



Ohio's Professional Soil Scientists

2024 Winter Newsletter Volume 51, Issue 1 Part 1 Annual Meeting Information & Agenda

Message from our president – Kathy Sasowsky

AOP President's Comments

Jan. 9, 2024

We hope to see as many members as possible at our Annual Meeting in the Multi-purpose Room of the Highbanks Metropark in Lewis Center on Friday, February 23, 2024! Our President-Elect, Joe Ringler, has planned a meeting with many current topics, from water quality to research at Ohio State to pedometrics and artificial intelligence to soils in Antarctica. We'll even get to interact with some of the living critters in soil. Please invite any other interested people that might like to learn more about soil science.

In this issue of our Newsletter, I would like to draw your attention to how soils are becoming at the forefront of climate change. There are many aspects of this, but here are a few that come to mind.

You may be aware that as the Arctic is warming faster than the Earth as a whole, much land in Alaska and northern North America, which in our lifetimes was known to be permafrost, is changing. Permafrost melts each summer to some depth and refreezes each winter. This area is now staying thawed for longer and might not even refreeze each year now. This causes transportation issues because traditionally land was navigated on frozen soils. As the name Gelisol implies, these turn to a gelatinous mess when thawed. We can imagine more compaction damage and human mixing of horizons. Some areas may become unable to be navigated. Oil pipelines from the North Slope of Alaska are designed to withstand some earthquake activity and some frost heave, but the compressible, melted permafrost could cause dislodging of pipe supports. These changes could affect the U.S. oil supplies in the future as exploration there continues.

An interesting and wholly different problem is also happening in these northern realms with climate change: new land is forming! In Southeast Alaska, land is isostatically rebounding (rising) 0.33-0.5 inches per year as ice melts. The ice had pushed Earth's crust into the asthenosphere; when that weight is relieved, the land can spring up. New land that was once below sea level is rising above the high tide line, meaning that now soils can be created there. People are racing to claim that land as their own.

<https://storymaps.arcgis.com/stories/662519e4406946faa6e655dd0329f2a7>).

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

Soils are being heralded as the potential savior for our greenhouse gas emissions, as they are able to sequester carbon. Good management of soil is key to ensuring that carbon stays in the soil and out of the atmosphere. Hopefully we all know that draining wetlands is detrimental for many reasons (flood control, groundwater storage, filtering water pollutants, etc.). With regards to climate change, the biomass in wetlands is old carbon (yet not ancient carbon as it is in fossil fuels, which are mostly 66,000,000-252,000,000 years old). Draining of wetlands causes oxidation of old organic matter. Soil organisms, fueled by the additional oxygen, decompose it, exhaling carbon dioxide that had been out of circulation.

<https://www.eea.europa.eu/publications/soil-carbon>

What we first heard as “soil quality” and the biologists, much more numerous than us, labeled “soil health” is present in much of the current scientific literature about ways to mitigate climate change. Now, the newer lingo is “regenerative agriculture” to describe ways that soil can be improved to facilitate crop growth and sequester carbon. These are things that you already were likely taught in college, as I was. From the Chesapeake Bay Foundation: “Minimize the physical, biological, and chemical disturbance of the soil.” “Keep the soil covered with vegetation or natural material.” “Increase plant diversity.” “Keep living roots in the soil as much as possible.” “Integrate animals into the farm as much as possible.”

<https://www.cbf.org/issues/agriculture/regenerative-agriculture.html#:~:text=Regenerative%20agricultural%20systems%20not%20only,the%20soil%20called%20soil%20microbes>. And, by the way, speaking of those farm animals, they are cycling current carbon from and to the atmosphere. They get a bad rap. You don’t have to believe me, check this out: <https://clear.ucdavis.edu/explainers/biogenic-carbon-cycle-and-cattle>

Don’t be intimidated by new lingo or others pushing into our field (pun intended). We should be the experts that many groups are seeking. Soils should be the major that students want to go into to help be part of the mitigation of climate change problems. Spread the word that soils deserve respect. Be proud and loud about our beloved soil.

