

Ohio Pedologist

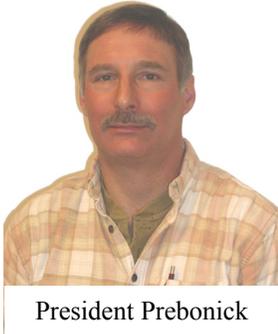
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President's Message

Dear AOP members,

How many AOP members have experienced one or more of the following scenarios? A young couple puts some money down on five acres in the country, takes a few years to pay it off, and then makes plans to build their dream home. In the permitting process the county health department informs them the soils on their property have severe limitations due to restrictive permeability rates therefore the soils are not suited for a conventional system and in order to build they will need an engineer to design an expensive sophisticated system. Or a home site was purchased in June, the home was built during the summer, and with the winter rains the home owners discover the house is sited in a low area that ponds water until May. Then there is the dream lot with only twenty-four inches of soil material over sandstone. How about the home with a basement in poorer drained, highly permeable materials that wears out two or three sump pumps a year?

Why do these situations play themselves over and over? I think for the most part the public does not realize the variability of soils across the landscape. Soils and soil professionals are not usually part of the home buying equation. Few people will bother with soils information unless they are required to. Too many people think if a building lot is for sale it must be satisfactory for a building site. Nearness to schools and stores or the bike trail in the back is more important than the soil under foot. They assume the property is fairly priced and worth the cost.



President Prebonick

It seems obvious there is a need to increase public awareness of the necessity of good soil information. As both an organization and individuals, we must foster a dependence on our knowledge. In the past most of those with soil expertise were in government funded careers working with other government agencies that realized the need for soil information. This is changing as the private sector realizes the economic value of soil data. With this change we need to be more aggressive in acquiring market share. Soil professionals must increase promotional efforts in the private sector. Those of us in government must increase our efforts to be involved in land use decision making with other disciplines.

If soil science is going to speak it must be with a unified voice. As we market soil information we must be in agreement on major issues. Let us work out differences of opinion scientifically and in an atmosphere of professionalism. Customer confusion resulting from conflicting information will be avoided.

Often professionals who do not know soils speak for those of us who do. Incorrect advice can cost the customer time and money while making soil data seem more arbitrary. Their information appears valid only because our profession is silent. When soils information is needed in the decision making process someone will supply it whether they are soil professionals or not.

We in the AOP are experts in understanding soil and water relationships, soil potentials, and landscape dynamics. We can predict the effects of development or other land uses. It is our business to match soil interpretations and physiographic characteristics with land use management. The future will be what we make it. The need for soil information will increase. Our involvement, education, experience, professionalism, and commitment will define our degree of success.

Steve Prebonick

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2004 Directory of Officers

Steve Prebonick, President
Rick Buzard, President-elect
Dan Lemaster, Past President
Todd Houser, Secretary
George Derringer, Treasurer
Steve Miller, Newsletter editor
George Hall, Academic Rep.
Rick Griffin, Federal Rep.
Lawrence Tornes, Private Rep.
Neil Martin, State Rep.

ASSOCIATION NEWS

Events

- **AOP Annual Meeting (Columbus) - Thursday
January 13, 2005**

Dr. Jerry Bigham has been selected as interim Director of the School of Natural Resources. He was selected by his peers (many of whom are in other disciplines) to lead the school through financially difficult times. It is anticipated that the Director position will be filled by January 2006

Matt Deaton Receives ACE

MATT DEATON, Soil Scientist, ODNR-Division of Soil & Water Conservation, Wilmington received the Award Celebrating Excellence (ACE) at Fountain Square on Thursday, September 16.

Although he has been on the job only three years, Matt Deaton's commitment to the Preble County soil survey project allowed it to be finished on time. He quickly became familiar with the area's soils, designed an investigative plan, collected documentation, and made a successful presentation to government officials. Matt is very skillful in soil surveying techniques and works well with the federal, county, and state workers in the office. He shares his knowledge of soils with diverse audiences and participates in soil judging contests.



CONGRATULATIONS!!!

Hats

Thanks to the work of Rick Griffin the popular AOP hats will be available for purchase at the AOP functions. The hats are available for \$15 each or two for \$25. Stock up while quantities last.

Collegiate Soil Judging

Wilmington College will be hosting the Northeast Regional Collegiate Soil Judging contest during the week of October 12th through 16th. Teams that were invited include The Ohio State Univ., Univ. of Maine, Univ. of New Hampshire, Univ. of Massachusetts, Univ. of Rhode Island, Univ. of Connecticut, Cornell Univ., Penn. State, Delaware Valley Coll., and Univ. of Maryland. The winners of the contest will compete at the national contest in the spring.

The Collegiate Soil Judging Program has provided many benefits to the association and the Soil Survey Program in Ohio. Many of the soil scientists in Ohio have participated in the program and find it very rewarding.

Special Thanks

A special thanks goes to Jim Svoboda for his work on the new AOP display. The three-panel display highlights several AOP functions. The exhibit includes individual plexiglass holders for brochures and membership application forms. Participants at the recent landslide workshop were the first to view Jim's handiwork. The display will be used throughout the year to promote our organization.



