

2018 ANNUAL CONFERENCE

*BRANCHES OF
KNOWLEDGE*



May 2-4, 2018
TOFTREES RESORT
State College, Pennsylvania

12:00 pm

Registration Open

1:00 pm – 5:00 pm

Soil Science Short Course

Soil Science: An Overview of Principles, Practical Field Methodologies, and Applications

Russell L. Losco, M.A., P.G., C.P.S.S. Delaware County Community College and West Chester University

Whether remediation, redevelopment, or resource management, soils are an integral part of the solutions to environmental problems. A better understanding of soils helps prepare us to manage environmental risk and protect public health and safety. This one half-day course will provide an overview of the current state of soil science and its application to stormwater management, on-lot sewage disposal, solid waste disposal, Brownfield development, urban revitalization, agriculture, and nutrient management.

We will explore the history of soil science and soil basics (i.e. texture, structure, permeability), then focus on the details of the types of soil classifications and taxonomy, published sources of data and the interdisciplinary components, soil genesis and its application, soil management across the spectrum of uses, paleosols, and anthropogenic soils and their impacts to various investigations. Methods of soil investigation will be explored, including permeability testing, test interpretation, and drainage classification. Some special cases and emerging topics will be explored, as well. Emphasis will be given to practical field methodologies and applications to meet current issues and regulatory requirements (i.e. Soil horizon restoration and reconstruction). Case studies and examples from the real world will be utilized to place the science in context with practice.

This seminar is intended both for those who have and do not have backgrounds in soil science. It is aimed at intermediate-level environmental professionals, practicing geologists and engineers, regulators, and public officials

either in need of a refresher course or those who are learning about soils for the first time; however, this should not discourage entry-level professionals from attending. Upon completion and full attendance of the course, participants will receive a certificate of completion and 220 CEU - PDH minutes.

Mr. Losco has over 40 years of experience as a scientist, with more than 30 years of that in geology and soil science. He is a Certified Professional Soil Scientist, a Professional Geologist, and an adjunct professor at West Chester University and Delaware County Community College and co-founder and owner of Lanchester Soil Consultants, Inc. He served for nine years on the Board of Directors of the Pennsylvania Association of Professional Soil Scientists (PAPSS) and is the lead author of the PAPSS Manual for Soil Investigation in Pennsylvania. He is a member of the Board of Directors of the Pennsylvania Council of Professional Geologists (PCPG).

The cost for this course (includes all materials and afternoon refreshment break) is **\$99** for PAEP and PCPG members and **\$129** for non-members. In order to register for this course (it is not included in the PAEP Conference registration fee), please use the following link: <http://pcpg.org/event-2845659>.

Event is live at the above link. Note: Registration cut-off date for PCPG or PAEP members is **April 25**. Non-member cut-off is **April 23**. We strictly adhere to these cut-off dates in order to adequately prepare for the course.

2:00 PM – 6:00 PM

Exhibitor Setup

6:00 pm - 7:15 pm

Welcome Reception: Heavy Hors D'oeuvres/Cash Bar with Exhibitors

7:15 pm – ???? pm

Quizzo

A great time was had by all last year so we have been asked to do this again. Join your friends and colleagues and test your knowledge of PAEP history, industry-related information, and general trivia. You can come with a pre-formed team or join one on site. Either way it will be a great night of fun and sharing knowledge.

- 7:00 am** Registration Open
- 7:30 am – 8:30 am** Continental Breakfast with Exhibitors
- 8:30 am – 8:45 am** Welcome: PAEP President
- 8:45 am – 10:15 am** Regulatory Update

Regulatory Update From USACE and PA DEP

Wade B. Chandler, US Army Corps of Engineers and David S. Goerman, Jr., PA DEP

A variety of topics will be discussed that are related to changes or updates to the Corps and PA DEP Ch. 105 programs, including the Pennsylvania State Programmatic General Permit-5 and many items that were just implemented or will be implemented by PA DEP within the year such as the new technical guidance (Aquatic Resource Condition Level 2 Rapid Assessments) and revised Environmental Assessment Form; finalization of the Function Based Aquatic Resource Compensation Protocol (310-2137-001) technical guidance, program development projects or demonstration efforts that are under way or nearing completion such as the new PA Wetland Mapping, PA Watershed Resources Registry. The extent of the information presented is dependent upon the time available for the session.

