



The Newsletter of the Pennsylvania Association of Professional Soil Scientists

PO Box 871, Mechanicsburg, PA 17055

December 2019

PAPSS 2018 and 2019 Meetings and Tech Sessions

October 2018, State College, PA

PAPSS members toured the operations at the Hawbaker Limestone Quarry in Pleasant Gap in October 2018. Hawbaker operates 21 quarries and 7 asphalt production plants in Pennsylvania and New York. Hawbaker staff provided an overview of quarry activities and regional geology.



The group then toured an NRCS Wetland Reserve Easement site. A former tilled field in the floodplain was restored to pre-farming conditions through selective planting and management. The streamside wetland provides wildlife habitat, runoff filtration, and erosion control.

The final stop of the day was an American chestnut research farm. In the early 1900s, the American chestnut tree dominated the eastern forests, with approximately 1 out of every 6 trees in Pennsylvania forests was a chestnut. Chestnut blight fungus very quickly destroyed all large mature trees. Some American chestnut trees survive and even produce seeds, but no longer can reach their former size before succumbing to the blight. The American Chestnut Foundation has been working since 1983 to backcross American chestnut trees and Chinese chestnut trees to develop a blight-resistant tree that has the same growth characteristics as the American chestnut.



October 2019, Stroudsburg, PA



PAPSS offered a wetland training course on October 3. Classroom activities included discussion of the Regional Supplements and methods and common mistakes of wetland data collection. Jay Drasher, endangered species biologist, covered the PNDI process and bog turtle hits. In afternoon field activities, Mr. Frank Plewa of the Army Corps of Engineers led the group in estimating percent areal cover and covered problem area wetlands and disturbed sites. PAPSS members Yuri Plowden and Laurel Mueller covered hydric soil indicators. PAPSS would like to thank Mr. Plewa again for his continued support of our wetland training programs.



The PAPSS annual meeting was held October 4 at the Kettle Creek Environmental Education Center. ■



2020 PAPSS Board of Directors



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Science Roundup

The following articles highlight news items collected from around the internet

Recycled water irrigation changes soil properties – A study published in the Journal of Environmental Quality demonstrated that long-term application of recycled water for landscape irrigation can have impacts on soil pH and salinity, even at deep soil depths. Such deeper impacts are less likely to be alleviated by typical practices such as aerification and gypsum application. <https://dl.sciencesocieties.org/publications/jeq/pdfs/48/6/1758>

Stop soil erosion now or face starvation soon, scientists warn – Professors speak at soil erosion conference warning of worldwide soil degradation. Conservation and land ownership are keys to soil conservation. <https://www.reuters.com/article/us-global-food-soils/stop-soil-erosion-now-or-face-starvation-soon-scientists-warn-idUSKCN1SL2Q5>

Macropore Flow in Frozen Soils – In a paper recently published in *Vadose Zone Journal*, researchers review the hydrologic importance of preferential flow in frozen soils during snowmelt infiltration. They emphasize that frozen ground is not impermeable, but rather that networks of unsaturated macropores (fractures, plant root holes, and animal burrows) can allow water to preferentially 'short circuit' the frost zone during snowmelt, reducing runoff and enhancing soil drainage and groundwater recharge.

The authors propose a new conceptual framework to be used as a blueprint for the future development of numerical models to account for these complex, but important, processes. Incorporating these processes into hydrological models will fundamentally improve our understanding of snowmelt water storage and routing in frozen landscapes. This will be critical for predicting the timing and magnitude of spring floods, soil moisture availability, groundwater recharge and ensuring future water security in cold regions. <https://dl.sciencesocieties.org/content/Macropore-Flow-in-Frozen-Soils> ■

Excavation and Confined Space Safety

Judge sentences drain company owner to 2 years for South End trench collapse deaths
– Massachusetts 12/2019

Funeral services set for man killed in Gregory trench collapse
– Texas 12/2019

Fire chief reflects on deadly trench collapse
– Pennsylvania 11/2019



The National Institute for Occupational Safety and Health (NIOSH) recommends engineering controls, protective equipment, and safe work practices to minimize hazards when working in trenches and excavations. Trenching and excavation hazards are known and preventable. Yet, trenching and excavation deaths in the United States number around 50 per year. Nearly 70% of those deaths occur in companies with less than 50 employees and 46% occur in companies with fewer than 10 employees.

