WISCONSIN AIPG SECTION UPDATE
Spring 2020

Wisconsin

President's Message

I took this picture in mid-February at a landfill where I was documenting the abandonment of two monitoring wells. I certainly could not have predicted that starting in mid-March COVID-19 would make all my work feel like this – completed at distance from people, or behind glass, or even better, via phone/video conference.

I have had my own geologic consulting business for almost eight years and have been working out of our home for that time. I had my procedures down pat for client and regulatory reviews, document copying and printing, mailing, etc., which have had to be modified, to say the least.

Projects have been put on hold, as they are not associated with critical infrastructure. Conferences I planned to attend were cancelled, leaving me scrambling a bit for professional development hours. And just connecting with people can be challenging. We would be interested to hear the challenges you are facing and your workarounds during this time (sounds like an article for the next newsletter).

Continued on page: 2

2020 Wisconsin
Section Officers

President
Paula Leier-Engelhardt, P.G., C.P.G.
paula@hydrogeosolutionswi.com

Vice President
Andrew Graham, P.G., C.P.G., P.E
andrewgrahampe@gmail.com

Secretary
Trevor Nobile, P.G., C.P.G.
wade81@aol.com

Treasurer
Jayne A. Englebert, P.G., C.P.G.
jenglebert@msa-ps.com

Regulations & Legislation Committee
Heather Hallett, P.G., C.P.G.
Heather.Hallett@foth.com

Screening Board Chairman
Andrew Mott, P.G., C.P.G.
andrew.mott@aecom.com

Education Committee Chair
Rebecca Butcher, Y.P
rebecca.butcher@woodplc.com

Newsletter Editor
Christine Lilek, P.G., C.P.G.
clilek5959@gmail.com

President's Message Continued …

The timing of the PFAS conference sponsored by the Wisconsin Section - AIPG was fortunately before the Safer at Home quarantine started in Wisconsin and was a well attended and successful event.

We are beginning the process of considering what our next workshop may be, and how it might be implemented. Your input is welcomed.

Our world, and even ourselves, have been changed. Let's work together to continue to do our jobs professionally and for the betterment of all. And take comfort in knowing that the rocks will still be there. . .

Regards, Paula Leier-Engelhardt

Far from Boring, And Staying Close to Home
By Paula Leier-Engelhardt, P.G., C.P.G.

After 37 years of marriage to a geologist and unwittingly becoming the best sample Sherpa ever, my husband knows there is no hope in dissuading me from any geology-related project I cook up. So, when I announced that as a long-term goal I was going to collect a rock from each Wisconsin county (there are 72, in case you were wondering), he put his head in his hands and said, "When do you want to start?"

What neither of us counted on was finding hidden treasures that the average Wisconsinite may not realize exist in the state. So, allow me to introduce you to some of the places we have discovered, and some of the people we have met along the way.

Brown County – The times, they are a-changin'

July 1st, and hotter than blazes. Our friend Tony is visiting and says, "Why aren't you taking us out to see some rocks?" Steve gives me the side eye and says, "Pick some place where we won't die of heat stroke."

OK – Let's go find a waterfall.

Wequiock Falls is at a wayside ten miles northeast of Green Bay.

Wayside 3 miles NNE of the UW-Green Bay campus at the intersection of Van Lanen Road and State Highway 57. SE ¼, NW ¼, Section 7, T24N, R22E, Green Bay East 7.5' Quadrangle.

The first question to ask is why is there even a waterfall here!? The Ordovician and Silurian formations making up the Niagara Escarpment dip to the east toward Lake Michigan and the Michigan Basin, not west toward the bay of Green Bay. There should be no streams flowing into this part of Green Bay. Well, let's thank a glacier. There is a low moraine east of the wayside that forms a drainage divide. Wequiock Creek likely flows along a regional fracture in the rock and drains the area between the moraine and the escarpment.

The second question to ask is how do you to pronounce Wequiock (thank you MissPronouncer.com). Third, what does it mean? The word comes from the Ojibwe word 'wikkway' meaning bladder. I can't solve that naming mystery – I got nothing. . .

Wequiock Creek flows over the base of the Silurian, and the falls flows down over the Mayville Formation, about 10 feet of light gray fine-grained dolostone with chert nodules. The Ordovician-Silurian boundary is at the base of the Mayville, and below it is the Ordovician

Maquoketa Formation, consisting of greenish and gray-blue shales and argillaceous dolostones.