-Kathy Sasowsky, AOP President for now ☐

Current AOP Executive Council

We are grateful to present our 2023 Council, which includes many continuing Council members:

President: Kathy Sasowsky, kathryn@sasowsky.com, (330)-670-0455.

President-elect: Joe Ringler, joeringler@yahoo.com

Past President: Matt Sullivan, Sullivan.64@osu.edu

Secretary: M. Scott Demyan, demyan.4@osu.edu

Treasurer: Rick Griffin, rgriffin1741@gmail.edu

Newsletter Editor: Julie Weatherington-Rice, aopeditor2020@gmail.com

Member At-Large: Jessica Martin, jessica.burns@usda.gov

Member At-Large: Anna DeFosset, anna@clearcreekseptic.com

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

Member At-Large: Reed Johnson, Reed.Johnson@usda.gov

Digital Information Manager: Anna DeFosset, anna@clearcreekseptic.com.

Your AOP Executive Council works to help all soils professionals in Ohio. If there are topics that you'd like to learn more about at our Field or Annual Meetings, please contact any Council member.

We will be replacing several people on council at our annual meeting. We need a new Incoming President and several other positions are also opening up. Matt Sullivan has contacted people and has found people willing to serve. Nominations from the floor are also accepted. Finding new people to take over leadership positions is always a hard job but please know that you are not alone if you chose to answer the call. We work as a cooperative council and there is a lot of support, help and encouragement from the other council members.

News from our Treasurer, Rick Griffin Annual Dues for 2024, Have you paid yours yet?

Dues payments - 2024

Name: _____

Do we have your correct contact information? Please provide contact information (only if there are changes to your previous contact information or if you are not getting the AOP newsletter by e-mail):

Street Address _____

City, State, Zip Code _____

Email Address _____

Phone number _____

Association of Ohio Pedologists Membership Dues starting 2024 (and dues for 2023, if you haven't paid)

For members approved as Professional.....\$40

For members approved as Affiliate Members and Student Members.... \$20

Category of Membership (circle one): Professional, Affiliate Member, Student Member,

Honorary (No annual dues)

AOP Dues Amount: _____

Contributions to Scholarship Fund: _____

Continuing Education Fund: _____

TOTAL AMOUNT ENCLOSED: _____

Make checks payable to AOP and send to:

Rick Griffin, AOP Treasurer

937 Laurel Ave.

Zanesville, OH 43701

You can also pay on line.

In addition, we would like to hear from you regarding membership and meeting topic ideas.

Dues can also be paid on line at the AOP web site <http://www.ohiopedologist.org> under the more....

Store heading

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

Annual Winter AOP Meeting

Date: **Friday, February 23, 2024**

Location: **Highbanks Metropark Nature Center, multipurpose room, 9466 Columbus Pike (US Rt 23 N) Lewis Center, OH**

Registration: **\$45, includes coffee, donuts, and lunch**

Send registration (form on following page) by Feb. 20, 2024 to:

Rick Griffin, AOP Treasurer,

937 Laurel Ave., Zanesville, OH 43701

Or register online at AOP website “store”:

https://www.ohiopedologist.org/store/c1/Featured_Products.html

Tentative Program

8:30 - 9:00 AM Registration, Fellowship, and Refreshments

9:00 - 9:05 AM Kathy Sasowsky – Welcome from AOP President



Kathy Sasowsky teaches at Cuyahoga Community College, developing courses and laboratories and instructing in-person and online on Earth Science. A certified professional Soil Scientist and registered Professional Geologist, she has researched geomorphic processes and modeling using remote sensing and G.I.S. for environmental clean-up and climate change spatial studies. Past work focused on soil investigations for sewage and other waste disposal as well as archaeological studies. She is a proud Nittany Lion (B.S. in Agronomy /Soils and an M.S. in Geology from the Pennsylvania State University). Kathy currently serves on the AOP

Executive Council as President. kathryn@sasowsky.com

9:05 – 9:20 AM Thomas Doohan – 70 Years of Carbon Dynamics: An Analysis of Soil Organic Carbon Stocks in the Sandusky River Basin



