

WISCONSIN AIPG SECTION NEWSLETTER

Spring 2018



Wisconsin

President's Message



Dear Fellow Geologists,

I'm honored in representing you as President of the Wisconsin AIPG Section for 2018. We have a wonderful and experienced Executive Board that I'm proud to be associated with.

The Wisconsin AIPG is facing challenges in 2018 related to; Professional Geologist Licensure, state funding for the Wisconsin Geological and Natural History Survey (WGNHS) and, Geology Programs in our State University system. Your State AIPG section encourages you to write your state senators and representatives regarding these issues. More details on these topics will be forthcoming in the State Section Newsletter.

In this rapidly changing technological world we live in, we frequently forget what got us interested in the sciences and "lit the fire" towards launching us on our geological careers. Reflect for a minute the concept of "paying forward". To many, "paying forward" represents monetary donations to a worthwhile cause at an annual banquet, pledge drive or social event.

2018 Wisconsin Section Officers

President

Darrell Reed
Cell: (715) 559-4189
dreed@sehinc.com

Vice President

Stacy Saari
Cell: (715) 561-2035
stacysaari@hotmail.com

Secretary

Trevor Nobile
Home: (262) 422-3038
wade81@aol.com

Treasurer

Jayne A. Englebert
Work: (608) 355-8860
jenglebert@msa-ps.com

Regulations & Legislation Committee

Paula Leier-Engelhardt
Work: (920) 737-9811
paula@hydrogeosolutionswi.com

Screening Board Chairman

Andrew Mott
Work: (920) 236-6713
andrew.mott@aecom.com

Education Committee

Thomas Kettinger
Work: (414) 944-6181
Thomas.Kettinger@aecom.com

All of this is good, no mistake, but in the far reaches of our brains, there remains memories of events, people, or something we read, saw or heard that sparked an interest to investigate and learn the geological sciences. I encourage our AIPG membership to “pay forward” as volunteers in the indoor and outdoor science classrooms of our communities. Wisconsin’s public and private school systems and universities need our assistance – we need to talk to, and with them; share our experiences and career stories and ask for their stories and listen.

Do you remember as a young child feeling the excitement in finding wave-polished, red and black rocks on that Wisconsin lake beach in July? Running to Mom and Dad, (or Grandma and Grandpa) we would excitedly show them what we found. When they paid attention and listened to us, we would grab and tug their hands to show them where these “precious gems” on that special beach could be found. Students of all ages need encouragement to investigate and learn more, like scientists. Perhaps you could add something to their discovery; encourage them to find different types and shapes, tell them the rock might have come from an ancient volcano, take photos together.

I have had the opportunity to present geology topics to many different grade levels and class sizes at primary and secondary schools and universities in Eau Claire. These presentations “recharge my batteries” at my workplace and in my personal life. You become better listeners, communicators and develop non-verbal skills (students make extended eye-contact with you when they are excited about something!). Show passion in your careers and “pay forward” to others.

I urge you to contact your local school administrator and teachers for becoming a science/geology volunteer. Nearly all schools now require a background check for volunteers entering class rooms. Summertime library and community programs may also provide opportunities for outside learning.

You have adventures and knowledge to share whatever your age and experience. You may just excite someone to investigate and pursue a science career. We need these young, inquisitive minds for our future communities. Have a great 2018!!

President Darrell Reed

AIPG National – Meet A Geologist Monday Christine (Chris) Lilek PG, CPG



AIPG on Instagram: "Meet A Geologist Monday: Christine (Chris) Lilek P...
instagram.com

Member of Wisconsin Section and 2018 AIPG National Executive Committee Advisory Board Member

How long have you been a member of AIPG?
- 20 years

Why do you think it’s important to be a member of AIPG? - Honor our past, encourage our present and inspire our future geologists!

If you could use one word to describe your career, what would it be? - Innovative

What has been the most rewarding aspect of your career? - Supporting the addition of geology topics and exam questions to the Wisconsin Master Naturalist Program. The WMNs provide natural resource education to everybody in Wisconsin.

What is your advice to young people entering the field of geosciences? -Volunteer and give back to the community for life!

Far from Boring, Not So Close to Home

By Paula Leier-Engelhardt, P.G., C.P.G.

Me: “Well, we have samples from 25 of the 72 counties. Time to take a break from Wisconsin geology.”

