



MICHIGAN SECTION AIPG NEWSLETTER

IN THIS ISSUE

# From the President's Desk

by Linda Hensel, CPG

Celebrating our 40<sup>th</sup> year as an AIPG Section (1977-2017)...

I want to thank everyone who has been an active member of AIPG MI Section throughout these past 40 years. Your participation and support of our section and the elected officers of all of our Executive Committees to date has been crucial to our growth and success. As I reflect in the final months of my presidency of our section, I am mindful and very appreciative of your individual time and effort in support of our section and all of our members throughout the years. Collaboration and working together for a common goal is worthwhile and very rewarding. I invite you all to put our annual section meeting, scheduled for the evening of November 30, 2017 at Weber's Inn, Ann Arbor, on your calendar and attend as there will be no charge for members to attend.

The theme of my newsletter article for this last quarter of 2017 is commitment. I had to consider the time and effort I would need to commit to the AIPG MI Section Executive Committee before I ran for office in the fall of 2013. I can say that the consideration of this additional commitment in my life was the most difficult decision I had to make before I

submitted my name to the Executive Committee as a candidate for the secretary position. I spent considerable time contemplating the time I would need to devote to conduct my duties as a member of the Executive Committee and carry on with the rest of my professional schedule. Any commitment to a specific cause is a very personal decision to the person making the commitment. A new commitment requires sacrifice on one's part to those other things we have already made a commitment, but one will also receive satisfaction and reward from this new commitment. We are all limited with how many commitments we each have at any one moment of our life. A significant part of my decision to commit to our section, providing I was elected, was that because I wanted to personally contribute and I was willing to sacrifice to make this commitment. I can say that after over 4.5 years into my commitment to the Executive Committee of our MI Section that I have received and learned much and I am the better person for it.

Please take the time to consider if you can make a commitment to our Section and submit your name this month for 2018 Michigan Section Secretary.



## Annual Meeting Musings



The 2017 Annual Meeting was held in Nashville, Tennessee. The meetings get better and better each year; you missed a good one!

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## MDEQ News

Get the latest news about proposed changes to the Refined Petroleum Funds.

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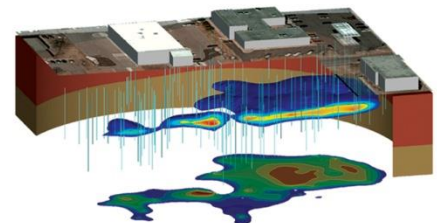
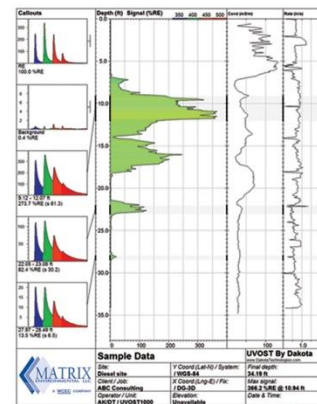
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# W



## Geophysical Methods to Map Bedrock Valleys - Search for Sustainable Water Resources

The following is an article provided by John Yellich, CPG as a demonstration for funding of the Michigan Geological Survey at Western Michigan University.

The Michigan Geological Survey (MGS) presented a technical summary for the Bedrock Valley demonstration project completed for the City of Portage in August. This project was completed successfully and documents the capabilities of the Michigan Geological Survey to present that geology and geophysical sciences can identify and support the management of selective buried water resources. This is one of the proposed demonstration projects to present scientific research successfully completed by MGS, justification for annual funding. This was initiated after receipt of the Natural Resources grant from the Michigan

Legislature in 2016. This type of research can be used to test and assess little or unknown deep water resources at a much lower cost utilizing MGS, WMU faculty and students. MGS has multiple natural resource assessment demonstration projects initiated to support the establishment of annual funding for the Survey. This demonstration funded the research of a MS Candidate, Benjamin Seiderman and the GIS documentation was supported by WMU Doctoral candidate Ms. Sita Karki.

