

the BRIDGE

Environmental Connections Start Here

March 1, 2024 | Spring - Volume 24.1



MISSION STATEMENT

The purpose of the Pennsylvania Association of Environmental Professionals is to promote environmental education, research, planning, assessment, review, and management through the formation and operation of a nonpolitical multidisciplinary professional society.

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PAEP is a member of NAEP, the national organization for environmental professionals. Click below to view news from the national perspective.



A Message from President Barbara Weedon

It is an honor to have been elected President of PAEP. I look forward to serving the organization and participating in the 2024 Annual Conference. Our organization has struggled for the last few years with participation and membership. In a time where most anything you could want to know can be found on the internet, PAEP has struggled with relevancy, particularly to the younger generation. I have been nostalgic lately remembering past conferences and events when we would gather in person and discuss current events in the consulting industry or held educational events to improve our skills. But I believe that the 2023 Annual Conference and the monthly webinars have shown that PAEP has much to offer its membership. The internet cannot replace in-person conversations and meeting face to face. What we need to impress upon a generation that does not like to talk to people, but would rather text or email, is that in-person connections are vital to career and personal growth.



I am sending out a challenge to individuals who have been members for many years and remember the days when the annual conference event was the time we heard about new initiatives and regulatory information. Encourage your younger staff, as part of the career goals and growth, to join PAEP and participate in a committee or attend the annual conference. This will give them an opportunity to learn that there are aspects of face-to-face interactions that cannot be achieved by a Google search or texting.

My personal initiative as PAEP 2024 President is to encourage participation in our various committees. Consider joining one of our committees or starting a new committee. In a time of political uncertainty and the influence it has on environmental regulations, we need to look for ways to come together and find ways of sharing our experiences on projects and with agency members.

Getting involved in various activities and events within our organization is a great way to connect with fellow members and contribute to the community. Joining a subcommittee can provide a more focused platform to work on specific projects and initiatives. By actively participating and engaging in various aspects of the organization, members can not only enhance their own skills and knowledge but also play a crucial role in shaping the direction and success of the younger generation and our group as a whole.

Thank you,

Barbara Weedon, PAEP President

Become a Corporate Sponsor for the next Volume of the Bridge

Just \$25 will ensure your company's logo place in the next edition, which is distributed to all members! Contact the [Business Office](#) for details and to register your company. (First come, first served. Only 6 companies can sponsor each quarterly issue).

"the BRIDGE" is the newsletter of the **Pennsylvania Association of Environmental Professionals** and strives to provide its members with current, useful and unbiased information that will improve their ability to offer quality consultation and appropriate solutions to their clients. To make sure you receive these publications, be sure to **allow email from** info@paep.org to be accepted.



Welcome new members!

Renewal notices were sent to current members before the end of last year. If you know past members who didn't renew, give them a gentle reminder to reup. The year is still new and plenty of activities are being planned. We have seen several new members enroll so far this year. They are:

Jack Bentz

Ashley Brehm - The Markosky Engineering Group, Inc.

Amanda Brown - The Markosky Engineering Group, Inc.

Jerry Crispino

Sarah Deibert - Skelly and Loy, Inc.

Matthew Fisher - Normandeau Associates, Inc.

Clayton Frey - NTM Engineering, Inc.

Elizabeth Greitzer - Skelly and Loy, Inc.

Andrew Kielaszek

Joseph Kopalek

Phillip Light

Patrick McGlynn

Richard McKissock

Shannon Petrillo - PennsTrail Environmental, LLC

Kathleen Riek-Miller

Michael Rumrill

Dawn Schilling

Zachary Smith - A.D. Marble & Company

Melissa Vargo

John Young - ASA Analysis & Communication, Inc.

As always, we are interested in your ideas and input on providing our membership with quality, informative, timely and educational programming and opportunities. Contact the [Board office](#) with your ideas!

Our 2024 Corporate Members:

(as of February 29, 2024)

ACT Engineers

ASA Analysis & Communication, Inc.

CDR Maguire Engineering

Ernst Conservation Seeds

Navarro & Wright Consulting Engineers, Inc.

Rettew

Climate Change: A High-schooler's Perspective

Author: Ranjit Rajapakse

I am a high school student who enjoys learning about science and the natural world. Looking at the news headlines, we can see that the world faces many challenges, namely socio-political tensions, human inequality, and global health crises. However, climate change represents the most significant threat that we currently confront. We are already witnessing the effects of climate change, and refraining from action could result in a planet unable to support life as we know it. As I witness the challenges we confront as a society, the burden on my generation seems heavier. My generation must learn to address the problems that we inherit, but we require our parents' and grandparents' generations to inspire the minds of our youth.

Climate change is caused by natural and anthropogenic emissions of carbon dioxide, methane, and other greenhouse gases into the atmosphere. Humans emit greenhouse gases mainly through non-renewable electricity generation, unsustainable agriculture methods, and fossil fuel-based transportation. Excess concentrations of carbon dioxide and methane prevent ultraviolet radiation from escaping the Earth's atmosphere, resulting in a net warming effect that has already increased our planet's temperature by approximately 1.9 degrees Fahrenheit in the last century. This seemingly insignificant increase has already resulted in cataclysmic events throughout the globe.