Wequiock Falls. The white line is the approximate boundary between the Mayville and Maquoketa Formation. Photo – Steve Engelhardt; Tony for scale.

The boundary between the Mayville and Maquoketa is disconformable. Wequiock Falls exists for the same reason Niagara Falls exists. As water flows over the relatively resistant Mayville, it erodes the softer, shaley material of the Maquoketa.

When we first moved to Wisconsin and I was discovering the geology of our new locale, I found an outcrop of the Maquoketa – a wet, slimy, shaley greenish mess that whispered, "bentonite" as I touched it. Why did this remind me of the Cretaceous Hell Creek Formation of the North Dakota Badlands?

It turns out that the shales and argillaceous dolostones of the Maquoketa Formation are the distal edge of an extensive clastic wedge that was shed westward during the Taconic Orogeny. As the Iapetus Ocean began to close in the Cambrian, a volcanic arc collided with eastern North America, forming a convergent plate boundary and shedding clastics westward. Volcanic ash traveled with those clastics, eventually weathering to bentonite clay. The Taconic Orogeny subsided during the Late Ordovician, then the Ordovician ended with an extinction event that wiped out 60% of marine genera, thought to be related to rapid cooling and subsequent sea level fall associated with glaciation. When encountered, bentonite foretells change. . .

If the truth be told, Wequiock Falls is much more impressive in the winter when the creek and groundwater seeping from the rock face has frozen. Many summers the creek dries out and there are no falls.

Photo: Dr. Steve Dutch

This was a wet summer, and a cooling mist hung in the ravine and around the plunge pool at the base of the falls. There was even enough of a breeze to keep the mosquitos at bay. Steve and Tony scrambled up and down the creek bed, while I looked for fossils and sedimentary features, and contemplated change as I moved up through the stratigraphic section.

Photo: Steve Engelhardt

When we came up out of the creek, we paid our respects at the statue of Jean Nicolet, who was the employed by Samuel de Champlain to explore this part of North America, ostensibly to find a shorter route to China, but more likely to establish diplomatic ties with local Native American tribes.

Photo: Gabrielle Mays, FOX 11 News

Nicolet was the first European to explore Green Bay and the Fox River. The exact spot where he landed in the late summer/early fall of 1634 is up for debate, but was likely somewhere between Marinette, Wisconsin and Red Banks near Wequiock Falls. Legend has it he arrived wearing a Chinese robe firing pistols in the air to impress, or frighten, the natives. I like to think he arrived at Red Banks, found Wequiock Creek and followed it to the falls. Just like the Maquoketa, his arrival signaled change was afoot.

We headed north to home, with a stop at Chives in Suamico, a wonderful restaurant located in the restored Town of Suamico general mercantile.

Photo: http://chivesdining.com/

Fine dining, good friends, and a most excellent adventure.

Introducing Your Wisconsin Section 2020 Executive Board Members

We thought you'd like to know a bit more about your WI-AIPG Executive Board Members! Many of them have full time jobs, participate in WI-AIPG Board calls and events, but they also enjoy other Wisconsin activities. Here's a brief summary of what they have been up to in the last year!

President
Paula Leier-Engelhardt - CPG
paula@hydrogeosolutionswi.com

Paula enjoys the opportunity to provide educational geoscience presentations (hey, she'll talk to any and all about geology!) Photo Credit: Karen Klenke

Principal Geologist and owner of HydroGeo Solutions LLC, with 34 years of experience as a consulting geologist, much of that time dealing with the geology and hydrogeology of landfill sites. Paula has worked in the Midwest (Wisconsin, Michigan, Illinois), plus Alabama, to site and permit municipal and industrial landfills. In addition, she manages the groundwater databases for several landfills, which includes validating and interpreting the data, and preparing statistical analyses. She has also worked on the remediation of closed landfills, in geologic environments ranging from glacial sediments to fractured bedrock.