Long Suffering Husband: “Okaaay. . . “

Me: “Let’s go to Iceland!”

LSH: “Now, I’m not saying no, but where did this come from?!”

This came about after I attended the 2016 meeting of the Institute on Lake Superior Geology. The last day of the meeting, one of the co-chairman said, “I have been approached regarding the possibility of running the Iceland field trip again, so I will be sending out an email to see if there is enough interest.” He then proceeded to show one picture after another of amazing geology. Now, we had a major wedding anniversary coming up in 2017, and we were trying to decide upon a trip destination to commemorate the occasion. After some research on his part, and some whining on mine, LSH agreed; Iceland it was.

The end of July 2017 found us in Reykjavík with 14 other hearty souls eager to learn all we could about Icelandic geology. (Well, to tell the truth, LSH was more interested in observing various species of birds). We were an eclectic mix. Half of us were from the U.S., with the other half from Canada. There was one other married couple (Canadian) with a non-geologist spouse who became our traveling partners. There were 4 PhDs/professors; 5 of us currently working in, or retired from, industry/government; and the rest were pursuing either their master’s degree or a PhD. We divided ourselves up into groups of four, piled our gear into our assigned Land Rover or Land Cruiser, and headed out for 10 days.

We geologists are fascinated by recent volcanic activity. It likely has something to do with the fact that you can stand on rocks younger than you and observe the processes that create them. If you

have been to Hawaii, you too, have experienced this for yourself. What is unique in Iceland is how that molten material interacts with the glaciers to create landforms that are only found there. A geologist can see such features as several types of volcanoclastic deposits, formed both subglacially and subaerially; rootless cones formed not from a vent, but when lava flows over a lake, wetland or pond; lava lakes that formed below ice that are now flat-topped table mountains; and of course, volcanoes, geysers and geothermal fields. And don’t forget the glacial processes in action, like glacial lagoons filled with just calved icebergs; sandur plains; braided rivers; moraines; and jökulhaup deposits, formed from the catastrophic release of meltwater from a glacier (not unusual when volcanoes are burping lava underneath said glacier). Honestly, we ended every day saying, “There’s nothing that could top what we saw today” and we would prove ourselves liars the next. Iceland is a geologist’s Disneyland.

As there is so much to see, I would recommend picking one to three things for your Iceland Geology Bucket List and making sure you see/experience them. Everything else will be a bonus.

My three items were:

1. The Mid-Atlantic Ridge, complete with the picture of one of us on the North American Plate and the other standing on the European Plate.



The author on the North American Plate, LSH on the European Plate. Photo credit: Steve Engelhardt

2. A braided river and sandur plain. My interpretation of glacial deposits that I regularly encounter in my work has been greatly enhanced. And [fording one of these rivers](#) should be a bucket list item.
3. Seeing the volcano Eyjafjallajökull that most recently erupted in 2010 and learning how to [pronounce the name](#). It isn't one of Iceland's most spectacular volcanos, but it is spectacularly difficult to pronounce.

My bonus items:

1. Watching puffins launch themselves off the tops of columnar basalts near the town of Vik to go feed in the ocean.



Puffins near Vik, Iceland. Photo credit: Steve Engelhardt

2. Swimming in a natural hot spring. Note: avoid the Blue Lagoon; it is a tourist trap. It is a much more authentic experience to find one the locals frequent.
3. Driving the dreaded F910 Highway through Vatnajökull National Park. Truly one of the most desolate, yet beautiful, places on Earth – and that is coming from someone who has done a significant amount of field work in the desert Southwest and Baja California! A word of warning: the F910 is supposedly a highway, but in reality, it is the roughest trail I have ever experienced in my life. After a 10-hour drive with a top speed of 10-15 mph, all of us should have been put through the NFL concussion protocol.

If you really want to eat like a local, try hákarl, the national dish of Iceland. Hákarl is Greenland shark, which is poisonous when fresh due to the high content of urea and trimethylamine oxide in its flesh. To be safely consumed, it was traditionally processed by gutting and beheading the shark and placing it in a shallow hole dug in

gravelly sand. The shark was then covered with sand and gravel, and stones were placed on top of the sand to press the fluids out of the body. The shark ferments in this fashion for 6–12 weeks. The modern method is just to press the shark's meat in a large, drained plastic container. I found it was “consumable” when I held my nose and washed it down with a shot of brennivín, an Icelandic schnapps. If hákarl sounds too adventurous, stop in a grocery store in any town and get some smoked fish. Every town has its own special fish and smoking technique, and everyone we tried was delicious.