10:15 am – 10:30 am Break with Exhibitors

10:30 am – 11:45 am Breakout Session

Breakout Session

P3 Bridge Detours and the Plain Communities

Dr. David J. Rue, Rue Environmental, LLC

Detours for bridge replacement projects, generally minor inconveniences for motorists, can become major impediments for the Plain Communities that travel by horse and buggy. The P3 primary contractor, Walsh Granite, included specialized interviews for the Plain Community as part of their public outreach program. The interviews were conducted to ascertain the level of difficulty that the Plain Community might experience as a result of detours. Sixty-one separate interviews were conducted as part of this specialized outreach. Mitigation for difficulties included rescheduling the time of detour, providing alternative transportation, and construction of temporary footbridges.

Breakout Session

Post Storm Event, Infrastructure, and Stream Restoration Improvements: Three Case Studies

Tom Graupensperger, Dewberry Engineers, Inc.

This session will present case studies for three projects that improve resiliency and sustainability of vulnerable infrastructure by using Natural Stream Channel Design and Restoration techniques. We will look at opportunities where infrastructure rehabilitation and replacement are paired effectively with stream restoration activities. Such projects include roads; bridges; culverts; sewers; storm sewers/outfalls; other utilities and green infrastructure; park, recreation, and trail facilities; and the creation, restoration, and reconnection of natural resources including floodplains, wetlands, and riparian habitat.

12:00 pm – 1:30 pm Luncheon and Keynote Presentation

Environmental Partnering

Secretary Leslie S. Richards, PennDOT; Jessica Shirley, PADEP; Secretary Cindy Adams Dunn (invited) PADCNR

Our panel will discuss breaking down silos between agencies to improve environmental health in PA. Often projects are completed in a vacuum without consideration to leverage project investment to improve the environment (rather than mitigate the impacts to) and are hindered by a divergence of development, environmental cleanup, restoration, and conservation goals. This discussion will utilize the context of the PennDOT Connects program to leverage government investment to improve the environment surrounding transportation projects in an effort to find new ways to improve the environment in Pennsylvania. We are pleased to have Dr. Michele Halsell, Director of the Sustainable Communities Collaborative of the Penn State University Sustainability Institute, who will serve as the session moderator.

1:30 pm – 2:00 pm

Dessert With Exhibitors

2:00 pm – 2:50 pm

Breakout Session

Breakout Session

Getting the Most Out of PA Conservation Explorer

Gregory S. Podniesinski, PhD, PA Department of Conservation and Natural Resources and Kent R. Taylor, PA Department of Conservation and Natural Resources

In July 2017, several new enhancements and data updates were made to PA Conservation Explorer that were designed to make your work as environmental professionals more efficient and better informed. Some of the new tools allow users to easily query existing spatial data and even add data to the map or display map services from PA Spatial Data Access and other public resources. This session will explore some of the new and lesser-known capabilities of this one-stop shop for environmental review, conservation planning, and GIS decision support. In addition, other topics such as guidance for botanical survey reports, submitting threatened and endangered species data, and understanding PA Natural Heritage Program species lists will be covered. A Q&A session will follow Explorer demonstrations.

Breakout Session

Classic Soil Science Knowledge and Modern Environmental Practice

Tracey Olexa, CPSS, PWS, PE, NTM Engineering

Soil Science is an essential Branch of Knowledge for environmental professionals. Classic soil science theories will be reviewed and put into context for professional practice. This talk will “dig into” the basics of soil pedology, biology, chemistry, and physics. The dynamic functions and ecosystem services performed by soil will be highlighted to foster an appreciation for this non-renewable resource.



