, George Derringer, Frank Gibbs, Dan Lemaster, Tom Zimmerman, and Kathy Sasowski.

Dr. Fenton Gray, an early Soil Scientist in Ohio died on October 18 in Stillwater, Oklahoma. He was 86. Fenton worked for SCS on the first detailed soil survey of Clark County, Ohio according to the Agronomy News. In 1951, he earned his Ph.D degree in soil science from the Ohio State University and joined the faculty of Oklahoma A&M College.

Fenton also did scattered farm soil mapping for conservation planning in the Mercer and Shelby Counties. His name is on the back of the early detailed soil maps in that area. I was not aware of where he was until I saw his obituary in the Agronomy News and SCS/NRCS Retirees Newsletter.

Larry Tornes

Website update

Currently, AOP is in the process of transferring our website from the U of Akron server to a server we will pay for. We will have our own domain name, the first choice being www.AOP.org; this may change depending on availability. The cost to house the website per year will be approximately $150. The website budget was derived from the money that is being saved in postage and printing costs by emailing newsletters to most members. We will inform you of the progress. As of now our web address is: Http://www3.uakron.edu/geology/aop/

Current Members

Allen, John	Gibbs, Frank	Milliron, Larry
Bauder, James	Gilmore, Gordon	Nash, Tom
Benyei, Dan	Glanville, Jeff	Parkinson, Bob
Bone, Sam	Griffin, Rick	Perales, Anna
Bureau, Marvin	Hall, George	Powell, Ken
Burgess, Don	Hamilton, Steve	Prebonick, Steve
Buzard, Rick	Hendershot, Bob	Redmond, Doc
Calhoun, Frank	Heffman, Keith	Ritchie, Bob
Caudill, Jean	Houser, Todd	Roseler, Robert
Christman, Dick	Jersak, Joseph	Roth, Linn
Cook, Ty	Kelley, Glenn	Rubel, Neil
Dado, Alex	Kerr, Jim	Sasowsky, Kathy
Deaton, Matthew	Lehman, Sam	Simonson, Roy
Derringer, George	Lemaster, Danny	Slater, Brian
Dotson, Ken	Lerch, Norb	Steiger, Joe
Ernst, Jim	Lucht, Terry	Svoboda, Jim
Feusner, Mark	Mapes, Rex	Tornes, Larry
Flesher, Cecil	Martin, Neil	Waters, Dwain
Forsythe, Jane	McCleary, Floyd	Weatherngtn-Rice
Gehring, Rich	McClure, Don	Williams, Norris
Gerber, Tim	Micheal, Dan	Wood, Duane
Gerken, Jon	Miller, Steve	Zimmerman, Tom

Note: The membership list includes only paid members for 2003 and honorary members. Please contact George Derringer, Treasurer (george.derringer@oh.usda.gov), if you have any questions about your membership status. Receipt of this issue of the Ohio Pedologist does not imply any individual's dues are current. Your name must appear on the list above or mailing of the newsletter will be discontinued.

From the Editor's Desk

The *Ohio Pedologist* is published quarterly. Please have your articles submitted by June 1, Sept. 15 and Dec.1 for timely distribution of the newsletter. Please note:

1) The deadline for submitting articles to the newsletter is 2 weeks before issue date.
2) The editor reserves the right to condense letters, make routine changes in grammar, and decline articles due to incriminating or offensive content..
3) Newsletter items should be brief, legible, and in good taste.
4) Articles submitted for publication in the *Ohio Pedologist* should be sent to: Steve Miller, 1974 N. 3 B's and K Rd, Sunbury, OH, FAX (614) 262-2064, or e-mail steven.miller@dnr.state.oh.us

Frank Gibbs—"A good professionally certified soil investigation will more than pay for itself."

There are three ways of paying: 1) hire a professionally certified soil scientist, 2) pay the expense of constantly training non-soil scientist staff to handle the easier and simpler sites, 3) or, stand the costs of replacing failed systems (including the legal fees and staff time for fact finding of why it failed and now proving whose fault it is). This way is the most expensive! But no matter how you slice it, there's no free lunch!

The following are excerpts from an article in Small Flows Quarterly, Fall 2002 Volume 3, Number 4. The entire article can be downloaded at http://www.nesc.wvu.edu/nsfc/.

Surface Failure Rates of Chamber and Traditional Aggregate-Laden Trenches in Oregon

Larry D. King, Ph.D., NCLSS, Michael T. Hoover, Ph.D., NCLSS,
Thomas H. Hinson, RS, NCLSS, NCPG, Richard L. Polson, CPSS, and Roger W. Everett, RS

Abstract: A methodology for conducting failure rate studies of onsite systems was demonstrated by comparing the field performance of aggregate-free chamber systems (the treatment) with traditional aggregate-laden, rock-filled trench systems (the experimental control) in Oregon. System populations were studied in two counties stratified by physiographic province/climate (i.e., humid temperate climate and high desert climate) and soil permeability (low, moderate, and high permeability). A field assessment of a random, stratified sample of 389 treatment and control systems (average age approximately 4 years old; range from 2.9 to 5 years) was conducted during a two-week time frame to determine failure rates under the same weather conditions for both technologies. Failure was defined as surface discharge of sewage during the field survey. Surface failure rates were low—below five percent for both—and there were not statistically significant differences in failure rates between the technologies or within and of the strata.