### Summary of Results:

Michigan Geological Survey presented the results of this data collection demonstration project, which was to identify and refine the location of any buried bedrock valleys in the area of the City of Portage, Kalamazoo County, Michigan using indirect geophysical methods, the Tromino Passive Seismic system. Many buried glacial bedrock valleys have been known to contain glacially derived sands and gravel which have a high potential for high quantities of permeable water bearing zones that can be equal to or greater than the shallower water bearing zones. This project has resulted in the refining of the location of several unique bedrock valley features that were suspected, but the true location, orientation and significance were not previously known until this compilation of the geophysical and geological data was completed. The older data sets are from 1915, 1955 and 1982, which interprets some surficial and an interpretation of bedrock contact features. This project has provided an interpretation of those areas, validation of the geology by boring logs in the area and presents the estimated depth to those potential zones on a bedrock topographic contour map (Portage Bedrock

Topographic/Contour Map) showing the NW-SE trends of the buried valleys within the City boundaries. Two cross sections are also presented to show the relationship of the bedrock valleys to the current production wells, a minimum of 50 feet above the base of the bedrock valley. This is a summary of those results which will be presented in detail on the MGS Website.

## Member Input Sought

The Section Executive Committee is seeking input from members on a variety of topics. Do you have any suggestions regarding speakers/presentation topics that you would like to hear? What about field trips or other events? Some place you'd like to see us go, or something you think the membership would enjoy doing? Then make your voice heard; please send your suggestions to one of the members of the Executive Committee; any of the six members would be glad to hear from you. AIPG is your organization. Please help keep it relevant and interesting for all by participating.

## Welcome New Members

The Michigan Section is continuing to grow. Please welcome the following new CPGs, Professional Members, Young Professional Members, Associate Members, and Students:

Emory Jacob Nelkie, Karem Abdelmohsen, Sean Brick, Nicholas Brown, Samuel Cameron, Aaron Darling, Allan Kambindama, Lance Kleino, Martine Loevaas, Phillip Lundie, III, Jacob Meldrum, Michael Schienke, Jessalyn Taylor, Alison Veresh, and Zachary Westphal.

To each of our new members, the Michigan Section Executive Committee would like to welcome you to our Section and encourages you to attend Section meetings and other events. You are also welcome to provide information for the Member's Corner articles.

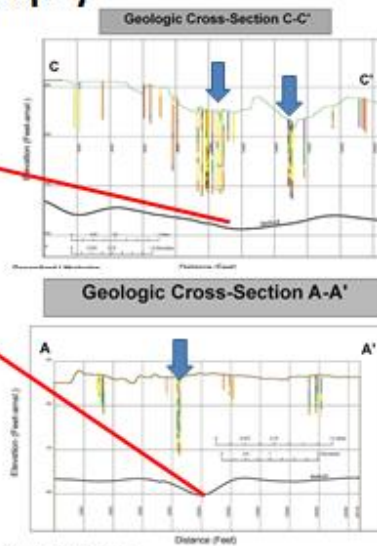
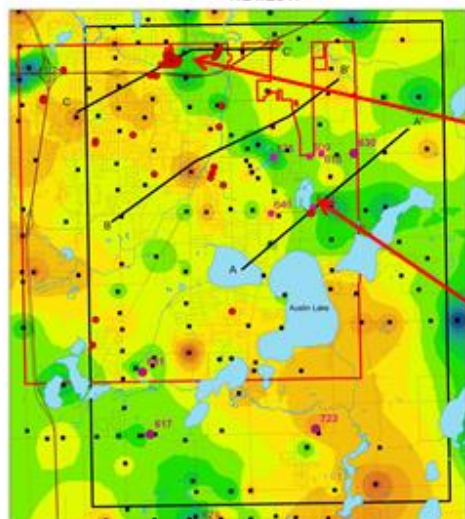
## Where in Michigan? Contest

The August edition of the newsletter featured a photograph of the Burnt Bluff Group at Fayette State Park on the shore of Big Bay De Noc. Benjamin Hinks correctly identified the photograph and rock formations.