Retirement

Rick Robbins, ODNR soil scientist in Findlay, will be retiring December 30th 2004 after 28 years of service. Rick started his soils career in Cuyahoga County and moved on to Seneca, Ottawa, Jackson, Hardin, Paulding, Hancock, and Wood Counties. He is presently the MLRA Project Leader for Northwest Ohio. Rick has accepted a position with NRCS in the retirement state of Florida. Congratulations and enjoy your next 28 years!

MY POINT OF VIEW

This section of the newsletter is used to encourage people to state their views and opinions. Please feel free to send any comments or suggestions you may have. The topic should be about any issues or concerns you have with our association or the discipline.

Dear Folks,

I would like to congratulate the AOP Executive Officers and Planning Committee for the excellent Workshop on Landslides that I attended in Cincinnati recently.

For those of you that didn't attend, you should know that approximately 65 people showed up for this workshop representing Geo-Technical Engineers, Land Use Planners, SWCD Employees, NRCS DC's, University and various City, County & State Dept. of Transportation Personnel from Ohio, Indiana and Kentucky, besides our "regular" Soil Scientist Contingent.

The meeting room and tour bus was full of all these various disciplines interacting and talking to each other all day about how they could help each other with this serious problem.

The Presenters were excellent (especially Rich Pohanna, Engineering Geologist from the City of Cincinnati) and the information was presented in a clear and concise manner.

To me, this is exactly what AOP should be doing: providing opportunities to learn the technical aspects of Soil Science while net-working with other various disciplines to let them know what we have to offer...

Congratulations on a job well done!!!

Sincerely,

Frank E. Gibbs
Certified Professional
Soil Scientist

Continuing Education Unit Credits for AOP Certified Soil Scientists

For the 35 soil scientists certified in 2002 under the grandfather clause provision, December 31 is the deadline to earn 60 continuing education unit (CEU) credits needed for certification renewal in 2005. As of September 25, when the Board of Certification met, 16 of the 35 had submitted CEU credit request forms, and 12 had earned the required 60 hours. All 37 Certified Soil Scientists will receive notification by October 1 of the number of CEUs accumulated. During the past three years, the Board has approved CEUs for the following training opportunities:

- 1/22/02, AOP Annual Meeting: 2 hours
- 2/8/02, Ohio Water Quality & Waste Management Conference, 6 hours
- 7/19/02, AOP's On-site Investigation Training for Septic Systems: 5 hours
- 8/20/02, ODNR Mineral Resources Management Applied Research Conference: 6 hours
- 9/10-12/02, Ohio Soil Survey Soil Scientists Workshop: 14 hours
- 9/13/02, Ohio Fracture Flow Working Group Field Day – Northeast Ohio: 5 hours
- 10/15-17/02, Central States Forest Soils Workshop: 9 hours
- 1/23/03, AOP Annual Meeting: 2 hours
- 3/25/03, Ohio Dept. of Health Midwest Workshop on Household Sewage Treatment, 6 hours

- 8/12-14/03, Soil Quality Training, 17.5 hours
- 9/5/03, Ohio Fracture Flow Working Group Field Day – Northeast Ohio: 5 hours
- 10/7-8/03, Ohio Mineland Partnership Annual Fall Conference: 10 hours
- 10/14-16/03, Central States Forest Soils Workshop: 11.75 hours + up to 2 hours for observing exhibits
- 11/4-6/03, Soil Quality Training, 17.5 hours
- 1/21/04, AOP Annual Meeting: 2 hours
- 2/2-6/04, Correlation & Management of MLRA Soil Surveys: 30 hours
- 2/5-6/04, Ohio Water Quality & Waste Management Conference: 8 hours
- 9/9/04, Ohio Fracture Flow Working Group's Natural Resources GIS Workshop: 6 hours
- 9/15/04, Landslide Workshop: 7 hours + up to 1 more hour for reading field trip packet before or after workshop

Credits for all other training activities offered since January 1, 2002 and for self-directed study, professional service, and authored educational materials can be requested by listing the activities on the standard CEU form. Supplying a copy of the activity agenda or program will assist the Board in assessing the proper number of credit hours and facilitate approval. The Board will meet again on January 8.

Tim Gerber, Secretary-Treasurer
AOP Board of Certification

Earth fissure north of city up to 30-feet deep; Desiccation crack may be due to drought

By CAROL BROEDER/Arizona Range News

A two-foot wide crack in the earth appeared last Tuesday night about seven miles north of Willcox. Originally believed to be an "earth fissure," as much as 100 feet deep, a state geologist now thinks it may be a desiccation crack instead. Bobby Rubals said he thought he heard a car crash near his home on Hardy and Nickels roads at about 11 p.m. Tuesday, July 13. Rubals went out into the dark to investigate, but could not find a car. "It sounded like a car crash," he said, "I didn't see the ditch until the next morning."