Thomas Doohan is a PhD student at Ohio State University’s School of Environment and Natural Resources. Advised by Dr. M. Scott Demyan in the school’s Soil and Environmental Mineralogy Lab, he is investigating how temporal variability of land use and inherent soil properties impact carbon stabilization at different spatial scales. He received an M.S. in soil science and a B.A. in public affairs journalism at OSU. Previously he was a staff writer for The Ashland Times-Gazette and The Daily Record in Wooster.

doohan.4@buckeyemail.osu.edu

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

9:20 - 9:50 AM

Clark Hutson – H2Ohio Program, Ohio Dept. of Agriculture



Clark Hutson is the H2Ohio Western Lake Erie Basin (WLEB) Program Coordinator, for the Ohio Department of Agriculture. Clark's role is to oversee implementation of ODA's efforts to encourage widespread adoption of BMPs on agricultural lands within the WLEB. Clark works with Soil and Water Conservation Districts, landowners, and partners with the goal of reducing total phosphorus loading by 40% by 2025. Clark has spent over 30 years working with agriculture producers and rural landowners in Northwest Ohio, helping them in understanding the economic and environmental impacts of the decisions they make and the actions they take while keeping their agriculture operations profitable and sustainable. Clark has a B.S. in Agriculture

Education from The Ohio State University and a M.B.A. from Tiffin University. He is a Past President of the All-Ohio Chapter of the Soil & Water Conservation Society. Clark and his wife Beth live near Tiffin Ohio in Seneca County. Clark is also involved with two International Service Organizations; he is a member of the Tiffin Kiwanis Club and member and Past President of the Rotary Club of Tiffin. clark.hutson@agri.ohio.gov

9:50 – 10:15 AM

Toshi Mizuta – Pedometrics: Soil and AI



Katsutoshi (Toshi) Mizuta, Ph.D., possesses a diverse skill set and a passion for advancing environmental sustainability, particularly in the realms of soil health, climate-smart agriculture, and ecosystem services. His expertise extends across a spectrum of domains, ranging from orchestrating lab-based biogeochemical incubation studies to harnessing the power of AI technologies and proximal/remote sensing for large-scale data mining endeavors. His commitment lies in crafting tools that facilitate informed decision-making, steering us towards

economical and sustainable management practices in the pursuit of global food security and effective responses to climate change challenges. While he works as a part-time postdoc researcher at University of Minnesota, he is actively engaged in education about Earth Science, Soil Science, and Digital Agriculture at Ohio Wesleyan University as an assistant professor. His academic journey includes both M.Sc. and Ph.D. degrees from the University of Florida, with his primary focus encompassing soil, water, and ecosystem sciences, complemented by a minor in food and resource economics. His collective endeavor focuses on the development and commercialization of cutting-edge in-season fertilizer application technology along with soil health practices. This pursuit is driven by his commitment to secure economic, agronomic, and environmental advantages for farmers. toshim@owu.edu

10:15 – 10:30 AM

Break

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

10:30 – 10:45 AM Alec Ogg – Assessing the relationship between agricultural land management practices and soil carbon across the Ohio landscape



Alec Ogg's interest in soil science stemmed from his humble beginnings in northwest Ohio where he competed in high school soil judging competitions and participated in the family grain and beef cattle operation. Alec graduated from Ohio State in 2022 with his BS in Environment and Natural Resources specializing in Soil Science. He is currently a graduate student at The Ohio State University. Advised by Dr. Scott Demyan, Alec is working on an international on-farm carbon farming assessment. The primary goal is to better understand the relationship between agricultural management practices and soil carbon. ogg.58@buckeyemail.osu.edu

10:45 – 11:00 AM Julie Weatherington-Rice – Tutorial of the Soilweb: Online Soil Survey Browser developed by California Soil Resource Lab at the UC Davis, UC-ANR, and in collaboration with the USDA NRCS