2:50 pm – 3:00 pm

Break

3:00 pm – 3:50 pm

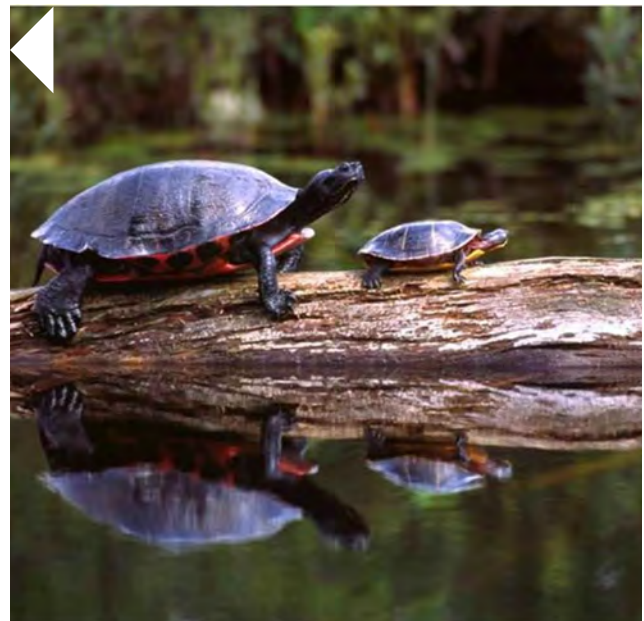
Breakout Session

Breakout Session

Relocation of State-threatened Redbelly Turtle during a Dam Breach in Delaware County

Deborah K. Poppel, AECOM and Bryan Strawn, AECOM

The Pennsylvania DEP needed to remove a high-hazard dam from Broomall Lake in Media, Delaware County. The state-threatened eastern redbelly turtle (*Pseudemys rubriventris*) was thought to inhabit the lake. Pennsylvania Fish and Boat Commission required PADEP to contract a state recognized, qualified redbelly turtle surveyor to ensure that no protected species of turtle were harmed during the construction activity. From April through June 2017, AECOM biologists trapped and relocated turtles, including the target species, from Broomall Lake to suitable habitats downstream. The permitting process, trapping techniques, construction oversight, and species collected will all be discussed during this presentation.



Breakout Session

Evaluation of the Contribution of Bromide from Coal-Fired Power Plant Discharges to Concentrations in Pennsylvania Drinking Water Sources

Kelly D. Good, Carnegie Mellon University

Energy extraction and utilization can have significant effects on drinking water resources. In this presentation, we share results from a watershed-based analysis that identified Pennsylvania drinking water intakes downstream of wet flue gas desulfurization (FGD) discharges at coal-fired power plants. These discharges contain bromide, which is of interest in drinking water sources due to its effect on disinfection byproduct (DBP) formation. While the types and amounts of DBPs formed is complex and depends on a variety of source water and operational conditions, bromide is known to increase the rate and extent of DBP formation and shift speciation towards brominated DBPs, which are more toxic. Thus, increases in source water bromide concentrations may lead to increases in health risks in treated drinking water. Bromide



is naturally present in coal, is captured in the wastewater of wet FGD systems, and is sometimes added to coal to enhance the removal of mercury at coal-fired power plants. The Mercury and Air Toxics Standards (MATS) require significant mercury reductions, which could lead to increases bromide discharges to surface waters from plants operating wet FGD. Bromide was not directly regulated in the 2015 Steam Electric Effluent Limitation Guidelines (ELGs) because a rulemaking analysis, which was based on geographic proximity, suggested few drinking water facilities would be affected by power plant bromide discharges. Our analysis used a watershed approach and identified 22 public drinking water systems serving 2.5 million people that were identified as being downstream of at least one wet FGD discharge.