The "ditch," which is across the road from Rubals' house, is about one-quarter of a mile long, and runs anywhere from an inch wide to the two-foot wide spot near the Rubals' place. Rubals, a 10-year Willcox resident, was at the local sheriff's office first thing Wednesday morning, before the doors even opened, looking for barricades to close the road. "I was afraid a car would fall into that ditch," he said. Rubals said that while there are only about three residences along that road, it has a "lot of traffic from people hauling cattle and big trucks hauling fertilizer." He said that sheriff and county officials arrived while he was putting up barricades and cones obtained from the county's roads department.

An emergency team was formed including officials from Cochise County Highway and Floodplain Department, sheriff's department, and the Arizona Geological Survey. Utility companies were also notified. The crack is about 25 feet from a 500-pound pressure gas line, and about 60 feet from two sets of 345,000-volt power lines. "At this point, we're fine," said Libby Howell, spokeswoman for Southwest Gas Corporation. The company has a contingency plan ready if further problems occur. An inactive line does exist within a few feet of the fissure, but was officially abandoned and permanently mothballed, Howell said.

Tucson Electric and Power received a call at about 6 p.m. Wednesday due to the close proximity of their power lines. "We feel it's well clear of our structure," said Joe Salkowski, spokesman for Tucson Electric and Power. "The lines are energized right now. The fissure is about 60 feet from any structure post and 30 to 40 feet from any ground wires." Salkowski said that the "structural engineer who helped put them up 20 years ago," investigated the site. The high-voltage power lines, which run from the Springerville Generating Station, cut over to Mt. Graham, then run along the Arizona/New Mexico to Tucson, provide about one-third of Tucson's electricity, Salkowski said. The part of the crack that is 60-feet from the power lines is only a few inches wide. The widest portion of the crack is about 400 feet from the high wires. Jon Spencer, senior geologist with the state's Arizona Geological Survey, said that fissures develop gradually enough that the utility companies "should have time to figure out what to do."

After the emergency team investigated the crack Thursday morning, Raymond C. Harris, geologist with the Arizona Geological Survey in Tucson, made a report to Rubals and his niece's husband, Todd Turley of Ft. Grant. Harris said at that time he believed it to be an "earth fissure," which is caused by

ground water pumping. Rubals and Turley had dropped a tape measure into the ditch and found it to be about 12 feet deep, but Harris said a fissure could be as deep as 100 feet. The apparent depth may be caused by fill-out from the surface soil that often occurs upon surface breach. Rubals said he began to have muddy water in his well since he heard the loud noise Tuesday night. The well is about 320 feet deep. "I had to clean my filter twice before noon the other day and once yesterday," Rubals said, "I'll probably have to do it again today."

On Monday, Harris told the Range News, "I'm re-thinking that it's a desiccation crack," which is related to the drought. This type of crack usually only reaches 20-30-feet deep, he said. The Nickels Road crack is "immediately adjacent to a network of desiccation cracks mapped out in the 1970s," he said. Harris said the clouding of Rubals' well could be caused by either one. They typically open at the surface "after runoff wets the top few feet of soil and sediment, saturating the clay minerals and reducing their cohesion to the point where the surface material loses structural strength and collapses into an existing void at depth," he said. Harris said that these cracks are large enough to be mistaken for earth fissures that are caused by ground water pumping. "It is ironic, given these cracks are due to drying, that it takes wetting to open them at the surface," Harris said in an abstract he wrote in 2003 entitled, "Giant Desiccation Cracks in Arizona."

Rubals said the area he lives in received about an inch-and-a-half of rain prior to the loud noise he heard. Harris said "the crack is so fresh, it's hard to tell," adding that more rain will help tell the story. "If it's an earth fissure, with more water, it will be bottomless." There are desiccation cracks in the west Sulphur Springs Valley that are much bigger than this one, said Harris, adding that this one has attracted attention because it spreads across a road and because of its proximity to gas and power lines. Harris said that either way "it will get bigger," so the highway department plans to "trench it out, fill it with material and tamp it down" to prevent it from widening.

In last year's abstract, Harris said that desiccation cracks are common in playas in the southwestern United States and have been "reported in several areas of Arizona but they are much more common than previously recognized." He said the cracks are similar to mud cracks or large soil cracks, "but on an enormous scale." The cracks themselves are up to three-feet wide, up to eight feet of apparent depth, and "a few are on the order of 1,000 feet long," he said. They form polygonal blocks that look identical to the shape of mud cracks, but the polygons are 50-200 yards across whereas typical mud cracks form polygons six to eight inches across and large soil cracks form polygons two-to five feet across, Harris said. Desiccation that causes these giant cracks occurs in clay-rich layers deposited in lakes or playas in internally drained basins, he said. The cracks form at depths of as much as 50 feet and work up to the surface by collapse of the roof of the cavity. Harris said that lowering of groundwater tables from pumping may be the trigger for some of these cracks, but not for all. "Some (desiccation cracks) occur in agricultural areas where groundwater levels have dropped because of pumping, but they also are found on remote playas where no groundwater pumping has occurred," said Harris, adding that they appeared in several places in Arizona around the turn of last century before groundwater pumping began. (Editor's note: Sierra Vista Herald Reporter Gentry Braswell contributed to this report.)



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Mailing label