In 2023, ocean temperatures off the coast of Florida increased to 101 degrees, surpassing records set during the previous summer of 2022. These increasingly high temperatures resulted in extensive coral bleaching and the destruction of marine wildlife. Rising ocean temperatures also contributed to powerful hurricanes such as Hurricane Idalia, disrupting communities along the East Coast. In Pennsylvania, snow has been replaced by extreme rainfall, resulting in major flooding and land degradation. Unfortunately, these events may only represent a microcosm of our world's issues by the end of this century.

Despite the immense challenge posed by climate change, probable solutions exist. Renewable sources of energy, such as offshore wind turbines and solar panel farms, will significantly decrease emissions. Reforming agricultural methods and reducing waste will allow us to properly manage natural resources. We need more scientists from all fields to join our fight against climate change. Only together can we prevent further environmental damage and restore lasting balance on Earth. Over the next decade, my generation will inherit the responsibility of solving the climate change crisis, and we will depend on current scientists and engineers to support our learning, inspire innovation, and disseminate hope.

(Editor's note): Ranjit is a high school student who is employed as an intern in the office of ASA Analysis and Communication, Inc.

Environmental News Releases

Check out the latest articles on environmental issues:

- o Earth.org has created this year's list of '15 Biggest Environmental Problems of 2024.' See what they list as pressing environmental problems. [Earth.org's 2024 list](#)

Links to other newsletters:

[DEP Newsroom](#) – Pennsylvania Department of Environmental Resources News Releases

[PA Environment Digest Newsletter](#)

[PennEnvironment](#)

[Pennsylvania Environmental Council](#)

[Conservation Voters of PA](#)

"The people have a right to clean air, pure water, and to the preservation of the natural, scenic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee for these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

...Article 1, Section 27, Pennsylvania Constitution

New Advances in Environmental Technology

Green Steel from toxic Red Mud

Researchers from the Max-Planck-Institut für Eisenforschung have successfully recycled the main byproduct of the refining of aluminum – red toxic mud. Four billion tonnes (or 4.4 billion US tons) of red mud are stored in industrial waste ponds. This waste is rich in iron. It also contains other heavy metals.

The researchers developed a direct and simple method to extract the iron from the waste using a hydrogen plasma. The resulting “green steel” will go a long way to cleaning up these cesspools of sludge that can be found around the world. The researchers estimate several hundred million tonnes of high-grade iron can be generated from this waste. The unused waste is turned into non-corrosive byproducts which contain important metals we can recover as well. The remaining waste will solidify. This residual material is suitable for construction projects as fill, according to the researchers. Read the [research report](#) in full as published in ‘Nature’.

Other environmental benefits would be realized from this process. Read the articles below to learn of additional positive impacts that can be achieved.

- [Aluminum’s notorious, toxic red mud could one day help make ‘green steel’ | Popular Science \(popsci.com\)](#)
- [Researchers create green steel from toxic red mud in 10 minutes \(newatlas.com\)](#)
- [Scientists just turned toxic red mud into CO2-free iron — here’s how \(msn.com\)](#)
- [The First Delivery of ‘Green Steel’ Suggests Its Future Is Not Far Off : ScienceAlert \(Volvo\)](#)

Do you have ideas on environmental solutions you’d like to air? Do you have tips on handling day-to-day issues we all have to deal with that you could share with your peers? Do you have ideas for news articles for “the BRIDGE”? Are you interested in improving your writing skills? Consider being a volunteer contributor for “the BRIDGE”.

We are avidly interested in speaking to your needs, concerns and interests. Your participation would “bridge” the gap in meeting the goals of your fellow members!

Since we last chatted...



Check out our free webinars available to all our members, on the [PAEP website](#). They can be used to satisfy your PDHs. Not a member? You can view any of our webinars for \$25.

Past Monthly Webinars – December, 2023 thru February, 2024:

- December 2023 – no webinar
- January 17, 2024 – **Abiotic and biotic factors affecting restored pollinator habitat in solar installations**, Sarah Kania, ASA Analysis & Communication, Inc.
- February 15, 2024 – **Evaluating Ecological Risk Under Pennsylvania’s Land Recycling Program**, presenter - Sean Weatherwax, Senior Scientist at Roux Associates, Inc.

Deb Poppel suggests members check out a recent presentation on the [Environmental Professionals RADIO](#) on mussels and mussel survey procedures. She highly recommends it.

Looking ahead...



If you have an idea for a future webinar you would like to have offered or a type of event you’d like to attend, contact PAEP at info@PAEP.org.