As a professional soil scientist, it is your responsibility to yourself and others on a site to know and prevent excavation hazards.

- Take charge
 - Do not enter an excavation you deem unsafe and do not allow entry by others
- Know the law
 - OSHA resources <https://www.osha.gov/SLTC/trenchingexcavation/>
- Always make a call to have utilities marked (Dial 811)
- Direct the excavator in proper excavation techniques
- Always inspect any excavation prior to entering
- Always have a means of egress
- Be aware of conditions that can exacerbate hazards
- Be safe. Do everything possible to make it easier to get out of a hole than to get into one. ■

In Memoriam

Luther R. Auchmoody



Luther R. Auchmoody, 83, of Ormond Beach, passed away January 15, 2019. He was born in Schenectady, NY, graduated from Scotia High School and honorably served in the U.S. Airforce. He was married to the former Josephine Blank on July 8, 1955. Luther received his B.S. and Master's degree from Syracuse University and his PHD. from North Carolina State University. He worked for the U.S. Department of Forestry as a Research Soil Scientist, for 35 years. After he retired he owned and operated his own consulting firm. Luther was a member of Tomoka Christian Church, American Legion, Society of American Foresters, and American Society of Agronomy and was Vice President of Schroon Lake Community Church in Schroon Lk, NY. He was survived by his wife; Josephine, daughters; Patricia (Don) Thison, Deborah (Joe) Anderson, Donna (Scott) Rectenwald, Penny (Doug) O'Neil and Jennifer (Dale) Goodine; 14 grandchildren; 16 great grandchildren and nieces; Robin Siciliano and Bonnie Harris. His brother Robert predeceased him. Donations may be made in his memory to Schroon Lake Community Church P.O. 276 Schroon Lake, NY 12870 / www.slcommunitychurch.com. ■

Luke E. Smeltz



Luke Edmund Smeltz, 54, of Enola went to Heaven Friday, November 8, 2019. He was at home surrounded by his family. He was a Project Manager/Soil Scientist for Skelly and Loy, Inc., Harrisburg. He was a PA Certified SEO and Certified Professional Soil Scientist. He was a member of the Brethren in Christ Church. He enjoyed spending time with family, gardening, listening to music, singing, evenings by the fire pit, anytime spent outdoors, Penn State Football, reading and learning new things. He is survived by his wife Kelly Jo (Haring) Smeltz; parents, Edmund and Doris (Keefer) Smeltz of Lewisburg; three daughters, Rachael E. Greene (Joel) of Camp Hill, Hannah M. Smeltz (Michael Inman) of Harrisburg, and Abigail L. Rivera (Tyler) of Enola; brother, Steven; two sisters, Rebecca Newton and Deborah Gessner; and seven grandchildren, Brooklyn, Khaleesi, Zaya, Lukas, Autumn, Zoe, and Tessa. Contributions are requested to American Brain Tumor Association, <https://give.abta.org/LukeSmeltz>. ■



PAPSS Online
www.papss.org

Web Soil Survey
websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Comments or contributions?
mlane@brickhouse-environmental.com



Dear PAPSS Member:

Greetings! This letter is to remind you that it's now time to renew your annual membership. Please complete the form below, providing your information **EXACTLY** as you wish to have it appear in our PAPSS 2020 Membership List.

Our dues are as follows:

PROFESSIONAL MEMBERS - \$50.00

APPRENTICE AND ASSOCIATE MEMBERS - \$25.00

STUDENT MEMBERS - \$15.00

Please note that there is a **\$15.00 late fee** if dues are **paid after March 1, 2020**.