Vice President
Andrew Graham - CPG
andrewgrahampe@gmail.com

Photo Credit: Andrew Graham

Andy is a Project Manager at Realtime Utility Engineers, Inc. (A Quanta Services Company). Engineering project manager with over 20 years of experience specializing in electrical utility T & D and design-build renewable energy projects. Previous positions: IEA, Vierbicher Associates

Secretary
Trevor Nobile - CPG
wade81@aol.com

Trevor at the summit of Mount Dana in Yosemite, (13,000 feet). Photo Credit: Trevor Nobile

Trevor Nobile is the Field Operations Director for the Remediation & Redevelopment Program at DNR. He works directly with the Program Director as a leader and strategist in developing and implementing a comprehensive statewide remediation and redevelopment program.

He previously served as a DNR Hydrogeologist/Regional Spill Coordinator, DNR Regional Supervisor, and worked in environmental consulting before joining DNR.

Trevor received a Bachelor's Degree from UW-Stevens Point and a Master's Degree from Florida Atlantic University in Boca Raton, FL. He is currently a licensed Professional Geologist in both Wisconsin and Florida, and is a Certified Professional Geologist with the American Institute of Professional Geologists.

Treasurer
Jayne A. Englebert - CPG
jenglebert@msa-ps.com

Photo Credit: Jayne Englebert

Jayne has 29 years of experience as a senior hydrogeologist at MSA Professional Services, Inc.

When not working, I enjoy traveling and exploring new places and would like to retire to Switzerland (if I could afford it).

I have been the AIPG Wisconsin Section treasurer since 2000, taking over from Dr. Charles Fetter whose shoes I could never hope to fill.

Regulations & Legislation Committee
Heather Hallett, P.G., C.P.G.
Heather.Hallett@foth.com

Photo Credit: Heather Hallett

Heather is a Hydrogeologist at Foth Infrastructure & Environment in Green Bay. She leads the hydrology/geology discipline at Foth and provides support to a range of projects from landfill and mine project permitting/compliance to environmental remediation. She previously served as president of WGWA after moving to Appleton from Albany, NY where she worked for CDM Smith.

Screening Board Chairman
Andrew Mott - CPG
andrew.mott@aecom.com

Andrew enjoying the 2019 AIPG PFAS Workshop with Cliff Shierk – ITRC and John Cuthbertson – AECOM

Andrew is a Project Hydrogeologist with AECOM in the firm's Environmental Practice. Areas of specialization include the following: Site development, environmental site assessments, soil and groundwater investigation, compliance issues, and remediation. Specialize in Brownfield grant writing and Brownfield redevelopment. Previous positions with STS Consultants.

Education Committee
Rebecca Butcher – Early Career Professional
rebecca.butcher@woodplc.com

Photo Credit: Rebecca Butcher, Wood PLC

Rebecca has a MSc in Geology with an emphasis in geophysics at the University of Maryland, College Park. She is currently working at Wood, PLC in Madison, Wisconsin on sediment and environmental conceptual site modeling.

Newsletter Editor
Christine Lilek, P.G., C.P.G.
clilek5959@gmail.com

Christine is a Wisconsin Master Naturalist and teaches Great Lakes water sampling and many other natural resource programs at Kohler Andrea State Park. August 2019 Photo Credit: James Buchholz

Christine is an Environmental Health Training Coordinator for the WI Department of Health Services and Commission Secretary for the Lake Sinissippi Improvement District.

Her previous positions include: Senior Hydrogeologist for DNR, MSA Professional Services, Wisconsin Electric Power Company, Board Director for Village of Cottage Grove Sewer and Water Utility.

Geology Day at the Capitol

Photo Credit: Christine Lilek

The Wisconsin Section of the American Institute of Professional Geologists hosted "**Geology Day at the Capitol**" on Wednesday, November 6th, 2019, from 10:00 am to 1:30 pm in the Wisconsin State Capitol Rotunda.

There were two Geology Tours of the Capitol led by Dr. Ken Bradbury – Director of the Wisconsin Geological Natural History Survey (Survey) and Wisconsin State Geologist. The tours were very well attended, and the participants appreciated learning about where all the dimension stones came from, what fossils could be seen in the stones, and information about the groundwater well in the State Capitol basement!

Attendees of the event were able to talk with several legislators and legislative aides and with people touring the Capitol that day. It was a great opportunity to share information with the State legislators on issues and topics that geologists are dealing with throughout the State.

