

VAPSS Quarterly Newsletter

Volume 38, number 1
 April 2016
 VAPSS was founded 1978

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VAPSS Fall Meeting 2016 Ridge and Valley October 24-29, 2016 (probably 3 days)

Geomorphology

Soil mapping

<http://www.vapss.org/>

Soil Scientists at Play

VAPSS is a Co-Sponsor with Virginia Tech

LOST & FOUND :

We're missing some folks, and welcome back anyone who has gotten lost in the various transitions. It's time for VAPSS spring renewal's great bargain on membership. \$100/Regular Member, \$20/Student Member

2016 BOARD OF DIRECTORS

PRESIDENT: Morgan Kash
 (703)609-3738
 PRES. ELECT: Vacant

PAST PRES.: Bob Denton

TREASURER: Greg Monnett

SECRETARY: Lexi Jones

Member: Austin Gardner

Member: Bob Melby

Member: David Beahm

Member: Stephen White

NRCS Liaison: Rachael Stull
 VPISU Liaison: John Galbraith
 Exec. Sec.: Jeff Miller
 (540) 382-7310

Spring VAPSS /Fairfax Soil Morphology Class

When: 2-3 June
Where: Reston Association Offices (12001 Sunrise Valley Drive, Reston, VA 20191) and pit sites around Reston
Why: Spring activity, spread VAPSS name among PE's in Northern Virginia
Lodging: Both places have motels within 20-25 miles or less
Food: Catered
 We would need lots of volunteers for pit-side assistance and digging of pits before the training
Program: Provide classroom and on-site training for PE's and others in identifying redoximorphic features in situ

CALL for NOMINATIONS are an ongoing process. Everyone gets a turn, so let us know when we can recruit you for a VAPSS Officer or Board Member position. Help us make VAPSS the "go to" place for Soil Science and Soil Scientists.

Call any of the Board members if you'd like to consider volunteering.

VAPSS Mission: *To recognize soils as a non-renewable natural resource and the practice of soil science as an interpretive science; to ensure a class of professionals exists that can properly utilize the large investment the Commonwealth of Virginia has made in the Soil Survey and to ensure the practice of soil science and evaluation meets established minimum standards of education, experience, ethical conduct and professional responsibility and to prevent abuses in the practice of soil science by untrained or unprincipled individuals.*

This has been a busy few months for VAPSS and your new president. Having never served as a president of a nonprofit organization I had little idea of what I was getting into. Started out a little rough but a strong board and a little outside advice from other VAPSS members made the transition smooth. Besides myself we have added three new board members: Lexi Jones, Austin Gardner and Bob Melby. Lexi has been busy with Laura our lobbyist in Richmond. We are now reviewing the bills as soon as they are created and can be more proactive than reactive. I would have never guessed the large number of bills proposed each year that involve soil science in some way. Lexi and Bill Sledjeski have the job of reading the bills and reporting any bill that could concern VAPSS to the board. Great late night reading to help you get to sleep.

Bob Melby is back on the board and will also serve as the backup for Bill Sledjeski on the SHADAC board. With the passage of HB 855 the future looks good for the push to the privatization of soil evaluation and permitting to the private sector. We have already seen this change over occurring in the more urban areas. There are a lot of issues with this transition and a number of organizations are not 100% in favor. They are some true concerns such as the policing of the private sector and the cost to lower income households. VAPSS will be there to represent our interest and well as public interest.

VAPSS will be involved in two conferences this year. We will be sponsoring the soil morphology class in Reston on June 2th and 3rd. John Galbraith and Erik Severson will be there from VA Tech, Mark Smith will be providing the test pits and other VAPSS members will be describing the pits. We will be having our fall meeting the week of October 24th in Winchester at Stephen Whites family farm. Stephen has graciously volunteered his family farm for our trip. There is camping available and hotels close by. I encourage both new, old and past members to attend some of these outings. It is at meetings like these where we meet new friends and revisit old friends. To truly learn what is going on with soil science in Virginia this personal contact is a must. Because soil science is so much more than evaluating soil for septic systems I encourage our members to reach out to other professionals to join VAPSS to help diversify our membership. With the economy picking up, the new rules and regulations being enacted for soil related fields such as storm water and the push to privatize soil evaluations the future looks good for soil science. Let's take advantage of this opportunity.