Membership will be cancelled if dues are not received by May 1, 2020

Please return this form, along with your dues check payable to PAPSS, to:

Sue Miller, PAPSS Administrator
1130 Boiling Springs Road
Mechanicsburg, PA 17055

Name_____

Title/ Certification_____

Agency/ Business/ Affiliation_____

Address_____

Home Phone_____ Work Phone_____

Cell Phone_____

Email Address(s)_____

Is address listed:

☐ Home

☐ Office

PLEASE NOTE – DEADLINE JANUARY 31, 2020!

**2020 CONSULTANTS' LIST OF CERTIFIED PROFESSIONAL MEMBERS
AVAILABLE TO PROVIDE SOIL SCIENCE CONSULTING SERVICES**

The Consultants' List Committee is preparing the annual update of the Pennsylvania Association of Professional Soil Scientists (PAPSS) Consultants' List of Certified Professional Members available to provide soil science consulting services. Anyone who is a *Professional Member* of PAPSS and is available to do soil science consulting work is encouraged to complete the information below and return it to Sue Miller, who will forward the information to the Consultants List Committee. The soil science Consultants' List is anticipated for publication in February/March 2020. Please include a **check for \$75.00 made payable to PAPSS** to defray the cost of publishing. *The information below must be completed and returned by January 31, 2020.*

Please be advised that eligibility for this list is restricted to professional members. Therefore, membership dues for the year 2020 (additional \$50 and form) must be submitted at the same time as the application and fee to be on the Consultants' List.

In the past, the "PAPSS Consultants' List of Soil Science Consultants" was USPS-mailed to many agencies and organizations throughout PA. Our current distribution includes email notifications to those same entities that the Consultants' List may be downloaded at www.papss.org under the "Find a Soil Scientist" tab. In addition, printed lists are provided by PAPSS members wherever our display is exhibited, such as conferences of PSMA, PASEO, PSATS, POWRA, PHRC, etc.

Please include any suggestions for future brochures with the return of your application.

Affiliated with the Soil Certifying Board of the Soil Science Society of America

MEMBER OF UNITED STATES CONSORTIUM OF SOIL SCIENCE ASSOCIATIONS (USCSSA)



PLEASE NOTE – DEADLINE JANUARY 31, 2020!

**2020 CONSULTANTS' LIST OF CERTIFIED PROFESSIONAL MEMBERS AVAILABLE TO PROVIDE
SOIL SCIENCE CONSULTING SERVICES**

Consultant's Name and Registration/Certification/Title(s): _____

Company Name _____

Business Mailing Address: _____

Telephone (area code): _____ Facsimile (area code) _____

E-mail address: _____ Educational Degrees (circle): B.S. M.S. Ph.D. Other _____

Areas of Specialty (check the areas that you are qualified to provide soil science consulting services)

☐ **A - Soil Mapping and Classification**

☐ **B - Erosion and Sedimentation Control**

☐ **C – Soil Investigations for Stormwater Mgmt.**

☐ **D - Soil Investigations for On-site
Sewage/Wastewater Disposal**

☐ **E - Soil Investigations for Spray Irrigation of
Wastewater**

☐ **F - Soil Investigations for Drip Irrigation of
Wastewater**

☐ **G - Soil Investigations for Sewage
Sludge/Biosolids Disposal**

☐ **H - Soil Investigations for Solid Waste Disposal**

☐ **I - Soil Investigations for Hazardous Waste
Disposal**

☐ **J- Land Reclamation or Remediation**

☐ **K - Wetlands Identification, Delineation, or
Mitigation**

☐ **L - Soil Investigations for Archaeological
Resources**

☐ **M- Nutrient Management Planning**

Please return entire form with Payment made payable to PAPSS to:

**Sue Miller
1130 Boiling Springs Road
Mechanicsburg, PA 17055**

Fed. ID 45-4659566

Payment - \$75.00

(_____ Check here if Receipt Requested)

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