Twelve display tables were arranged around Rotunda including information from:

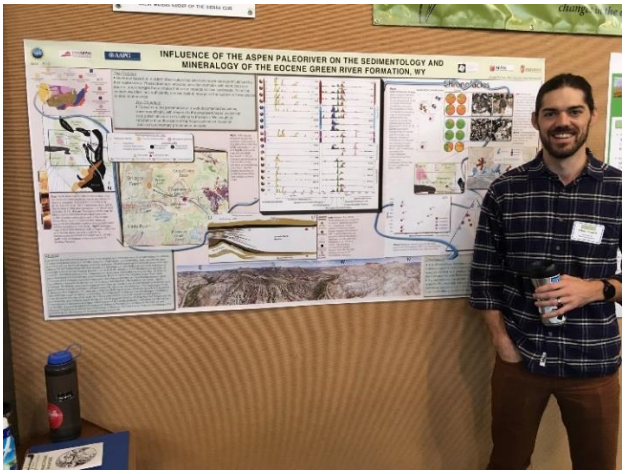
- **Wisconsin Master Naturalist Program** with Wisconsin rocks & natural resource education program information
- PFAS Updates from **GZA**
- Brownfield Remediation Case Studies from **AECOM** & **MSA**
- New Groundwater maps & models from the **Survey**
- Lake District Projects from the **Lake Sinissippi Lake District**
- Responsible Mining and Groundwater Research Findings from **UW Eau Claire**
- The Importance of Professional Geologist Licensing and Responsible Mining Information from **Foth**
- **Wisconsin Section of AIPG** displayed AIPG event information and resources available to members

River Edge Nature Center's Undergraduate and Graduate Student Presentation Symposium

WI AIPG provided an event sponsorship, 2 judges and a student poster scholarship for the 2019 Student Presentation Symposium at River Edge Nature Center November 9, 2019.

Seven Wisconsin colleges (UW-Madison, UW-Milwaukee, UW-Stevens Point, UW-Green Bay, UW-Parkside, UW-Oshkosh, UW-Platteville, and Edgewood College) provided nineteen undergraduate and graduate students for oral and poster presentations on geoscience, ecology, and natural science topics.

There were five geoscience-based presentations this year. A 50% increase over the 2018 Symposium!



Geology student Ethan Parish (UW-Madison) presenting on "Influence of the Aspen paleoriver on the sedimentology and mineralogy of the Eocene Green River Formation, WY". Photo Credit: Christine Lilek

You can view the Symposium oral presentation titles and presenters on-line at: http://www.riveredgenaturecenter.org/symposium/

PFAS: Beyond the Theoretical and What's Working?

Two hundred and thirty-two people gathered to learn more about PFAS contamination in Wisconsin. Photo Credit: Paula Leier-Engelhardt

The February 27, 2020 PFAS Seminar gathered 232 registrants, 20 sponsors, 17 exhibitors and 6 students to find out what's beyond the theoretical and what's working for PFAS investigations and remediation.

Our speakers and presentations included:

- Regulatory Update (Bridget B. Kelly, WI DNR)

  A takeaway: "*WDNR is concentrating on several items: identifying known PFAS sites, developing a biennial Budget to include an AFFF Survey and Source Prioritization and Mapping, and addressing Executive Order #40 Action items: expanding PFAS monitoring, developing PFAS regulatory standards, coordinating WisPAC Council and developing a PFAS Action Plan.*"

- Evolving Perspectives on Exposure and Risk (Christy Barlow, Ph.D., GZA)

  A takeaway: "*In determining toxicity levels in the future, we need to consider all exposure factors, such as water intake rate, which are representative throughout an individual's lifetime as opposed to choosing the most sensitive (and often the shortest) stage of life*."

Some of our Seminar Speakers (from left to right, top to bottom): Barlow, Ursin & Griffin, Bogdan and Kelly.

- Fate, Transport, and Forensic Analyses: What Does My Data Tell Me (Jeff Tracy, Geosyntec Consultants, Inc.)

  A takeaway: "*PFAS compounds have unique signatures from different sources. Graphics can illustrate PFAS "fingerprints" from different sources.*"

- Analytical Methods and Data Validation: Caveat Emptor (Mark Westra, GZA)

  A takeaway: "*Isotope dilution technique minimizes errors from sample preparation and quantitation at such low concentrations. For example: When you are looking for 30 gallons of water in Lake Michigan, isotope dilution allows you to see with more accuracy and precision than relying on signal intensity alone*."