I appreciate the opportunity to be your president for 2016. I joined VAPSS in 1981 and though I served on the board a number of times never served as the president. My personality, especially when I was younger I felt did not necessarily fit the role of trying to run a non-profit organization. I am sure others in VAPSS members might question their ability to serve as the president. If you have a good board you will enjoy the experience. Please consider putting your name out for our president in 2017.

President's Message: by Morgan Kash

Pipelines Pipelines Everywhere

by Nan Gray

9 Feb 2016

Google pipelines of Ohio sometime when you are driving down one of their roads and tell me that you don't wonder what's in them. The continuous trenching is relatively near the surface and although the disturbance is drastic for those creatures living in that zone, once the installation crew leaves, soil dwellers may re-inhabit some of the disturbed ground. The larger the pipe the larger the disturbance, until you have a London Tube subway (which is being expanded by the way) or Chunnel (https://en.wikipedia.org/wiki/Channel_Tunnel). There is no doubt but that soil dwellers on both sides of the disturbance became isolated permanently from each other with these constructions.

Fragmentation of a soil species population usually results in soil dwellers that become weak and die from isolation and we wind up with a reduced population of ...name anything, fungus, bacteria, snakes, spiders, worms, chipmunks, etc. Fragmentation of habitat affects and reduces plant and animal diversity above ground and below ground. Fragmenting and isolating a population does not create diversity.

Species diversity is a classic hallmark of a healthy environment, well fed and not one overly stressed. Stressed environments harbor fewer species and less diversity of species.

Look at Fracking from a soil perspective. A grid work of buried, connected pipe ties Fracking drill/well pads together, plus access roads, electricity, etc. Forests with dense tree cover are opened by roads and frack gas/liquid pipelines. Soils are opened, moved around, identity changed, hydrology changed. Multiply this and the native ground does not function as a whole ecosystem from natural landscape to natural landscape. A function of the soil is to clean water. West Virginia's water is seeing problems with the fracking industry's fracking wastewater and installation of all the frack gas/liquids pipelines.

There have to remain places on Earth that are not disturbed by these big construction projects and if we, The Trained, The Soil Scientists, don't say, "Hey, Wait a minute, don't do that forever", no one else knows to. Everyone talks about clean water, especially after the Flint, Michigan aqueous lead episode, but the challenge is to find anything good for soils from the fracking industry.

In Agriculture, we are taught about inputs and how it is easier to grow a suitable plant rather than to add large inputs to the soil to accommodate a plant/crop that does not naturally grow in that soil, unsuitable land use.

Karst land is the type of ground that should not have a big disturbance in it. We take notice when a road collapses into a sinkhole. It becomes a large input to accommodate an unsuitable land use.

Pipelines especially are out of sight out of mind. Many pipelines carry hazardous waste liquids and gases. Some liquids/gases are down there for storage, some as commodities in transit. Previous VAPSS meetings showed broken water pipes gushing water into the Potomac River near Great Falls. We know pipes break, or get holes, or leak for many reasons.

When it comes to siting a utility corridor, I would rather have the corridor used that is already damaged, that has known risks, already has the "edge" effect, than to dig up undisturbed ground, unknown risks. No, that is not easy and no, it is not the straightest route/cheapest route for the utility, but the point is to leave the largest piece of undisturbed soil that can be left, so that it can function and provide the almighty soil ecosystem services we know keep us alive.