Julie Weatherington-Rice was born to be a natural scientist as she has been looking at rocks, plants, critters and soil all her life. She holds a BS in Earth Science Education, an MS in Geology and a PhD in Soil Science all from The Ohio State University. Julie is currently, semi-retired from Bennett & Williams Environmental Consultants Inc., which specializes in groundwater public water supplies and protecting our soil and water. Moreover, she spends most of her time working with allied professionals and citizen scientists, trying to demystify the fields of geology, soil and water. She lectures, prepares training materials, and coordinates the AOP Education and Scholarship efforts. She also serves as the AOP Newsletter editor. Julie lives in Worthington, Ohio with her daughter Susan Rice. jweatherington.rice@gmail.com

11:00 – 12:00 Noon Dr. Berry Lyons – Soils in the Ice-Free Regions of Antarctic: What is Their Composition and What Do They Tell Us About Climate History?



W. Berry Lyons is a College of Arts and Sciences Distinguished Professor of Earth Sciences and a University Distinguished Scholar at The Ohio State University. He is a former Director of the Byrd Polar and Climate Research Center and a former Director of the School of Earth Sciences at OSU. Prior to his arrival at Ohio State, he was a faculty member at the University of New Hampshire, University Nevada, Reno, and the University of Alabama. Although trained as a chemical oceanographer, he and his research group have been interested in terrestrial

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

water systems for the past few decades, working on such topics as the relationship between chemical weathering and erosion, the role of climate change, urbanization and agricultural practices on water quality, The utilization of inorganic chemicals and isotopes to trace water movement, and the biogeochemistry of polar environments. In addition to his group's work on lakes and rivers and streams, he has also published papers on the inorganic geochemistry of precipitation, soils, dust and sediments. lyons.142@osu.edu

12:00 – 1:00 PM Lunch – City BBQ

1:00 – 1:15 PM Jordan Pitt - Electromagnetic Induction Techniques for Investigating Soil Functioning on Pipeline Rights-of-Way



Jordan earned his undergraduate degree from Reinhardt University (north Georgia) with a BS in Biology. After graduating, he spent 2 years as a drone pilot creating 3D maps for engineering and accounting decision making. His interests in the utilization of technology for ecological decision-making lead him to take an interest in the work of his advisor, Dr. Scott Demyan. He is currently a first-year master's student at The Ohio State University School of Environmental & Natural Resources specializing in the field of soil science. pitt.64@buckeyemail.osu.edu

1:15 – 2:15 PM Jeni Ruisch – Beneath the Surface: Hidden Arthropods in Leaf Litter and Soil



Jeni Ruisch is the Director of Outreach for the Entomology Department at Ohio State University. She curates the Insectary, a collection of ~150 species of live arthropods used for research and education. These animals travel around the state of Ohio and beyond, meeting the public. Jeni hopes to quell fears, bust myths about bugs, and introduce people to science and the wonderful world of arthropods. She has over 20 years of experience working with exotic animals in captivity, and her background is in human and animal cognition and behavior. This unique cocktail of experience and education allows her to act as a bridge between humans and the animals that surround them. When she is not working, she is hanging out with her husband, brand-new baby and their plethora of pets, and probably lifting up rocks somewhere hoping to find cool bugs. ruisch.2@osu.edu

2:15 – 2:30 PM Break

2:30 – 4:00 PM Business Meeting

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

New AOP Members

We are pleased to welcome two new members to AOP this year. They are Tiffany Janson and Toshi Mizuta. Tiffany hales from Madison, Ohio. She works at and owns Environmental Professional for Midland Environmental Assessments a firm that provides Phase I and II Environmental Assessment Audits for property transfers. She holds a BS in Geology, an MA in Geography and is currently completing her soils requirements on line at the University of Arizona, working towards applying for her CPSS certification.

You can read all about Toshi in our program agenda and hear him talk at the annual meeting. Let's make a point to greet them at the annual meeting. It's wonderful to have more new younger blood in our organization.

Update on Newsletter mailings

This is the fourth mailing of the newsletter to a much shortened list of recipients. If you did not pay your 2023 dues, or are an honoree member or a contact person to a sister Agency or Association, this may be your last newsletter. I will be going over the list of paid 2023 members with Rick Griffin to make sure my mailing list is up to date. This has been a very hard decision to prune the mailing list as I removed a number of names of old, dear friends. If you were on the Consultants list and have not paid the 2023 AOP dues, you will also be removed from that list.