- PFAS Implications and Perspectives in Due Diligence and Real Property Transactions (Edward B Witte, Esq., Godfrey & Kahn, S.C.)

  A takeaway: "*WDNR currently has authority to regulate PFAS as Wis. Stats. Ch. 292 "Hazardous Substance". NR 720 direct contact RCL for PFOA and PFOS: 16.4 mg/kg. DHS recommended groundwater numbers for PFOA & PFOS as Enforcement Standard: 20 ng/L (ppt) and Preventative Action Limit: 2 ng/L (ppt).*"

- Statewide PFAS Sampling of Wastewater Treatment Plants in Michigan: Results and Implications for Industry (Dorin Bogdan, AECOM)

  A takeaway:" *While Wastewater Treatment Plants (WWTPs) are not the source of PFAS, they are a natural point of collection and could serve as a key location for control and potential removal to mitigate their release into the environment.*

  Conventional sewage treatment methods do not efficiently remove PFAS, and effluents discharged from wastewater treatment plants and biosolids applied to the land for beneficial reuse have been identified as two of the main known PFAS release pathways."

- Emerging Compounds from an Air Perspective – A Case Study of Atmospheric Deposition of PFAS/GenX (Mike Abraczinskas – Director, North Carolina Department of Environmental Quality-Division of Air Quality)

  A takeaway: "*Regulatory agencies have some awareness that "the water issue" may not be just a water issue. Relatively modest amounts of emissions can lead to widespread groundwater issues via atmospheric deposition – even upgradient! Monitoring and surveillance are a must in all directions*."

Keynote Speaker - Mike Abraczinskas – Director, North Carolina Department of Environmental Quality-Division of Air Quality

- Conceptual Site Model for PFAS at the Nine Springs Wastewater Treatment Plant (Martin Griffin, Madison Metropolitan Sewerage District and Mike Ursin, TRC)

  A takeaway: "*PFAS are likely in influent and they are not destroyed during current wastewater treatment. We are finding a higher level of PFAS in effluent, due to treatment concentrations.*

  PFAS are being transformed at wastewater treatment facility into different chained PFAS compounds – long chain PFAS are partitioning in the bio solids"

- Advances in Colloidal Activated Carbon for PFAS Management (Ryan Moore, Regenesis)

  A takeaway: "*Colloidal Activated Carbon is the size of a red blood cell. It can be suspended in water/polymer and distributed widely at low pressure. It is an extremely fast sorption and has a huge surface area, which converts a polluted aquifer into purifying filter*"

- The Promise and Pitfalls of In-situ Carbon Immobilization of PFAS (Len Mankowski, Wood Environment & Infrastructure Solutions)

  A takeaway: "*Biochar and colloidal activated carbon effectively reduced PFAS in groundwater in each application, but heterogeneity in vertical distribution of carbon during injection occurs with both media material and follows (and treats) preferred migration pathways.*

  Delivery of both media at the water table is a challenge. More testing and analysis will be helpful in the future to fine tune treatment systems."

- Developing a Robust Fate and Transport Model - Case Study (John M. Cuthbertson, AECOM)

  A takeaway: "*While short term remediation solutions are available, we are still lacking: long-term treatment solutions, identification of lateral/vertical extent of groundwater flows, the establishment of long-term alternate drinking water solutions and the identification of agricultural receptors (crops, feed, etc.)*."

- Programmatic Approach to Management of PFAS: Using Risk-based Prioritization to Understand Liabilities (Shalene Thomas, Wood Technical Consulting Services)

  A takeaway: "*Carefully evaluate data sources at onset. Capitalize on the best databases and geospatial sources. Validate all sources before use (junk in= junk out). Your approach should consider legacy sources vs active/operational sources. Make sure you set the plan into action, and continue to contemplate the bigger picture (i.e. additional building blocks)*"

Power Point slides of the presentations will be available for viewing till May 6, 2020 at:

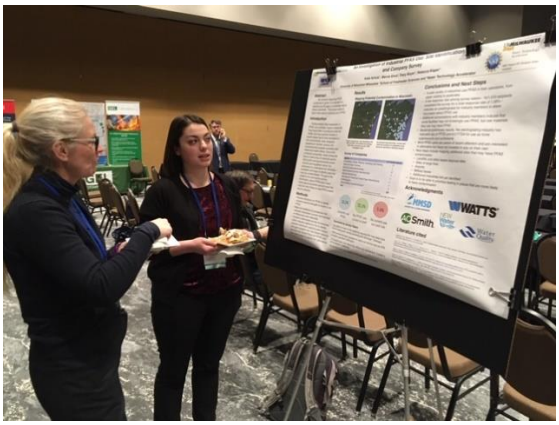
https://aipg.org/page/2020WIPFASSeminarPresentations

Panel members (Left to Right): Witte, Osborne, McKnight, Cuthbertson, Dickert, and Fassbender. Jayne Englebert – WI – AIPG Treasurer stands behind panel. Photo Credit: Christine Lilek

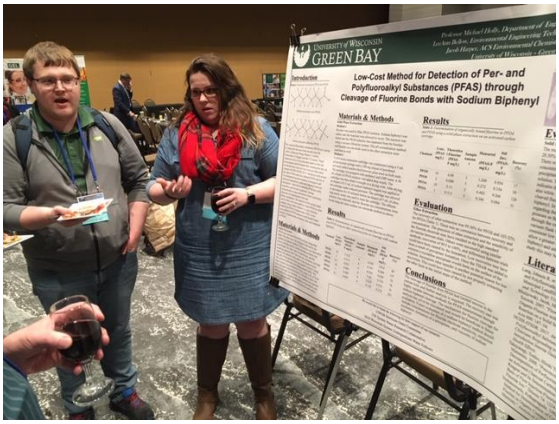
The Seminar also offered a Closing Expert Panel Discussion and Concluding Remarks featuring:

- John M. Cuthbertson, PFAS Lead, AECOM
- Judy Fassbender, Section Chief, DNR
- John Dickert, Division Administrator – State and Local Finance, DOR
- Taryn McKnight, Product Manager, Eurofins Test America
- John Osborne, Principal Hydrogeologist, GZA
- Edward B. Witte, Esq., Godfrey & Kahn.

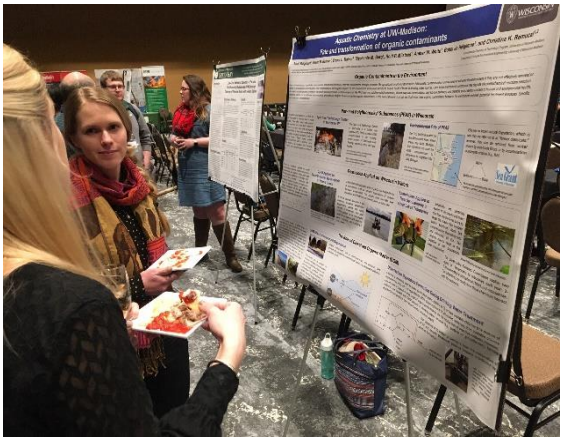
Three student research posters were presented during the Social Networking time after the Seminar closed:



"An Investigation of Industrial PFAS Use: Site Identification and Company Survey" by Katie Schulz - from the University of Wisconsin-Milwaukee School of Freshwater Sciences



"Low-cost Method for PFAS Measurement Research" by Jacob Harper - ACS Environmental Chemistry Major at UW – Green Bay



"Aquatic Chemistry at UW-Madison: Fate and transformation of organic contaminants" by Sarah Balgooyen from UW-Madison

Our Seminar Sponsors included:

AECOM, Clean Harbors, Coventa Environmental Solutions, Eurofins TestAmerica, Godfrey and Kahn, Geosyntec Consultants, GZA, MSA, Orin Technologies, Partner Engineering and Science, Stafford Rosenbaum Attorneys, Stantec, Vista-Analytical and Wood.

In-Kind Sponsors:

Dept of Natural Resources, Dept of Health Services, FET, WGWA, Wisconsin Geological & Natural History Survey and Wisconsin Rural Water Association

Exhibitors:

Vista Analytical Laboratory, Eurofins-Environmental Testing Test America, Pace Analytical, Clean Harbors, Purolite, GEL Laboratories LLC, SGS, Regenesis, GZA, Orin Technologies, Oneida Total Integrated Enterprises, US Ecology, RAMBOLL, Water Surplus, Evoqua Water Technologies, ECT2, Job Site Services

Thank you also to our planning committee members!