But by far, the most memorable moments were spent on the outcrops, deciphering what was in front of us, arguing the pros and cons of the opinions put forth, and reveling in the years of geologic experience and enthusiasm surrounding me. I realized this the day we got back home.

The yard was still soggy from a very rainy summer, but the gardens looked happy. Clothes were starting to get washed, and we were looking forward to that bed of ours. It was so nice to see the familiar things. But as I looked out the window, I saw no lava fields, or mountains, or braided rivers. There was no adventure planned for tomorrow, or new friends who would share the road with us.

Then, I understood how Frodo found The Shire a little small at times. . .



Hákarl & Brennivín Photo credit: Steve Engelhardt

Open Letter to Wisconsin Legislators

“Wisconsin licensed professional geologists grow the economy and keep us safe!”

Dear Wisconsin Legislator:

The State of Wisconsin saw a need for professional geologist licensing in the late 1980s; specifically, in mine siting, solid waste facility siting, operation of solid waste landfills, and remediation clean-up activities. Wisconsin understood that licensed professional geologists help grow the economy and keep us safe at the same time.

New mining, construction and remediation efforts need the licensed professional geologists more than ever before.

Past Successes

In 1997, Wisconsin’s Governor signed into law the **State Statute Wis. Stats. Chapter 470 “EXAMINING BOARD OF PROFESSIONAL GEOLOGISTS, HYDROLOGISTS AND SOIL SCIENTISTS**”; which was just updated in 2015-2016. See <https://docs.legis.wisconsin.gov/statutes/statutes/470.pdf> for more details.

This law requires that all professional geologists, professional hydrologists, and professional soil scientists be licensed by the Wisconsin Board.

Since 1997, Wisconsin AIPG Chapter members have heard proposals by various legislative members that licensing geologists may not be needed in Wisconsin. The Wisconsin Department of Safety and Professional Services and the Wisconsin Department of Natural Resources explained the need for the continued use of licensed geologists, hydrologists and soil scientists in Wisconsin, and helped detailed that need into State Statute and Code requirements.

Current Successes

The following list of required licensed geologist statutes and codes established by the Wisconsin Legislators and Governors are making a positive economic difference in Wisconsin:

Wis. Statutes 295 - Preservation of marketable nonmetallic mineral deposits

Beginning on October 14, 1997, a landowner may register land owned by that person under this section if all the following apply:

The land has a marketable nonmetallic mineral deposit, as evidenced by the certification of a professional geologist licensed under **ch. 470** or a professional engineer registered under **s. 443.04** and by any other information required under **sub. (4).295.20(1)(a)1.1.**

Wisconsin Administrative Code NR 135 – Non-metallic Mineral Deposits

The registration documents for a marketable nonmetallic mineral deposit shall include the licensed professional geologist's or registered professional engineer's seal.

Wisconsin Administrative Code NR 500.05(4) - Solid Waste Facilities

Initial site reports, feasibility reports, plans of operation, site investigation, remedial action options reports and any other reports where interpretation of geology or hydrogeology is necessary shall be under the seal of a licensed professional geologist.

Wisconsin Administrative Code NR 512.09 (3) – Field Direction of Well Drilling and Installations

A professional geologist or qualified technician who is directly supervised by a professional geologist shall observe and direct the drilling of all borings and the installation, development and abandonment of all wells. A professional

geologist or qualified technician who is directly supervised by a professional geologist shall also conduct all in-field hydraulic conductivity tests and visually describe and classify all geologic samples.

Wisconsin Administrative Code (NR 700) – Personnel Qualifications for Conducting Environmental Response Actions General.

All sampling, field work and development of plans for field activities for response actions being taken to satisfy the requirements of **ss. NR 708.09 to 708.15 or chs. NR 716 to 754** shall be conducted by or under the supervision of a professional engineer, hydrogeologist or scientist, unless sub. (2) or an exemption in **s. NR 712.11** is applicable. Submittals that are prepared to satisfy the requirements of this section shall be prepared by or under the supervision of a professional engineer, hydrogeologist, or scientist.