AOP Awards Committee Awards

Matt Sullivan and Kathy Sasowsky reactivated the Awards Committee. We have no awards scheduled for the Winter Annual meeting but Kathy is always eager to learn of new possible awardees. Jo Ringler will be joining that committee as our new President after the Winter meeting. Please contact either of them if you have nominations.

Rep. Mary Lightbody's H.B. No. 579, her Replacement and educating our Legislators

As we have noted in earlier newsletters, Rep. Lightbody, former Ohio House District 4, presented her H.B. No. 579 during the last weeks of the 2021-22 Ohio Legislative Session. Rep. Lightbody has stepped down from her position so that she can spend more time with her children and grandchildren who all live out of state. She has been replaced with our new Rep. Beryl Brown Piccolantonio from Gahanna who is the President of the Gahanna-Jefferson School Board, is currently the chief ombudsperson for Ohio's workers' compensation system and is a practicing attorney. She is not new to government; her mother is Marilyn Brown who was a Franklin County Commissioner for many years. Rep. Lightbody is hoping that she continues to work on promoting the ban on oil and gas production brine spreading. Rep. Lightbody's bill bans the use of oil and gas waste "brine" production fluids on Ohio's roads for ice and dust control. ODNR Oil and Gas Management have been trying to ban this application since the 1980s.

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

Members of the Buckeye Environmental Network Ohio Stop Brine Spreading Task Force held an Ohio Legislators Education Day on November 15th to familiarize the Senate and House members of the two committees who would be hear a reintroduced bill. Susan Rice and I were part of the team meeting with members of the House and Senate committees or their aides to explain the importance of banning this practice on Ohio roads for dust and ice control. We included information on how many barrels of the oil and gas waste brine has been spread in their districts from 2012-22, a time line of efforts to stop the spreading, information from ODNR, ODH and ODOT about why it should not be used and an example of the current legislation and how easily it can be amended to halt the brine spreading. I am pleased to report that for the most part, we were well received by members of both political parties on both sides of the Statehouse. Only a few people were unwilling to discuss the issue with us so we consider this a positive move forward. The Buckeye Environmental Network is planning another educational day this spring at the Statehouse, tentatively scheduled for May 8th.

We are currently looking for Democrat and Republican Co-Sponsors in the Ohio House and for sponsors of both parties for the Ohio Senate. If any of you have representatives or senators who have demonstrated concerns about the health and safety of all Ohioans and concern for preventing environmental contamination, please let me know and I will forward possible contact information.

Future meeting announcements and cancelations

No new additional meetings beyond the annual meeting are scheduled. I will notify AOP members when the BEN Statehouse Educational Outreach session is finalized.

AOP Scholarships Announcements

Megan Conklin won our 2023-24 AOP scholarship. She is finishing her core courses. That means we have two unclaimed AOP scholarships available of 2024-25 for anyone not attending OSU. The scholarships are awarded annually to anyone studying soil science at Wilmington, Central State or out of state on line in preparation to becoming a certified professional soil scientist. Each scholarship is worth \$500.00 a year and students can apply for multiple years. Contributions made to the AOP scholarship fund underwrite this effort. At this point, we have had only one application, a student from Wilmington.

Application is easy. The applicant simply needs to write a 1-2 page letter telling us something about them, why they are interested in the field of soil science and why they are applying for the scholarship. We need to know which college or university they are attending/planning to attend, that they have been accepted and where they are in their set of courses. We need for them to be AOP members, plan to stay in Ohio to work here after they finish their core courses, training with AOP members and working towards their CPSS registration. The scholarship is open to anyone, an incoming freshman, a student partway through or someone training for a second career. Scholarship applications must be received by June 1, 2024. Applications can be sent to AOPEditor2020@gmail.com. The scholarship committee consists of Matt Sullivan, Kathy Sasowsky, Dan Michael and myself.