Save the Date!! **MAY 17, 2024**



Why?: 14th Annual PAEP & WTS Golf Outing

Where?: Valley Green Golf Course | 1227 Valley Green Rd, Etters

7am Registration

8am Shotgun Start

Registrations are due by May 1, 2024

See the brochure ([click here](#)) for more info and to register

Upcoming Webinars:

- March 12, 2024 - **Achieving A Sustainable Future Together: The Future of District Energy for Achieving Carbon Reduction Goals**, presenters are Jessica Hartley and Jeannie Morris, VP of Government Affairs for Vicinity Energy.
- April 24, 2024 - **Protecting Pennsylvania’s Aquatic Ecosystems from Thermal Discharges in an Era of a Warming Climate**, presented by Chris Gurshin, Vice President and Principal Scientist at ASA Analysis & Communication, Inc.
- May 2024 – **An Economist, a Chemist and an Engineer are Stranded on a Desert Island: what Good is the Economist?**, presentation by Dr. Jeffrey Wakefield, SWCA Environmental Consultants

Remember, all webinars are free to members, but you must register. Go to paep.org and sign up!

Upcoming Events:

- Annual PAEP & WTS Golf Outing (see above)
- September 11-13: 2024 Annual Conference

Watch your emails for announcements when other upcoming events are scheduled.

Do you have any ideas for a social outing? Here are some suggested activities: Mini-Golf Outing; Bowling; Axe-Throwing and/or Skeet-Shooting Fundraiser; Corn-Hole Tourney.

Let us know your ideas! info@paep.org

Mark Your Calendar!

PAEP

will hold its

2024 Annual Conference

from September 11 thru 13

at the

Penn Stater Hotel and Conference
Center in State College.

Photographers...

We are still looking to update our photos for "the Bridge", our website, and other publications as they may arise. Pictures can be anything you feel you want to share – action, static, streams, construction, pollution, remediation, etc. If you can, please provide some background info, like, the photographer's name, Company name, date of photo, and location.

Submitted photos can be used by PAEP without compensation. The above photo credits will be included if provided. Please submit to info@paep.org.

PAEP BOARD

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Radhika deSilva – Secretary

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We all are aware of the unintended impacts anthropogenic activities have had on numerous species throughout the world. Right here in Pennsylvania we have experienced the alarming reduction of once-plentiful species of Flora and Fauna, both terrestrial and aquatic based. Some of these species are being replaced by invasive organisms introduced by accident or purposely into our environment resulting in serious unplanned consequences. Keep your eyes peeled for these species during your daily endeavors.

Pennsylvania Endangered and Threatened Species Series*

Rumors are swirling that Biden is not doing well in Pennsylvania ...that is *Biden's beckii*, also commonly known as Beck's water-marigold. It has been declared *Greatly Impaired* in Pennsylvania by the 'NatureServe Explorer' non-profit. Its rarity may be due in part to a loss of habitat and it may be a victim of a changing climate. It can be found in bodies of still water, such as, ponds, lakes and slow moving water.



Bidens beckii

Its roundish yellow flower appears on a stem which sticks out above the waterline four to six inches. Of the Biden's species of plants this is the only one that is found solely in water and wetlands. It serves a modest role in our ecological balance providing habitat stabilization, air and water quality, wildlife habitat, biodiversity support, carbon sequestration and pollinator attraction.

From [New Jersey's](#) Department of Environmental Protection: "Remember, even seemingly small and inconspicuous plants like *Bidens beckii* contribute significantly to our environment. Let's appreciate their role in maintaining ecological balance!"

For additional information see:

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.147252/Bidens_beckii

<https://plants.usda.gov/home/plantProfile?symbol=BIBE2>

<https://www.inaturalist.org/taxa/204252-Bidens-beckii>

Pennsylvania Invasive Species Series*

Not one to be outdone by a Biden, the **Trump(et) Creeper** (*Campsis radicans*) is a vine with a beautiful looking flower. That's where its attractiveness ends. It is known as an invasive specie that - if left to its own devices - will overtake an otherwise ordered and balanced landscape.



Trumpet creeper

This plant must be handled aggressively where found. It must be thinned and cut back routinely to its desired confines because if it expands beyond this boundary, it will replace natural and desirable non-invasive vegetation. Its deep root system makes it especially troublesome, comparable to Crown vetch in its unwillingness to go away quietly. Avoid planting it on purpose.

Physical contact will cause itchiness and rash (contact dermatitis). Ingesting the seeds, leaves, flowers and sap – essentially the entire plant. Ingestion can cause various symptoms, such as, external rashes, indigestion and upset stomach (keep the Pepto-Bismol nearby!). Though it may seem innocuously beautiful, avoid it like COVID-19.

Sources/Additional readings:

[WIKIpedia article](#)

[USDA Datasheet](#)

<https://cdn.mdedge.com/files/s3fs-public/Document/September-2017/083040177.pdf>

[Leafy Journal](#)

* Disclaimer: any comparison to a current POTUS and/or or candidates for POTUS, their characteristics, or their fitness to perpetuate our environmental integrity is the opinion of the writer and strictly intentional. Apologies to any reader who takes umbrage to this article.