3:50 pm – 4:00 pm Break

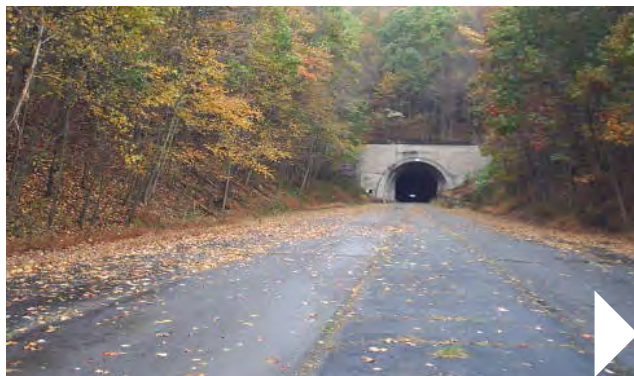
4:00 pm – 4:45 pm Breakout Session

Breakout Session

FHWA Regulation and Policy Updates – 23 CFR 771 and 774

Camille A. Otto, Federal Highway Administration

A Notice of Proposed Rulemaking (NPRM) was published on September 29, 2017 for 23 CFR 771 and 774. This NPRM includes proposed revisions to the FHWA and FTA joint regulations implementing the National Environmental Policy Act (NEPA) and Section 4(f) requirements to address programmatic approaches in environmental reviews included in the FAST Act as well as other changes. FHWA will discuss the proposed changes and provide an update regarding the status of the regulations and any recent changes or finalizations. In addition, information on current trends in documentation and comments will be shared. There will be plenty of time to ask questions too!



Breakout Session

The Tale of Three Trails: Balancing Environmental Priorities with Economic Development

Craig W. Bachik, Navarro & Wright Consulting Engineers, Inc.

The session will provide a case study perspective and overview of The Old PA Pike (TOPP) trail, which is an 8.5 mile stretch of the abandoned Pennsylvania Turnpike in Breezewood, PA. This segment of the turnpike was abandoned in the 1960's and has remained largely dormant and underutilized for almost 50 years. The trail master plan update prepared in 2017 sets a course for economic development strategies for the rural communities of Bedford and Fulton Counties and highlights this unique recreational amenity as a Pennsylvania destination. The session reviews the historical significance of this former railroad corridor turned turnpike and the delicate balance of restoring two abandoned tunnels with environmental challenges. The end goal of the project is to establish the resurgence of this amenity into a contemporary family destination and landmark recreational site situated in Pennsylvania's Buchannan State Forest land. The natural reclamation of this former transportation corridor is balanced against the ecotourism benefits of increased public activities. Learn more about the environmental challenges and complicated nature of making this project a national destination while preserving the integrity of the surrounding natural environment.

4:45 pm – 5:45 pm Breakout Session

Breakout Session

Air Quality Monitoring in Response to Opposing Land Development Goals

Mark D. Huncik, Air Quality and Meteorological Consultant

Recent changes at a local university's steam plant coupled with off-site land development plans have potentially created a localized "hot-spot" for air pollution. Exposure assessments via dispersion modeling were conducted for a variety of pollutants. Local residents advocated for and obtained an air quality monitoring program as part of a "conditional use permit" for a proposed high-rise residential development.



Breakout Session

Regional GSI: A Philadelphia Story

Michael J. Tucci, P.E., ISS Management, LLC

The need for robust urban stormwater system retrofits to satisfy increasingly stringent federal, state, and local requirements cannot be understated. Many urban watersheds are facing the immediate need to reduce pollutant loadings and combined sewer overflows (CSO). Green Stormwater Infrastructure (GSI) incorporates systems that mimic natural hydrology in an urban watershed and reduce pollutant loadings and CSO. Economies of scale can be achieved by constructing regional or sub-regional stormwater management facilities to satisfy federal, state, or local requirements by managing stormwater from multiple, hydraulically-connected properties. Regional stormwater facilities are gaining traction in the GSI retrofit space to manage stormwater runoff. The decision to take a regional approach is often complex and must be carefully considered to ensure that economies of scale are achieved and future flexibility is maintained for all involved stakeholders while achieving program goals. Since the cost per acre to design and install a stormwater management facility on a regional is less than the cost per acre for multiple smaller projects, regional stormwater facilities are financially attractive to decision makers. Additionally, regional facilities are desirable to property owners because they alleviate the burden of having to construct a discrete SMP on their own property where construction could cause business interruption. ISS Management, LLC, constructed a regional basin in the Northeast section of Philadelphia that manages stormwater from 20 properties over an approximately 50-acre watershed. The project was successful in large part due to ISS' ability to bring all stakeholders together to convince them of the benefits of collaboration. Funded through the Philadelphia Water Department's (PWD) nationally recognized Green Cities, Clean Water program, the regional facility is one of the first of its kind in the region. Property owners pay for the long-term maintenance of the facility with the cost savings they experience through PWD stormwater credits, which reduce their stormwater charges by 80%. In addition, the property owners have the ability to redevelop their properties over time since the regional basin has excess capacity. The presentation will cover a case study of how ISS successfully implemented a GSI retrofit that incorporated a regional stormwater basin in an urban setting.