AOP will continue to award small scholarships for the Ohio Academy of Science Jr. and Sr. High School Science Fair applicants. There is a new category of soil science that students can choose when preparing their projects. We are open to all topics but they must actually be studying soils. Our number of applicants grew last years and we are hoping for more applicants in the coming years. The time to get

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

interested in soils is in Jr. and Sr. high school so that you can make college choices that support that major.

As we work on our outreach of younger students, we would like to consider small scholarships for FFA soil judging teams or Envirothon teams if anyone has contacts with those organizations.

The Ohio State University AOP scholarship. Matt Sullivan coordinates that scholarship. Currently there is \$7167.00 in that fund. Ohio State typically awards 1-2 scholarships from that fund annually. The amount is typically \$500 to \$1,000. This year, the OSU student chosen for the 2023-2024 award was Audrey Bajec. She was given an award of \$1,500.00. If you are interested in funding that scholarship effort, please donate directly to the Ohio State AOP Soil Science Scholarship fund. I understand those contributions count towards football tickets.

AOP Web Page Consultants List and Education PowerPoints/Videos - Updates

Consultants List Updates

Just after Rachel Warren developed our wonderful new consultant's page, the program that supported our system was discontinued. As we search for another way to create a more user friendly system, we currently have a table that lists name, contact information and counties served. If you are an AOP member in good standing and also a CPSS, you should be on the list. Please check that we have you correctly listed.

If you go to the Consultant spread sheet and you see two ** listed next to your name, that means that we do not have an update for you. Please, please let us know what counties you serve. It's very frustrating trying to give referrals when you are listed as "all counties" and I know for a fact that you do not work all over the state. I'm not good at reading your minds. Our consultant list is only as good as the accuracy of our information. This is also the only way we are going to find out if we have areas of the state with no coverage. Now that I have the final 2022 paid dues list from Rick Griffin, we have removed anyone from the list who is no longer an AOP member. I will do a similar purge once I have the 2023 list of AOP paid members.

New Equipment for the Continuing Education Committee

Thanks to some unexpected contributions, the AOP Education Committee was able to purchase a new laptop computer, three years of technical support, software and additional peripheral equipment. We broke out the new equipment for the Fall Field Days and found it was so much easier to set up for the programs. Currently, there is enough money in the fund to cover a few more years of annual software licensing. This means that AOP has a computer that we can update as needed! We still do not have a projector so will need to borrow one from one of the members for the Annual Meeting and into the near future. Plans are to transfer all the AOP equipment to Anna DeFosset so that she can use it in her role of Digital Information Officer.

Contacts for the Continuing Education production team if you need to reach them

Rachel Warren
Rachel is in Youngtown
rachelpwarren@outlook.com

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

614-404-8154 (mobile)

Susan Rice
298 W. New England Ave.
Worthington, Ohio 43085
614-436-5248 (house)
614-208-6634 (mobile)
Sarice4@gmail.com

Megan Conklin, BS, RS
Program Manager
Environmental Public Health Services
Cuyahoga County Board of Health
5550 Venture Drive
Parma, Ohio 44130
(p)216-201-2001 x1266
(f)216-676-1317
mconklin@ccbh.net

Digital Information Manager:
Anna DeFosset,
513-335-4788
anna@clearcreekseptic.com

In Memoriam

Why do I have to keep writing these notices? I am so tired of losing beloved friends. This one really cut to the core.



Rachel Laurel Townsend

February 28, 1977 - November 28, 2023

Rachel Laurel Townsend Obituary

Rachel Laurel Townsend, 46, of Yellow Springs, left this earth early in the morning on Tuesday, November 28th, 2023. She passed away peacefully surrounded by her families love, with her parents by her side. She was born February 28, 1977 in Springfield Ohio, the daughter of Peter H and Heather G. (Logan) Townsend. Rachel graduated 1995 from Yellow Springs High School and Antioch College in 2002 with a degree in Environmental Science and geology. She was a fierce supporter of the excellence of her Antioch College education, which included a 6 month co-op at the University of Waterloo, Ontario,

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

which is widely regarded as one of the world's leading groundwater research centers. She had a brilliant mind, mastering anything she attempted from geology to oil changes. Rachel worked her way up from a position as a county Health inspector to working for the Ohio Department of Health overseeing the safety of all private water wells in Ohio.