While reviewing the National Organic Program standards, I was reminded of why the NRCS is linked so closely to Agriculture and my heart. Part of the Scope of the NRCS is to (6) Improve all agricultural lands, including cropland, forestland, and grazing lands that include pastureland, rangeland, and grazed forestland so that the long-term sustainability of the resource base is achieved. We have to keep THE RESOURCE BASE. To me, that means keeping a resource base, full of soil dwelling diversity, as in tact as possible. We are not the last ones to use this planet.

ref:

The screenshot shows the eCFR website interface. The browser address bar displays the URL: www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=3f34f4c22f9aa8e6d9864cc2683cea02&tpl=/ecfrbrowse/Title07/7cfr205_main_02.tpl. The page title is "ELECTRONIC CODE OF FEDERAL REGULATIONS". The main content area displays the path: [Title 7](#) → [Subtitle B](#) → [Chapter 1](#) → [Subchapter M](#) → [Part 205](#). Below this, the page lists the following sections: TITLE 7—Agriculture, Subtitle B—REGULATIONS OF THE DEPARTMENT OF AGRICULTURE (CONTINUED), CHAPTER 1—AGRICULTURAL MARKETING SERVICE (Standards, Inspections, Marketing Practices), DEPARTMENT OF AGRICULTURE (CONTINUED), SUBCHAPTER M—ORGANIC FOODS PRODUCTION ACT PROVISIONS, PART 205—NATIONAL ORGANIC PROGRAM, and Subpart A—DEFINITIONS. Under Subpart A, the entry for §205.1 is shown with the heading "Meaning of words." The left sidebar contains navigation aids such as "Browse / Search Previous", "Browse", "Simple Search", "Advanced Search", "Search History", "Search Tips", "Corrections", "Latest Updates", "User Info", "FAQs", "Agency List", and "Incorporation By Reference". A "Related Resources" section at the bottom of the sidebar provides information about the Code of Federal Regulations (CFR) annual edition.

§610.2 Scope.

(a) Conservation operations, including technical assistance, is the basic soil and water conservation program of NRCS. This program is designed to:

- (1) Reduce soil losses from erosion;
- (2) Help solve soil, water, and agricultural waste management problems;
- (3) Bring about adjustments in land use as needed;
- (4) Reduce damage caused by excess water and sedimentation;
- (5) Enhance the quality of fish and wildlife habitat; and

(6) Improve all agricultural lands, including cropland, forestland, and grazing lands that include pastureland, rangeland, and grazed forestland so that the long-term sustainability of the resource base is achieved.

(b) The Natural Resources Conservation Service is USDA's technical agency for providing assistance to private landowners, conservation districts, and other organizations in planning and carrying

out their conservation activities and programs. NRCS works with individuals, groups, and units of government to help them plan and carry out conservation decisions to meet their objectives.