Failures during wet seasons typically exceeded those during dry seasons, but not always. For instance, dry-season failure rates were very high (even for young systems) when the infiltrative surface was too small for the soil conditions (Hoover, 1979). Hoover measured failure rates of 30 to 39 percent for sand mound systems three years old and younger during a dry-season summer-time assessment in Pennsylvania.

Also, past failure rate studies have illustrated the impacts of incorporation of a proactive management program and improvement of the soil science expertise of the regulatory agency's filed staff on reduction of failure rates. Lindbo et al (1998) reported very low failure rates (≤ 5 percent) in a survey of sand-lined and traditional aggregate-laden trench systems that were very effectively sited, designed, installed, monitored, and maintained. These systems performed much better than the 12 to 20 percent failure rates measured five years earlier by Hoover et al. (1993) for systems less than five years old in the same four-county area. The major causes for the reduction in failure rates from 12 to 20 percent to ≤ 5 percent in the five-year time frame were the introduction of a public management program and improvement of the field staff's soil science expertise in the local health departments.

Other studies of younger systems (one- to three-year-old mound systems) during the dry season in Pennsylvania showed much higher failure rates (e.g., 30 to 39 percent) than observed here when the drainfields in Pennsylvania were too small for the soil conditions (Hoover, 1979; Hoover, et al., 1981). Therefore, based upon past experience, if the chamber systems in the current study had been too small for the soil conditions in Oregon, one would expect to observe higher failure rates than the 1 to 2 percent rates observed here, regardless of the young system ages and dry conditions during the assessment. This is a pertinent issue because of the 50 percent reduction in infiltrative surface basal are sizing used for the chamber trenches in this field study.

The low failure rates observed were unusual but not unprecedented, as seen form earlier results by Lindbo et al. (1998), where failure rates were ≤ 5 percent. This is pertinent to the current study because implementing soil science expertise in the regulatory permitting staff was one primary factor causing the reduction of the 12 to 20 percent failure rates observed earlier by Hoover et al. (1993) to the ≤ 5 percent rates observed by Lindbo et al. (1998) in northeastern North Carolina.

In the current study, soil morphological characteristics and site suitability were observed at many of the study sites during the field performance assessment. These were compared to the soil/site conditions determined by the county regulatory agency during permitting of the systems studied. Soil morphology and site suitability were evaluated during the field performance assessment at 164 sites—83 in the West region and 81 in the East region. The soil/site suitability decisions made by county regulators during the initial system permitting in Oregon were accurate and matched the survey teams soil assessments determined during the field performance assessment.

Observations indicated that soil/site assessments during permitting in Oregon were superior to soil/site assessments conducted during system permitting in Pennsylvania and North Carolina in earlier studies by Hoover (1979), Hoover and Amoozegar (1989) and Hoover et al. (1993). Therefore, the highly accurate soil/site assessments during system permitting likely also contributed to the low failure rates observed in Oregon.

One reason that may explain the highly accurate permit site assessments in Oregon was the training and expertise required for those conducting site evaluations for onsite systems. County and state personnel in Oregon who conduct site evaluation and issue permits are required to have 10 college credits in soil science, including a soil morphology and genesis course. Many of the county permitting staff in Clackamas and Deschutes Counties were even more highly trained than generally required in Oregon, being soil scientists, some with advanced degrees.

Mailing label

Ohio Pedologist
The Ohio State University
School of Natural Resources
Columbus, OH 43210

SUMMER PICNIC

Saturday, July 26, 2003
Beaver Creek State Park, Columbiana County.

Beaver Creek State Park and surrounding area offers a plethora of activities including:

- Museum of Ceramics
- Letonia Coke Ovens
- Hiking trails
- Camping
- Nature center
- Canal paths
- More……

Lunch will be catered at the park's picnic area. Mark your calendars and work up an appetite. More information will be in the next newsletter.

TREASURER'S REPORT

Report duration from 1-1-03 to 4-7-03	
Beginning balance as of 1-1-03	$9,246.03
Balance in savings acct. on 1-1-03	$7,126.24
Balance in checking acct. on 1-1-03	$2,075.79
Cash on hand on 1-1-03	$44.00
Income	$2,771.59
Balance before expenses as of 4-7-03	$12,017.62
Expenses	$850.57
Net Worth as of 4-7-03	$11,167.05