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Professional Soil Scientists

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President's Message



By Steve Miller

Spring is finally here after what seemed like a very long winter. Although not a bad winter it did not want to end. Surprisingly in my area the frost held off while the fruit was in blossom so it looks like a good fruit year. It will be interesting to see what the weather will bring this summer.

Steve Hamilton has been busy working on the AOP Summer Meeting. This year the meeting is planned for Tuesday and Wednesday, August 27th and 28th at the Piketon Research and Extension Center. Again, we will collaborate with the AOC-SWCS. They will focus on shale fracturing and the environmental concerns. The research station also will have field discussions on aquaculture, forestry, horticulture and soil, water and bioenergy.

The AOP Summer Meeting is planned for Tuesday and Wednesday, August 27th and 28th at the Piketon Research and Extension Center.

AOP is going to focus on the new sewage regulations and current research on sewage systems. We again are happy to have Dr. Dave Lindbo from NC State University commit for the two days. Rebecca Fugitt will also discuss the new sewage regulations. With the diversity of topics planned we are hopeful this year's meeting will be great training opportunity for both agency and private practice soil scientists.

We are looking forward to a great year and hope everyone can contribute slightly to make our organization stronger. It could be something as small as expressing thoughts to your AOP representative, contributing an article to the newsletter to volunteering for the EC. I look forward to seeing everyone at the summer meeting.

Best Regards,

Steve

Soil and Site Evaluation in East Central Ohio

By Joe Steiger, CPSS

The past eighteen months have brought many challenging situations in the twelve counties that I serve along with associates Kyle Baldwin and Mark Flowers. Most of our work is in Muskingum, Fairfield, Licking and Belmont counties but we have also visited sites in Coshocton, Guernsey, Morgan, Perry, Franklin, Delaware, Washington and Harrison counties. As the drafting of new Ohio Sewage Treatment System rules continues there are a variety of local health rules that apply.

In day-to-day work our primary focus is to provide accurate and timely information to satisfy our clients. The greater goal, however, is to protect and improve water quality of streams and aquifers. By providing the data needed to design effective on-site treatment of wastewater, we help reduce the discharge of untreated wastewater and extend the life of treatment systems. Following are some observations on cases encountered:

1) There are no requests for soil evaluations of new subdivisions, but we are visiting lots in already existing subdivisions. Most of these are requests by a potential buyer, which requires that we have approval from the seller or will since the evaluation will likely affect the sale. A surprising number of lots are not suited for any type of system design, due to saturated soils. Others lots are limited by length of contours that reduces the potential size of the residence.

2) We are being called to do the soil and site evaluation before the land survey is completed for creation of new lots. Surveyors are aware that the shape and size of the lot needs to accommodate the residence and the wastewater leaching areas. Also, the unusable areas such as steep slopes, flood plains, and drainage patterns need to be recognized.

3) The presence of earthfill, excavation and reclaimed mine soil is a regular occurrence. In some places land leveling or filling has buried the natural soil that is just a few feet below the surface. The compaction and age of the fill determines how well it will function. Thirty or forty-year-old fill or mine soil generally has soil structure developed eighteen to thirty inches deep. Of course, there is the unknown question of where the saturation zone is in these earthfills since colors are mostly relict. We looked at one site that was the excavated site of the original National Road complete with limestone aggregate and culvert. Earth fills are often present on floodplain sites and around old deep mine entrances.

4) Occurrence of bedrock (Cr and R layers) and highly permeable outwash deposits are a factor in protecting groundwater aquifers. We often encounter the Blackhand sandstone formation in Fairfield, Perry and Licking counties. The Wisconsin outwash along the Licking, Muskingum and Hocking valleys are also important aquifers.

5) Replacement of existing malfunctioning systems is an important part of our work. Most but not all, counties require a soil and site evaluation for the design of the replacement system. Age, neglect, or poor design, are the prime causes of failures. Some failed systems appear to be the result of placement of compacted fill over the leaching areas. We often find ideal soils for the replacement leach area. But we also find sites with inadequate space for a replacement on the lot. Failing systems sometimes result in legal actions. This is where findings of the soil and site evaluation may become part of court records. I recently observed a system in a somewhat poorly drained soil with a perimeter drain installed. The system appeared to be functioning fine but the perimeter drain outlet was causing nutrient enriched growth of grass.

6) A recent development resulting from the oil and gas boom in Eastern Ohio is the demand for sites to locate temporary housing (Recreation Vehicle parks). We have completed site and soil evaluations for about 150 RV units mainly in Belmont, Guernsey and Washington counties. These are among the many commercial projects such as retail stores, offices, churches and industrial sites that require a wastewater treatment system design.

These case notes are the result of visits to some 350 sites. I find we often spend much time helping the clients understand the environmental conditions of their site. Hopefully, this leads to a stronger commitment to protect the valuable soil and water resources they depend upon.

Gerken named a Distinguished Alumnus of the College of Food, Agricultural, and Environmental Sciences at Ohio State

On March 2, AOP charter member Jon Gerken, was named a Distinguished Alumnus of the College of Food, Agricultural, and Environmental Sciences at Ohio State. He received the award from new Dean, Bruce McPherson, at a College-wide awards banquet held at the Fawcett Center.