[64 FR 42003, Aug. 3, 1999

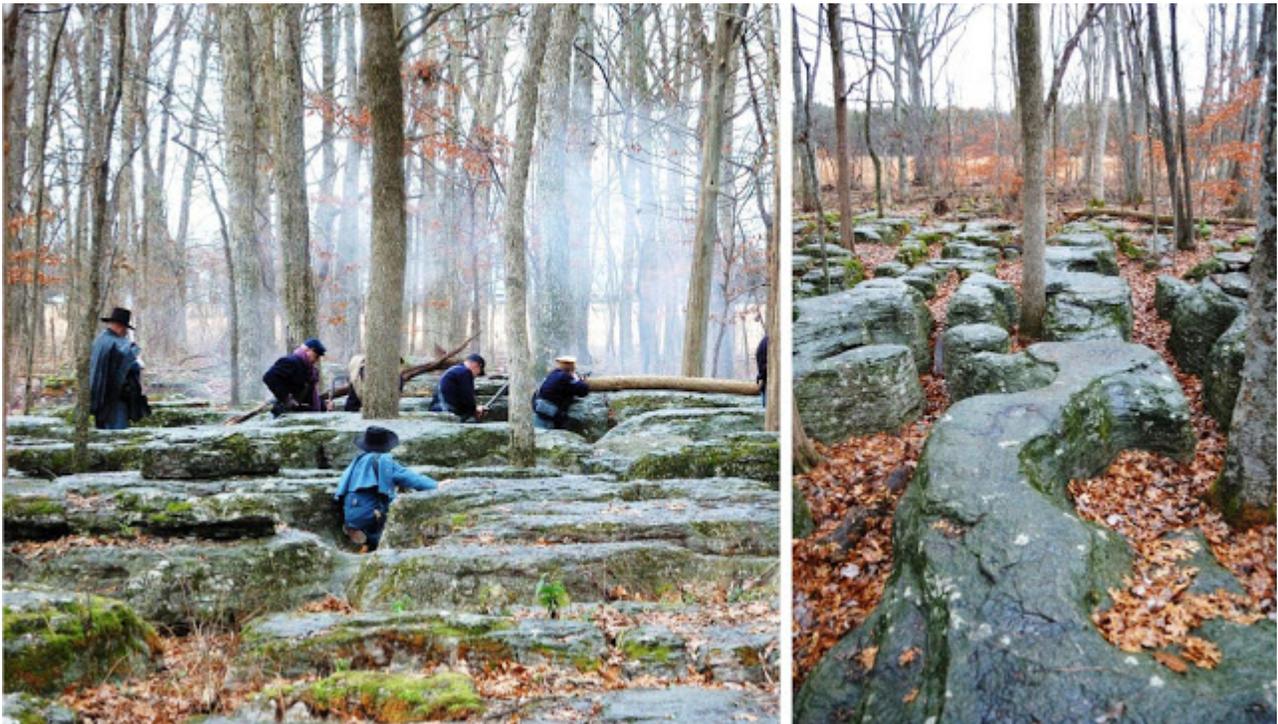
Electronic Code of Federal Regulations

[Title 7](#) → [Subtitle B](#) → [Chapter VI](#) → [Subchapter B](#) → [Part 610](#)

[http://www.ecfr.gov/cgi-bin/text-](http://www.ecfr.gov/cgi-bin/text-idx?gp=&SID=031a406579126399729ac8159725169c&mc=true&tpl=/ecfrbrowse/Title07/7chapterVI.tpl)

[idx?gp=&SID=031a406579126399729ac8159725169c&mc=true&tpl=/ecfrbrowse/Title07/7chapterVI.tpl](http://www.ecfr.gov/cgi-bin/text-idx?gp=&SID=031a406579126399729ac8159725169c&mc=true&tpl=/ecfrbrowse/Title07/7chapterVI.tpl)

When is somebody else going to write about soils encountered by long distance corridors? I'll give you a chance and not censor it. Pipelines are another reason why you call Miss Utilities, 811.



The most studied battleground from the American Civil War, from a geological perspective, is the rolling terrain surrounding Gettysburg, Pennsylvania. Here, the mixture of harder igneous and softer sedimentary rocks produced famous landform features such as Cemetery Hill and Little Round Top that provided strong defensive positions for the Union Army.

Another even more common type of rock -- carbonates such as limestone -- provided similarly formidable defensive positions at numerous other battlefields in both the eastern and western

theaters of conflict.

Limestones and dolostones shaped the terrain of multiple important battle sites, including Antietam, Stones River, Chickamauga, Franklin, Nashville, and Monocacy, and these rock types proved consequential with respect to the tactics employed by both Union and Confederate commanders.

This article by Scott P. Hippensteel of the University of North Carolina at Charlotte describes how carbonate rocks produced rolling terrain that limited the range and effectiveness of both artillery and small arms. Additionally, thin soils above limestone bedrock prevented tillage and the resulting forests provided concealment and cover for advancing troops. From a defensive perspective, on a larger geographic scale carbonates provided natural high ground from chert-enriched limestones. On a smaller scale, erosion of these same rocks produced karrens (or "cutters") that provided natural rock-lined trenches for defending troops.

Reference:

Carbonate rocks and American Civil War infantry tactics. Scott P. Hippensteel, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, North Carolina 28223, USA. Themed issue: Human Dimensions in Geoscience. DOI: 10.1130/GES01266.1

Note: The above post is reprinted from materials provided by Geological Society of America. Reprinted by permission.