*Thank You Planning Committee!!

* Christine Lilek-WI Department of Health Services
* Wendy Davidson-AIPG
* Cathy Duran-AIPG
* Rebecca Butcher-Wood
* John Cuthbertson-AECOM
* James Drought-GZA
* Jayne Englebert-MSA Professional Services, Inc.
* Bernie Esselman-Eurofins TestAmerica
* Andrew Graham-RUE
* Heather Hallet-FOTH
* Larry Kinsman-Orin Technologies
* Paula Leier-Engelhardt-HydroGeo Solutions LLC
* Emma MacAlister-Geosyntec Consultants, Inc.
* Taryn McKnight-Eurofins TestAmerica
* Andrew Mott-AECOM
* Trevor Nobile-WI Department of Natural Resources
* John Osborne-GZA
* Jeff Ramey-TRC Solutions
* Stacy Saari-Minnesota Department of Natural Resources
* Mike Ursin-TRC Solutions

AIPG Appreciates the Support from Our Seminar Sponsors, Exhibitors & Speakers!

Wisconsin Regulatory Updates

By Heather Hallet

NR 812, Wis. Adm. Code Revisions

Revisions to NR 812 for well construction and pump installation:

On January 22, 2020, the Natural Resources Board (NRB) adopted proposed revisions to NR 812 Wis Adm Code [PDF]. The revisions include changes to correct and clarify wording, simplify procedures, update construction standards, and be consistent with other state and federal laws, while continuing to protect groundwater and public health.

The proposed NR 812 revisions have been submitted to legislative committees for review and approval. Final rule changes are expected to go into effect in mid-2020.

These NR 812 rule revisions will address 3 major areas:

1. Correct errors or unclear language.
2. Streamline existing processes and requirements.
3. Update construction standards which have not been revised for over 20 years.

NR 140, Wis. Adm. Code Revisions

Amendments to ch. NR 140, Rule No DG-15-19 Amendments to ch. NR 140 to set numerical standards to minimize the concentration of polluting substances in groundwater to establish new state groundwater quality standards and revise existing state groundwater quality standards.

Additionally, errors and omissions in Appendix I to Table 1 (Public Health Groundwater Quality Standard) and clarification of definitions and terms will be addressed, and the frequency of submissions of substances to DNR from regulatory agencies.

Revise NR 140 to create numeric groundwater Enforcement Standards (ES) for the Cycle 10 list (27 substances):

- 16 new substances: 11 pesticides, 2 metals, 1 bacteria, 2 PFAS (PFOA & PFOS)
- 11 revisions (existing): 5 metals, 5 solvents, 1 bacteria

Once adopted, the numerical groundwater standards become the criteria for protecting public health, and are used in the regulation of:

- Solid and hazardous wastes
- Spills and remediation sites
- Wastewater and water quality
- Septic tanks
- Salt storage
- Fertilizer and pesticides, etc.

The Department anticipates holding 5 public hearings in the month of November, 2020. Hearings will be held simultaneously by videoconference. Anticipated locations are Madison, Eau Claire, Rhinelander, Oshkosh and LaCrosse.

The Department will hold these hearings in these locations to gather stakeholder input on a rule package that is used widely statewide.

https://p.widencdn.net/ww8zrq/2020-01-4G-PP-Scope-DG_15_19-NR-140-Scope-Presentation

https://p.widencdn.net/6umslk/2020-01-4G-scope-DG-15-19-GW-numerical-standards

NR 700, Wis. Adm. Code Updates

On January 23, 2019, the Natural Resources Board (NRB) approved statements of scope for emergency and permanent rulemaking. Following recent legislative changes to statute, and changes in terms and practices that occur over time, DNR

is revising specific sections of chs. NR 700-754 to meet three main goals:

1. Meet an emergency rulemaking mandate within 2015 Wis. Act 204;
2. Attain consistency with statutory revisions made by 2017 Wis. Act 70 and 2015 Wis. Act 204, including revisions relating to contaminated sediments; and
3. Update references and clarify requirements and procedures as needed since the last set of rule revisions became effective in 2013.