Mr. Jon Gerken received his B.S. in Agronomy-Soil Science from The Ohio State University in December, 1970. He then resumed a lifetime career as a soil scientist with the Natural Resources Conservation Service (formerly the Soil Conservation Service). From 1971-74, he worked on the Franklin County (OH) Soil Survey, a project that has provided valuable data to guide urban development in the Columbus metropolitan area. In 1974, he was promoted to project leader for the Madison County (OH) soil survey, including the area now designated as the Molly Caren Agricultural Center-Farm Science Review. In recognition of his quality fieldwork, technical knowledge, and leadership abilities, Jon was promoted to the NRCS State Office in 1980 where he served in several roles,

including the positions of Soil Scientist Liaison and State Soil Scientist from 1995 - 2007. As Soil Scientist Liaison, he guided the Ohio soil survey program through a nationwide reorganization to improve efficiency and provide a more stable work environment for NRCS soil survey staff. As State Soil Scientist, he directed NRCS soil inventory work throughout Ohio and oversaw all activities involving the application of information produced. This activity required close cooperation with other NRCS disciplinary units as well as other agencies and organizations. In particular, Jon was a member of the Ohio Soil Inventory Board, a coordinating body with representatives from NRCS, ODNR and OSU/OARDC. A major accomplishment realized during his tenure as State Soil Scientist was a program that partnered federal, state and local resources to digitize soil maps from all 88 Ohio counties with the result being a seamless geospatial database meeting national digitizing standards. This accomplishment now provides on-line, 24/7 access to Ohio soils data through the Web Soil Survey and other web applications developed by the NRCS. Jon also served as President of the All Ohio Chapter of the Soil and Water Conservation Society (1994), a nonprofit, scientific and educational organization of professional conservationists focused on issues related to the conservation of soil and water resources while recognizing the interdependence of humans and the environment. This organization provides scholarships to deserving students pursuing university degrees in resource management related fields.

In 2007, Jon was promoted to the position of Assistant Program Manager for the NRCS Soil Survey Division in Washington, D.C. where he was responsible for distributing \$90-\$100 million annually to fund the soil survey programs in all states and territories of the US. He was also responsible for developing production goals, tracking annual accomplishments, and training State Soil

Scientists to manage their state programs more efficiently. He was a member of a team that received the Secretary of Agriculture's Honor Award in 2011 for successful implementation of a massive reorganization to improve efficiency of the NRCS soil survey program in 145 field offices across the country. During his 42-year career in the NRCS, Jon has been recognized at local, state, regional and national levels as a leader who fosters collaboration and demonstrates a readiness to anticipate and implement organizational adjustments needed to improve the quality and delivery of U.S. soil resource information.

Jon has been a member of the School of Environment and Natural Resources Alumni Society (SENRAS) Executive Council for the past 8 years. Before transferring to Washington D.C., he served as Vice-President of the Council and represented SENRAS on the CFAES Alumni Society Board of Directors. Despite having his work center in DC, Jon has maintained an active role on the Council and frequently commutes to Columbus to participate in Society functions.

An Invitation to Submit AOP & Ohio Soil Survey Archives, Plus Biographies

Jeff Glanville has collected Ohio Soil Survey records previously stored at OSU from the past 60-plus years, along with AOP archives that had been stored there for the past 20 years. He is inviting members with AOP and Ohio Soil Survey records that may be in jeopardy of disposal or neglect, to forward those materials to him for secure storage. He can arrange to have materials picked up if necessary and can help with scanning, typing, copying or other processing steps. He can be contacted at 614-255-2507.



Can you guess who's pictured? Answer on the 5th page of the newsletter.

Maybe the most interesting items from the OSU archives are the slides. These were taken mostly by Jim Petro, from the 1950's into the 1970's. They are mostly of staff, in the office and in the field. This is very interesting stuff, especially for some of us "younger" guys, who may have heard or seen the names but never had the opportunity to meet the people. All of these have been scanned, and we've captioned about a third of them. We have a few of these posted on the AOP web site, in the photo gallery.

Jeff is also interested in collecting individual histories of Ohio Soil Survey personnel – short autobiographies, or biographies of colleagues, with recollections, observations or concerns. He cites the biographies of 37 soil scientists compiled in 1999 for Penn State's Agronomy Series #143 publication as examples. Those biographies can be viewed at: <http://ecosystems.psu.edu/research/pdf/as143.pdf>.

Free Training, CEUs

Rick Griffin

The following link is to the NRCS webinar website. There are many archive webinars and other info that would be of interest to our members. It's available to the public, you can get continuing education credits, and it is free!

<http://www.conservationwebinars.net/>

Soil Consultant List Updated!

The AOP Consultant list was recently updated by Jeff Glanville. Matt Lane our Webmaster converted the info into an easy to print .pdf and uploaded the file. Take a look at:

<http://ohiopedologist.com/soil-consultant-list/>

Dirt Can Make You Happy

By Naomi Sachs

"It's in the dirt. Or to be a little more specific, a strain of bacterium in soil, *Mycobacterium vaccae*, has been found to trigger the release of serotonin, which in turn elevates mood and decreases anxiety. And on top of that, this little bacterium has been found to improve cognitive function and possibly even treat cancer and other diseases." Read the rest of the article at:

<http://www.hortmag.com/blogs/gardening-blog/dirt-can-make-you-happy>

George Schafer, Jim Ernst, Bob Ritchie, and Nick Holowaychuk. Lorain County. June 2, 1967.

Welcome New Members

Jacob Elder holds a masters degree from the Ohio State University and has worked for several years as a project scientist in environmental management with Cox-Colvina & associates, Plain City, Ohio. Jacob joins the AOP as a new affiliate member.



Brent Macolley holds a bachelors degree from the Ohio State University and has worked since 2012 as an environmental scientist for MAD Scientist & associates, Westerville, OH. Brent joins us as a new affiliate member.