6:00 pm – 6:30 pm Reception with Exhibitors

6:30 pm – 8:30 pm Dinner and Presentation of Awards

Following dinner, PAEP will recognize and present awards to this year's winners of the Karl Mason and Walter Lyon award for their individual or organization's contribution to the field of environmental management in Pennsylvania. PAEP will also present the freshman/sophomore and junior/senior/graduate scholarship winners for 2018.

7:30 am **Registration Open**

7:30 am – 8:30 am **Continental Breakfast with Exhibitors**

8:30 am – 9:15 am **Breakout Session**

Breakout Session

Acorns to Oaks: Native Plant and Planting Specifications for Best Practices

Jim MacKenzie, Octoraro Native Plant Nursery

As wholesale growers of native plants for 28 years, Octoraro Native Plant Nursery has seen a wide spectrum of specifications for plants and environmental restoration projects that make one say “hmm...really?” This session will offer a nuts and bolts approach to specifying plant material and installation best practices. We’ll also address protection measures and maintenance needs, post construction, to help improve survival rates and the success of your project.



Breakout Session

Industrial Water Reuse

Timothy E. Keister, CWT FAIC, ProChemTech International, Inc.

A successful project to reuse an industrial wastewater as cooling tower makeup water will be followed from project conception, equipment specification, installation, start-up, and operation. Use of fresh water makeup to three cooling tower systems was totally replaced with the concentrate wastewater from process makeup water reverse osmosis units. The major problem of cooling system corrosion due to high levels of chloride and sulfate ion in the soft, highly cycled reverse osmosis concentrate was addressed by use of patented polysilicate based water treatment chemistry. Water analysis data on city, RO concentrate, and cooling tower waters will be presented along with corrosion rate data. The project reduced fresh water use by 571,000 gallons per month with a reduction in wastewater discharge to the sanitary sewer of 576,000 gallons per month.

9:15 am – 9:30 am **Break**

9:30 am – 11:00 am **General Session**

New Methods in Environmental Assessments for Pennsylvania Waterways Permitting

Teresa M. Amitrone, Liberty Environmental, Inc. and David S. Coyne, QEP, Liberty Environmental, Inc.

After years in draft status, the Pennsylvania DEP recently finalized its new requirements for Chapter 105 Environmental Assessments at waterways permitting projects. This presentation provides a detailed review of these new methods from a consultant’s perspective, and shares our experiences from their successful implementation in 2017. The presentation also provides step-by-step instructions and interpretation of the Pennsylvania Function-Based Aquatic Resource Compensation Protocol and its associated Level 2 Rapid Assessment Protocols. These methods systematically and quantitatively evaluate the functional value of existing resources, the effects of project impacts, and the specific requirements for compensation to offset those impacts.

11:15 am – 12:30 pm **General Membership Meeting/Board of Directors Meeting**

12:30 pm **Conference Adjourns**

CONFERENCE INFO

ONSITE SERVICES

HOTEL

Toftrees Resort
and Conference Center

One Country Club Lane
State College, PA 16803

(814) 234-8000
www.toftrees.com

Group Room Rate:

\$109.00 Single/Double Occupancy
(plus applicable taxes)

Reservations:

To make your room reservation, please call (814) 234-8000 and mention PAEP to receive the group rate. Reservations must be made no later than Monday, April 2. Please note that the available room block may fill prior to the aforementioned cut-off date. Reservations made after the cut-off date, or if the room block has been filled, will be accepted based upon availability with the group rate. Be sure to call early! Directions can be found on the hotel web site www.toftrees.com. Also, a limited number of rooms are available at the Government per diem rate.

DEADLINES

April 2 Toftrees Resort reservation cut-off date

April 19..... Registration form due to PAEP

April 27..... Cancellations must be received in writing to receive a refund. No refunds after this date.

Questions?

Contact the PAEP Registration Office at (814) 355-2467 or info@paep.org. Visit our website at www.paep.org.