This edition features a new photograph at the top of the first page. The first person to correctly identify what the photograph depicts (feature name, location, and formation) will win AIPG swag! Submit your

## MGS Portage Bedrock Topography

Bedrock Topography of Portage, MI and Vicinity  
7/21/2017



**Generalized Lithologies**

- Basalt
- Clay
- Granite
- Sand
- Sand & Gravel

**High production community wells**

All data sections are interpreted to show and water wells are displayed if found within 100 feet of the cross-section line. There may be individuals in the location of the well that are not shown. Descriptions are present in the strongly descriptive section on the water well and pump.

entry to the editor; only one per person per issue please.

If you have a photograph of a Michigan bedrock formation you would like to see used for our contest, please submit it to the editor along with information on the location and formation(s) it depicts.

## 2018 Section Secretary Election

It's that time of year again. The Michigan Section AIPG Executive Committee is encouraging members to run for 2018 section secretary. We'd like to have at least two individuals volunteer to run for Secretary for next year. Don't be shy; those of us on the committee don't bite, and this is a great way to become involved with your organization and help guide the Section's activities. If you are interested in helping out, please send a statement of interest and a short bio to Adam Heft ([adam.heft@wsp.com](mailto:adam.heft@wsp.com)) no later than Friday, October 27, 2017. The election for Secretary will open on October 30.

As a reminder, the duties of the Section officers may be found on the Section website.

## Notes from the 2017 Annual Meeting

The 54<sup>th</sup> AIPG annual meeting was held from September 23<sup>rd</sup> to 26<sup>th</sup> in Nashville, Tennessee. This year, the Michigan Section had a record 14 representatives in attendance, including six students! Eleven of them were members (Larry Austin, William (Bill) Mitchell, Sara Verbrugge-Pearson, Tim Woodburne, Adam Heft, Mara Karageozian, Josh Cichy, Megan Miller, Jayson Olivera, Noah Tibbits, and Sam Cameron) and Larry's wife Mary and son Robbie, and Tim's wife Kate represented the Michigan Section.



Left to right: Kate, Tim, Bill, Larry, Adam, Sara, and Mara; (Josh, Megan, Jayson, Noah, Sam, Mary and Robbie not pictured). Photo courtesy Adam Heft.

This year's meeting kicked off with a pre-meeting social event Friday evening; dinner

and entertainment on the General Jackson riverboat. Participants were treated to a great meal and a Nashville-style show while cruising the Cumberland River.



The 2017 National Executive Committee. Photo courtesy Sara Pearson.

Saturday featured the Institute's business meetings, and a student career day. Following the business meetings, the students and several professionals got together so the students could get some additional first-hand information from the professionals in a wide array of professional specialties. A social mixer (the Icebreaker) was held Sunday evening, and included a silent auction that helped raise over \$7,000 for the Foundation. Among the items auctioned were several incredible mineral specimens (dogtooth calcite on sphalerite) which were donated by the Gordonville Mine.

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Sunday's activities included the first two field trips; one to Mammoth Cave and the second to the Harpeth River and Stones River fault zones (which also included some civil war history in addition to the geology). Michigan participants attended and enjoyed both trips.



Attendees on the Harpeth River field trip. Sara (foreground) is sporting her commemorative Michigan Section 40<sup>th</sup> t-shirt; Bill Mitchell is in front of her. Photo courtesy Adam Heft.

Monday was primarily a day of technical presentations and student posters. Six students presented posters; three each graduate and undergraduates, and all walked away with prize money for their posters. The awards reception held Monday evening was enjoyed for the meal, the fact that all awards

were presented during a single event, and for its overall format and brevity.