Public meetings were held from February 2019 to January 2020 and are now completed. Details about those meetings are listed at:

https://dnr.wi.gov/topic/Brownfields/RuleChanges.html

However, there will be additional opportunities for public input and comments throughout the remainder of the rule-making process.

NR 151 Wis. Adm. Code Revisions

The purpose of the proposed revisions to NR 151 is to establish agricultural nonpoint source performance standards targeted to abate pollution of nitrate in areas of the state with highly permeable soils that are susceptible to groundwater contamination (sensitive areas) for the purpose of achieving compliance with the nitrate groundwater standards.

NR 151 Scope Statement Summary:

- Targeted performance standard development is one tool and will not completely solve the nitrate in groundwater problem statewide, but a measure of progress is achievable.
- Drinking water contamination treatment strategies (new well construction, point of use treatment, etc.) will remain important.
- Groundwater quality improvements take time and the commitment of all stakeholders.
- Just like in NE Wisconsin, long term monitoring and assessment will be important. The department will partner with WGNHS and the Groundwater Coordinating Council.

The Department has requested approval of the NR 151 scope statement. This is just the beginning of a long, thorough process. Gathering stakeholder input is important to the department and they state that Wisconsin cannot solve the widespread nitrate contamination problem without significant stakeholder involvement. There will be opportunity for substantial public input in the rule process.

December 2019 DNR NR 151 Scope Webcast
https://p.widencdn.net/tcpedq/00-Tuesday-2019-12-2D-PP-Weigel

Mining Deemed Essential Industry

Mining is considered an essential industry under Gov. Evers "Safer at Home" order:

The US Department of Homeland Security's Cybersecurity and Infrastructure Security Agency has also listed mineworkers as essential critical infrastructure workers and deemed miners vital to the national effort against the Covid-19 coronavirus pandemic.

https://evers.wi.gov/Documents/COVID19/EMO12-SaferAtHome.pdf

AIPG's 2020 John T. Galey Memorial Public Service Award Selected

AIPG John T. Galey Memorial Public Service Award will be presented to WI AIPG Member Christine Lilek at the 2020 AIPG Annual Meeting in Sacramento, California.

The award is given to AIPG members with an exemplary record of service to their profession and to the Institute.

Photo Credit: Elizabeth H Diebels

The American Institute of Professional Geologists' Public Service Award was established by the Executive Committee in 1982 in recognition of one of its primary purposes: service to the public.

In 1992, it was renamed the John T. Galey, Sr., Memorial Public Service Award, in posthumous honor of our fourth President, whose long professional career was a continuum of service to both the geological and the general public. The application of geology to the needs of the general public may be in many different forms.

Recipients of this award have outstanding records of public service on the national, state, or local level well beyond their normal professional responsibilities. The list of previous individuals selected for this award can be found at:

https://aipg.org/page/NominationForm-GaleyAward

Congratulations, Christine and WI AIPG!

ON-LINE EDUCATION ACTIVITIES

"In order to assist online teachers and learners during closures due to COVID-19, GSA has made all webinars open access through the end of June 2020." GSA

The Geological Society of America (GSA) is a global professional society with a membership of more than 20,000 individuals in more than 100 countries.

GSA provides access to elements that are essential to the professional growth of earth scientists at all levels of expertise and from all sectors: academic, government, business, and industry. The Society unites thousands of earth scientists from every corner of the globe in a common purpose to study the mysteries of our planet (and beyond) and share scientific findings.

On-line GSA resources can be viewed at:

https://www.geosociety.org/GSA/Education_Careers/GSA/edu-career/Home.aspx?hkey=63819187-ba15-4bf2-86e0-229352a40502

Geosciences Online Learning Initiative (GOLI)
The Geoscience Online Learning Initiative (GOLI) by the **American Geosciences Institute**, started in cooperation with the **American Institute of Professional Geologists**, provides a platform for on-demand, life-long learning and continuing education opportunities in the geosciences.

GOLI live webinar events provide up to date information on technical and applied geoscience topics and are taught by a range of experts from across the geosciences. Attendees earn Continuing Education Units (CEUs).

All learners who complete online courses offered through the GOLI platform with a passing grade of 70% or higher are eligible to purchase Continuing Education Units (CEUs) for a nominal charge.

A Webinar list can be viewed at:

https://www.americangeosciences.org/workforce/goli