Read more : <http://www.geologypage.com/2016/03/how-rocks-shaped-civil-war.html#ixzz45cYXU5w3>

Virginia Tech Places 10th at National Soil Judging Championship

The Virginia Tech Soil Judging Team tied for 10th place at the 2016 National Collegiate Soil Judging Contest held in Manhattan, KS on April 7-8. The overall team standings were: 1) West Virginia; 2) Iowa State; 3) Minnesota; 4) Delaware Valley Univ.; 5) Tennessee Tech; 6) Purdue; 7) Maryland; 8) Texas Tech; 9) Arkansas; and 10) Ohio State (won tie-breaker). This is the third consecutive year and fourth in the last five that the national champion came out of the Southeast Region that Virginia Tech competes in. The top 5 individuals were: 1) Katie Stutler, West Virginia; 2) Jake Ziggafos, Iowa State; 3) Rusty Zimmerman, Minnesota; 4) Arthur Franke, Purdue; and 5) Jaylen Hancock, Tennessee Tech University. There were 91 contestants. In the group judging division, the top five teams were: 1) Purdue University; 2) Maryland; 3) West Virginia; 4) South Dakota State; and 5) Minnesota.

The event was held in the Flint Hills near Manhattan. The days were very windy, and prescribed burns in the tallgrass prairie were conducted on many of the days before the contest. Almost all soils were Mollisols, some were black to over 1 meter deep. The parent materials were ancient wind-blown silt deposits (loess), ancient colluvium (gravity-moved sediment), glacial till, and alluvium (stream deposits). Many of the soils had a restrictive clayey subsoil feature and color patterns confirming past saturation and reduction. "The students were asked to record their estimates of the soil properties and evaluate the soils and sites for uses such as buildings with basements or septic tank absorption fields. The students also evaluated the hydraulic conductivity, depth to high water table, runoff and erosion potential of the site. These skills are in top demand by employers," according to Dr. John Galbraith. Some of the team

practiced for the contest by taking a course called “Soil Description and Interpretation” offered by the Department of Crop and Soil Environmental Sciences (CSES).

Finishing 19th for Virginia Tech was Olivia Simpson, a senior Environmental Science (ENSC) major from Rocky Mount, VA. Steffany Yamada is a senior Crop and Soil Sciences (CSS) major from Woodbridge, VA who finished 24th. Also on the team was Robert Goodwin, a junior ENSC major from Midlothian, VA, and Hunter Wyatt, a senior Agricultural Sciences Major from Sugar Grove, VA. On the group judging team were Carrie Ortel, Jake McGaughey, Stephanie Duston, and Elizabeth Gray.



“Auntie ‘Em, the VTs are showing up in Kansas.”

Front row, left to right: Olivia Simpson, Stephanie Duston. Back row, left to right: Elizabeth Gray, Robert Goodwin, Hunter Wyatt, Carrie Ortel, Steffany Yamada, and Jake McGaughey. Not pictured: Coaches John Galbraith and Mike Badzmierowski.

2016 LEGISLATIVE ISSUES

HB558: *An Act to direct the State Health Commissioner to develop a plan to eliminate evaluation/ design services by the Department of Health for onsite sewage systems and private wells.*

This Act is presently under review by VDH which has created a Team that includes the Sewage Handling and Disposal Advisory Committee (SHDAC). VAPSS is a member of that committee and has volunteered to assist in an element that is responsible for developing the transitional planning of the project management plan. Included in that element are the following items:

- A. Final transition date which all site evaluations/designs will be performed by the private sector.
- B. Transition timeline to incrementally eliminate evaluations/designs provided by VDH
- C. Incremental timeline to require private evaluations/designs for other services.
- D. Local Transitions or whether the Department can reduce/eliminate services in areas with limited licensed professionals
- E. Fee Changes, necessary changes to application fees to encourage private evaluations/designs.
- F. Services in underserved areas, provisions for evaluation/design services by VDH in underserved areas.

Everyone presently licensed as an AOSE/OSE is urged to review HB558 for other concerns and comment accordingly. I would appreciate all appropriate comments relative to the 6 items listed in order to fairly represent the opinions of the membership and Board.