Not all activities that individuals participate in are planned by National. A small group of meeting attendees from several different Sections went out after the awards reception to enjoy a downtown Nashville haunted lantern tour, followed by several hours enjoying tasty beverages at a watering hole in Printers Alley.



National President Adam Heft presenting the 2017 Student Chapter of the Year award to Wayne State University Mara Karageozian. Photo courtesy Sara Pearson.

Each of the Michigan Section attendees had a great time. Don't take my word for it; here is what several of them had to say...

*This year's Michigan Section delegate to the annual meeting was Tim Woodburne, our Vice President. Here is what Tim had to say about the meeting:*

"My primary responsibility was to represent the Michigan Section; I gave a short presentation about the status and the many activities our Section holds to the National Advisory Board. I realized that we have one of the stronger Sections, and have a lot more to offer our members than many other Sections.

"The meeting location was easily accessible, and was a great venue. Besides giving the report to the National Advisory Board, I attended field trips and technical presentations. For me the highlight of the meeting was the field trip to Mammoth Cave. The field trip guide was excellent, and provided great information about the geology of the cave and the area in general, including area oil and gas activities, and I learned a lot. If you have never been to one of the National meetings, I strongly urge you to go. You will have a great opportunity to meet people, spend some time in the field with the rocks, and hear some great presentations."



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Michigan's own Larry Austin, who serves as the National Screening Committee Chairman, had this to say:

"Arriving at the Marriott, we discovered we were sharing the hotel with the Crimson Tide from Alabama. Once we straightened out a couple of room details, I found myself riding the elevator with three of the team and one other hotel guest. I'm pretty sure we were within ounces of the load limit for the elevator as I'm not sure my entire family together including Steph and her husband, Dan would equal one of those team members in mass. Very nice, polite athletes, but BIG! I hope Vanderbilt's players had their health insurance up to date. I heard they were pulverized on Saturday, but I did not get a casualty count.

"Saturday's meetings were well attended with representatives from AGI, ASBOG, EFG and Geoscientists Canada.

"Many of the agenda items were the usual items that require attention. However the most important item that caught my attention was the introduction of the new National Licensed Geologist (NLG) classification of membership.

"The attitude toward professional regulation has changed from the 80's and 90's. No longer are state governments pursuing regulation but rather deregulation is the current emphasis. At least three states have ended regulation of geologists while deregulation is under consideration in several more, notably Arizona and Florida.

"The NLG is intended to provide a vehicle by which a geologist can document qualifications that equal or exceed the requirements of ASBOG and hopefully ease licensing where required and provide proof of qualifications where not. Key requirements of the NLG are holding a CPG, passing both the fundamentals and professional practice portions of the ASBOG exam, and maintaining an annual Continuing Professional Development (CPD) commitment of 16 hours including one hour of professional ethics documented through AIPG's CPD program. Below are my comments to incoming AIPG National President Doug Bartlett when asked what I thought of the NLG proposal:

*"Wow! Deja vu! The NLG program brings back a lot of memories in AIPG history. Hopefully now is the moment it can bring much of that*

*history back together and into fruition.*

*"Ok, let me step back in time a bit and provide some background to my comments. Back in the late Holocene (as opposed to whatever we've decided to call today, something about Anthropocene that doesn't quite pass muster in my spell checker) when AIPG was quite a bit younger than today, much of the talk was of AIPG's CPG having sufficient stature to avert the need for a patchwork quilt of state licensing. I even ran for National President twice on a platform supporting CPG in the role now targeted for NLG. Apparently my timing wasn't quite right as I was defeated both times.*

*"At the same time some Sections were pushing for licensing while the Professional Engineers were fighting it tooth and nail. Initially, National opposed such action and withheld their support. Eventually, however, the path became clear and several years later National began working to try to achieve some level of consistency between states. Michigan alone made 7 or 8 attempts and still doesn't have licensing, possibly never will unless there's quite a change in attitude in Lansing. Be that as it may, at one point I think the tally was 34 states had regulation in one form or another*