REGISTRATION

Full Registration includes Opening Reception and Quizzo event on Wednesday, 2, plus all sessions and meals on Thursday, May 3 and Friday, May 4. **Non-Member Full Registration Fee** includes PAEP Membership fee for 2018.

Single Day Registration includes all sessions, meals, and materials for that specific day. (This fee does not include PAEP membership dues for non-members.)

Students: If you are a student and interested in attending the conference, please contact either Kristin Aiosa at KAiosa@jmt.com or Mike Kenawell at MKenawell@jmt.com for details.

You must be a current PAEP member for the member rates to apply.

Short Course: The cost for the Soil Science Short Course (includes all materials and afternoon refreshment break) is **\$99** for PAEP and PCPG members and **\$129** for non-members. To register please use this link: <http://pcpg.org/event-2845659>.

*Event is live at the above link. Note: Registration cut-off date for PCPG or PAEP members is **April 25**. Non-member cut-off is **April 23**. We strictly adhere to these cut-off dates in order to adequately prepare for the course.*

Continuing Education: Although PAEP conferences are not officially certified to provide credit, attendees will be provided documentation of their attendance and training in the form of a certificate, upon request.

Sponsorship and Exhibition

PAEP welcomes Sponsors for various conference events, as well as Exhibitors. Sponsor logos will be highlighted on PAEP's website, in the conference program, and at the conference. Exhibitors will be provided with a 6 ft. draped table. Please contact Sarah Lavin at sml104@pitt.edu or (724) 443-4111, or the PAEP headquarters at info@paep.org or (814) 355-2467 for information.

Cancellations

All cancellations must be made in writing to PAEP and received by **April 27, 2018**, in order to receive a refund. All registrations will incur a \$25 non-refundable processing fee. No refunds will be given for cancellations received after this deadline or for 'no shows.'

REGISTRATION FORM

2018 PAEP Annual Conference Registration Form

(Please use one registration form per person)

NAME _____ BADGE NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

EMAIL _____ TELEPHONE _____

	Type of Registration	Member Rate	Student Rate	Non-Member Rate	Total Due
_____	Full*	\$295.00	\$160.00	\$365.00	\$ _____
_____	Wed, May 2 Reception	\$ 35.00	\$ 35.00	\$ 45.00	\$ _____
_____	Thur, May 3 One-Day Rate	\$230.00	\$ 75.00	\$275.00	\$ _____
_____	Thur, May 3 Reception/Dinner	\$ 50.00	\$ 35.00	\$ 60.00	\$ _____
_____	Fri. May 4 One-Day Rate	\$ 120.00	\$ 25.00	\$180.00	\$ _____
_____	Late Fee after April 19	\$ 25.00	N/A	\$ 25.00	\$ _____

Total Amount Enclosed \$ _____

* Full Registration includes attendance at each of the day's events and meals for that day.

___ Check here if you require any special dietary attention or have a disability and require accommodations in order to fully participate in this meeting. You will be contacted by a PAEP staff member to discuss your specific needs.

___ Check here if you would agree to supporting the PAEP Student Scholarship Fund by donating a themed basket for the conference.

► **PAYMENT** (please circle) Check Enclosed (payable to PAEP) MasterCard Visa

Credit Card # _____ Expiration Date _____ CCV# _____

Signature (credit card orders only) _____

► **MEAL ATTENDANCE CONFIRMATION** (please complete)

Please confirm which scheduled meal function(s) you will be attending based on the type of registration you have selected above so we may include you in our counts to the hotel: (check all that apply)

_____ Wednesday May 2 Opening Reception
_____ Thursday May 3 Reception/Dinner
_____ Friday May 4 Breakfast

I give permission for PAEP to disseminate my name and contact information (i.e. list of attendees) at the conference.

___ YES ___ NO

Signature: _____ Date: _____

► **REGISTRATION PROCEDURE**

Please complete and return this registration form along with payment to:

Pennsylvania Association of Environmental Professionals
174 Crestview Drive, Bellefonte, PA 16823-8516 | Phone: 814.355.2467 | Fax: 814.355.2452

If payment is made by check, make payable to PAEP. If payment is made by credit card (MasterCard or Visa), you may fax this form. We are unable to accept registrations over the telephone. Please note that registrations will not be processed without payment.

SPONSORS

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