She was a cub-scout leader and enjoyed knitting. Rachel loved the outdoors, taking walks, collecting rocks and fossils. She was a devoted mother to her son, Devon, and fought fiercely to be here with him as long as she could. Her deepest regret was having to leave him so soon. Rachel was a wonderful mother, daughter, sister, aunt, and friend to so many. She could find four leaf clovers by the dozen. She loved to read, often finishing a book in one sitting. She loved her friends and all the adventures they had over the years. Most of all she loved being a mom and spending time with her beloved son Devon. Rachel is survived by her parents, Peter and Heather Townsend; her son Devon Townsend; sister, Kristin Fagan (Seth Fowble), two nephews: Wyatt and Grady Fagan; and her Canadian family of aunts, uncles and cousins.

A celebration of life will be held at a later date. On line expressions of sympathy may be made at www.littletonandru.com

My memories of Rachel are deep and long. I honestly cannot remember how young she was when I first met her. I worked on projects around the state with her father Peter Townsend who was the Geology Department at Antioch. Of special note was the Tremont City landfill expansion and Barrel Fill Superfund site in Clark County. That was in 1997, Rachel was 20 by then. Peter was one of the early joiners of the Ohio Fracture Flow Working Group. He also had a side business, Hydro-log LLC which he started in 1989 when Rachel was 12, later Townsend Environmental Consulting. They provided downhole wireline geophysical data for water wells and we hired them at Bennett & Williams to log our major public water supply wells. Rachel would join her dad out on our drilling sites from probably her teenaged years on.

When it came time to choose places to do her internships (Antioch required extensive practical real world internships as part of their degree program), she came to Bennett & Williams for her first one and we helped arrange her major internship at the University of Waterloo. She still had her Bennett & Williams T-shirt last time we talked about it last summer. We kept tabs with her as she went to work for the Clark County Health Department, linking up for coffee and long talks at Young's Dairy when we would be in the Yellow Springs area for meetings and presentations.

When she took over the Ohio Dept. of Health Water and Wastewater section from Rebecca Fugitt, she came to me to talk about how to improve the soils training for registered sanitarians across Ohio. The PowerPoint on septic soils limitations that hangs on the AOP website came about at her request. She would attend AOP meetings and was part of the meeting at the ODNR Core Warehouse that created our Education Committee. We continued to keep in touch after her original cancer made it necessary for her to resign from ODH. Just this last spring and summer when we were both in the hospital for our own set of complications, we would write snarky Facebook posts to each other about our hospital experiences. I loved her dearly and will miss her so much. She was one of my "kids" and I was always so very proud of her but never so proud of the way she fought the cancers. She was given 6 months in the beginning; she lasted more than 3 years, mostly out of true grit. I will notify AOP members when I find out about memorial plans as it warms up.

Association of Ohio Pedologists Newsletter Volume 51 Issue 1 Part 1

Letters and Phone Calls to the Editor

This section of the Newsletter belongs to you, our members and future members, in the hopes that if we communicate with each other, we can find pathways to move forward to train the next generation. Please send your letters and/or responses to the Editor at AOPEditor2020@gmail.com and I will include them in upcoming issues of the Newsletter which is developed and disseminated quarterly.

There was one phone call recently from Greg Buckingham, an AOP member who lives in Indiana but also works in western Ohio. He had a site where it was going to be necessary to install a mound system. He had Indiana design criteria, but no one at the local health department could tell him what the Ohio criteria were. I made some suggestion of people to call here in Ohio and then followed up his request for information when I presented to the Ohio On-site Association (the septic installers association) earlier this month on the soils limitations for septic tank leach fields. They, of course, had a number of members who have installed them here in Ohio. I'll post their references in Part 2 of this newsletter.

Part one of the Winter 2024 Newsletter

This ends Part One of the Winter 2024 Newsletter. Part two shares highlights from AOP members and information on design and building mound leach fields here in Ohio.