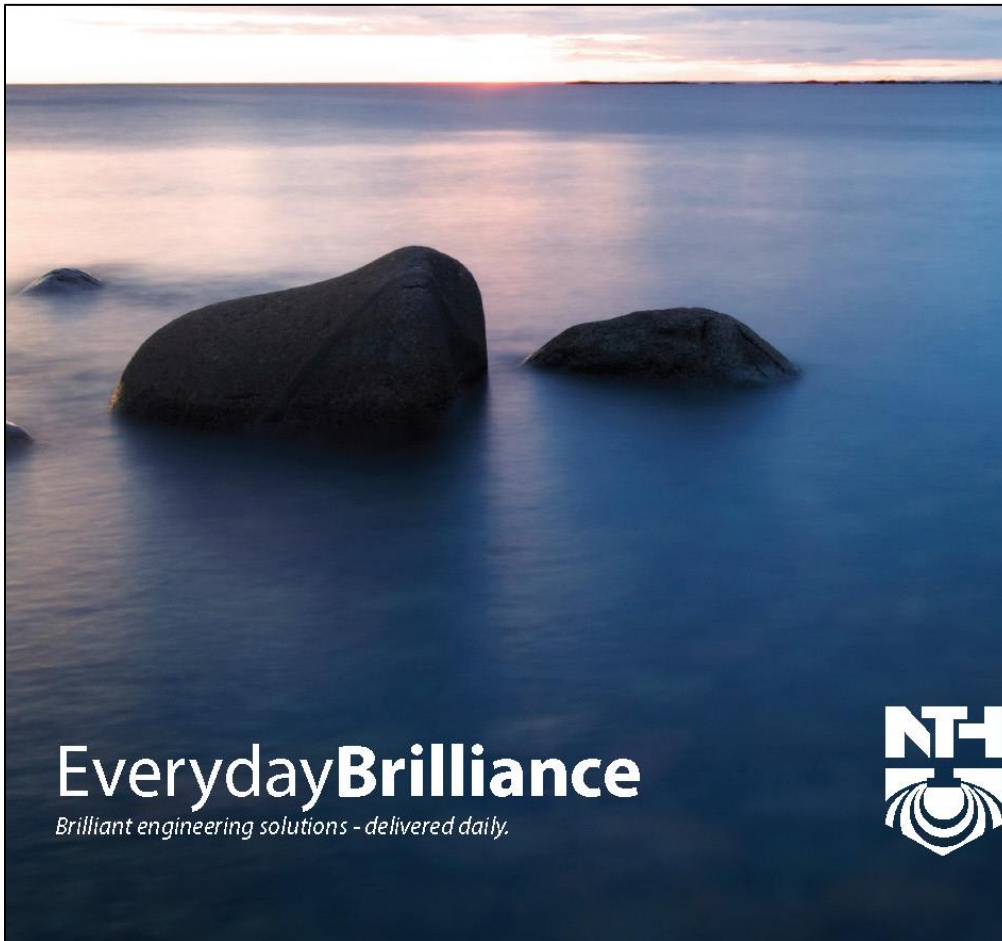
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*and I see from your table a couple have dropped off the list.*

*"That said, I strongly support the concept. Hopefully the timing is more conducive for success and recognition of the NLG now than it was years ago for the CPG. And although I'd prefer it were the CPG getting the recognition, I understand AIPG isn't going to get a bunch of old retired geezers like me to sit for the ASBOG exams just to say we did.*

"Beyond that, the exhibits were great, the field trips wonderful - we did Mammoth Cave and Lookout Mountain - the icebreaker and silent auction were fun and the Awards Banquet inspiring. Mary and Rob toured Nashville on Saturday introducing Rob to HonkyTonks and Nashville Bar-B-Que, while I was in meetings, and they came back with a number of stories.