The **Case Closure GIS-Registry Report form** (<http://dnr.wi.gov/files/PDF/forms/4400/4400-202.pdf>) requires the signature of a professional hydrogeologist.

Wisconsin Administrative Code NR 820 - Environmental Review of High Capacity Well Applications

A determination by a registered professional engineer, registered professional geologist or registered professional hydrologist of the 80% exceedance flow for the stream and associated water level at the location closest to the proposed well location.

Future Successes

Our newest addition to Wisconsin requirements (**September 2017**) is our **Storm Water Infiltration – Technical Standard 1002 Soil Evaluation Requirement**. The documents must be completed and signed in the future by a

licensed professional soil scientist, or licensed professional geologist as licensed by the Wisconsin Department of Safety and Professional Services.

Wisconsin AIPG Section is working with several Wisconsin engineering organizations to reach out to new staff in the Wisconsin Department of Safety and Professional Services and we plan on sharing additional information with our Wisconsin legislative members.

In the past, we've held **Geology Day at the Wisconsin State Capitol** for geoscience education of representatives and their aides and hope to do this again in the future. It's an ongoing job; providing geoscience expertise and educating others on the importance of our professional licensure here in Wisconsin.

We appreciate your support in getting the message out to everyone:

“Wisconsin licensed professional geologists grow the economy and keep us safe!”



Photo Archive – Photo credit: Christine Lilek

2009 Geology Day at the Capitol with WI AIPG Vice President Steve Sletten and Wisconsin Senator.

Geology Calendar of Events

Weis'n'Miners Geology Club

The Weis'n'Miners Geology Club is sponsored by the Weis Museum. The club is for everyone interested in minerals, fossils, lapidary & jewelry-making, geology, archaeology, gems, metaphysics, and mining.

Everyone is welcome--singles, couples, families, young & old--and all levels of knowledge. First organized in 2007, the Weis'n'Miners Club has already become the largest geology club in Wisconsin!

Weis'n'Miners Geology Club meets the last Tuesday of every month, at 6:30 pm Emeritus Room at UW-Fox Valley 1478 Midway Road, Menasha

Some of their past meetings included presentations on wire-wrapping, mammoths and archaeology, gem faceting, gold, fluorescent minerals, and copper mines of Michigan's Upper Peninsula.

<http://www.uwfox.uwc.edu/wesm/geoclub.html>

Welcome to the Dinosaur Discovery Museum

The Dinosaur Discovery Museum in Kenosha, Wisconsin, is the only museum to focus on the **link between meat-eating dinosaurs and birds**, one of the most complete known fossil records.

Location and Hours

Dinosaur Discovery Museum | 5608 Tenth Avenue, Kenosha, Wisconsin | 262-653-4450 |

Find our Visitors Guide [here](#).

Open Tuesday through Sunday: Noon to 5 pm;
Closed Mondays year round.



Photo Courtesy: Dinosaur Discovery Museum

Wisconsin Rock & Mineral Shows

[Heart of Wisconsin Gem & Mineral Club Show - 05/05/2018](#)

May 5 – 6, 2018

Contact: Cynthia Kelman

Contact Phone: 715-387-8782

Venue: High School Fieldhouse

Address: 1401 E Becker Rd, Marshfield, WI

[The Wisconsin Geological Society - 05/19/2018](#)

May 19 – 20, 2018

Contact: Paul Schmidt

Contact Phone: 414-771-8668

Venue: Muellner Building at Hart Park

Address: 7300 Chestnut Street, Wauwatosa, WI

[Coulee Rock Club Gem & Mineral Show - 06/02/2018](#)

June 2 – 3, 2018

Contact: Allison Conrad

Contact Phone: 507-895-8109

Venue: Omni Center

Address: 255 Riders Club Rd, Onalaska, WI

[Lakeland Gem & Mineral Club 50th Annual Show - 07/20/2018](#)

July 20 – 21, 2018

Contact: Pattie Hartmann

Contact Phone: 715 477 2519

Venue: Lakeland Union High School

Address: 9573 State Highway 70, Minocqua, WI

[Oshkosh Earth Sci. Club Gem and Mineral Show - 09/29/2018](#)

September 29 – 30, 2018

Contact: Ann Voges

Contact Phone: 920-725-1640

Venue: Sunnyview Expo Center

Address: 500 E. County Road Y, Oshkosh, WI