Bill Sledjeski, PSS, AOSE

bill@soiltechinc.com

VAPSS HAS SOME RENGER BINDERS LEFT (WITH VAPSS LOGO ON THE FRONT)

Purchase Price of Binder \$25.00
 VA Sales Tax (VA Residents Only) \$ 1.25
 Shipping & Handling \$ 4.90
Subtotal Per Binder \$31.15

Please make checks payable to: VAPSS and mail to: 383 Coal Hollow Rd, Christiansburg, VA 24073-6721



Membership Application Form

Application *** Renewal ***** Information Change**
 (Please circle one of the above)

Jeff Miller, VAPSS, 383 Coal Hollow Rd, Christiansburg, VA 24073-6721
PH: 540.382.0943 FAX: 540.382.2716 Email: vapps@vapps.org

Please type or print clearly, and mail with payment to the address above. Please use the address where you would like to receive VAPSS mailings. All members are responsible for updating his/her contact information with the Executive Secretary.

Name: _____ Date: _____

Business: _____

Address: _____

Is your information to be held in confidence? _____ Yes _____ No

Telephone numbers: (W) _____ (H) _____

Cell phone number: _____

Email address: (W or H) _____ @ _____

Specialties: _____ General practice (PSS), _____ OSE, _____ Wetlands, _____ E&S _____ Storm water, _____ Geology/Hydrogeology, _____ Nutrient Management/Cropping, _____ PE, _____ Regulatory, _____ Academic/Teaching

County(s) or regions where you work? _____

VAPSS membership class and dues:

Dues are to be paid on an annual basis for each calendar year. VAPSS dues are not pro-rated.

___ **Regular** - A person interested in the purposes and objectives of VAPSS, and receiving approval by majority of the Board. Eligible to vote. There are separate requirements for holding office. Dues are \$100/year.

___ **Student** - A person pursuing a college degree in soil science or related field. May not vote or hold office. \$20/yr.

License/Certification:

___ Virginia Certified/Licensed Professional Soil Scientist (C/LPSS).

___ Virginia Alternative/Conventional On-site Soil Evaluator (AOSE/COSE).

___ Other _____

Members who pay Regular dues in 2013 or 2014 may receive one VAPSS t-shirt. Only one t-shirt will be given to each Regular member during that two-year period. The t-shirts will be available for pickup at the Spring or Fall Meeting. Conference Registrants paying full fees become members for duration of 2013. Make your checks payable to VAPSS. Mail to the address shown at the top of this form. Receipts are available upon request. Note: Paypal may be utilized at VAPSS.org

Donations to VAPSS including the Bill Edmunds Scholarship Fund, may also post via Paypal

<p>Virginia Association of Professional Soil Scientists</p> <p>Ed: Lexi Jones Email: aamljones@gmail.com</p> <p>Remember to call Miss Utilities (811 or 800-552-7001) before you dig and get a ticket number to protect you and everyone on the project. Safety first.</p>	<p><i>Postmaster: Address Service Requested</i></p>
<p>2016 ADVERTISING AND ARTICLE DEADLINES</p> <p>WINTER 2016 (due January 15) SUMMER 2016 (due July 15) SPRING 2016 (due April 15) FALL 2016 (due September 15)</p> <hr/> <p>Save the date!</p> <p>VAPSS Spring “lite” Session- 2-3 June: In situ redox identification in Fairfax County –more- inside this Newsletter.</p> <p><u>Other events:</u> SSSA S-12 Soil Scientists in Phoenix November 6-9, 2016. See Meetings at Soils.org June 10-11, 2016; Grapes (juice) and soils; see PAPSS website for more details</p> <p style="text-align: center;"><i>A Joint Technical Session Soil and Geomorphology Tour of Erie County, PA</i></p>	
<p><i>Forum much?</i></p> <p>Go to our VAPSS.org website, send Jeff Miller an email and he'll set up your access to the forum.</p> <p>VAPSS (spell it all out) has a Facebook page, with photos, announcements, friendly banter and information of newsworthy topics. Knock on door and administrator will let you in.</p> <p>We want to learn about you, and these social media are great tools to interact amongst the field of professionals; if anyone would like to create a Linked-in page we could use your help. There are useful technical and professional exchanges there-in.</p>	