"The Mammoth Cave trip also included Eastern Kentucky University (EKU) monitored Crumps Cave and the National Corvette Museum, scene of the February 12, 2014 sinkhole collapse that swallowed 8 vintage 'Vettes. They managed to salvage 6 but two of them were history, not a piece of fiberglass big enough to cover your palm.

Amazingly the building above them suffered no significant structural damage. Crumps Cave is a privately owned (EKU) and instrumented cave used for cave research by EKU so this was a special treat to gain entry. The group took the historic tour of Mammoth Cave with our EKU guides to narrate rather than the Park Service personnel.

"Lookout Mountain, scene of the Civil War Battle Above the Clouds, is accessed either by roadway up a long and winding two lane or the inclined railway tram. Our group took the tram although the bus did bring our lunches to the top. The scene overlooks Chattanooga which is why it was so important to Union troops to climb the mountain and take its commanding position above the river and rail yards. We also visited Raccoon Mountain, a TVA pumped storage facility not unlike the Ludington Pumped Storage facility except larger.

"We had to leave on Tuesday morning to get Rob back to school so we missed the Tuesday events. And again, all I can say is if you weren't there, you missed another good one!"

*And here's what several of the Michigan Section students had to say...*

"Attending the AIPG national conference was one of the most defining moments in my college career. I have attended various other conferences, but this one in particular was hands down the best. The atmosphere at this conference was light and friendly so it made it much more enjoyable! The business professionals who attended the conference were the most insightful and helpful people I have ever talked to regarding my career within geology. Since these business professionals are associated with the AIPG, the advice and connections I received will undoubtedly benefit me well into my future. However, I am not the only one who benefited from attending the AIPG conference. I was given the opportunity to bring down five students from Central Michigan University to Nashville, Tennessee where we all had the opportunity to network and instill lasting impressions together. It was incredibly exciting to watch our student members represent CMU with such pride and professionalism. I am proud to be a member of the AIPG; I am looking forward to attending the next annual conference."

-Josh Cichy, CMU AIPG Student Chapter President



National President Adam Heft with the Michigan students. Left to right: Adam, Megan, Sam, Noah, Jayson, Mara, and Josh. Photo courtesy Adam Heft.

"As a student preparing for the transition from full time student to the young professional life, I found this conference to be extremely beneficial in every aspect. Coming from a school with a smaller geology department, it was comforting to see the personal interest the members have for each other. Members truly wanted to know what my interests were and where I wanted to go in the field of geology and gave helpful advice and encouragement. This made me realize that even as a student member, the support we have is incredible. The student workshop day was even more helpful than I could have imagined. We have all been to presentations on what to do and not to do for a resume, but this presentation was far more beneficial. With the allowance to ask questions during the presentation, along with having geology related examples and not just general examples, students could put together exactly what they needed to be successful in the geosciences. Presentations on how to apply for government jobs, as well as presentations on status of the job market, and how to get involved with the AIPG after graduation seem to ease my concerns about the transition from college to professional."

-Megan Miller, CMU AIPG Student Chapter Vice President

"The AIPG Conference in Nashville was one of the most insightful and helpful experiences I have had in my life. This conference helped me open my eyes in the profession of geology and helped me build my path towards a career. I met so many professionals in the industries I am interested in and met some of the friendliest people in my field of science. The career day helped me build myself and my resume to begin that process of finding a job after graduation. The other geologists were extremely insightful and offered ways to advance that were never a part of my mind before. It felt like all of the professionals present wanted to

help the students grow and develop into young professional geologists. I loved this conference, and I hope students continue to come learn and network with the organization."

-Jayson Olivera, CMU AIPG Student Chapter Treasurer

"This was the first year I have attended the National AIPG conference. This was an incredible learning and networking opportunity. During the first full day our Central Michigan University group was at the conference we attended the career prep-day where several lectures were presented regarding key tips on how to make resumes and CV pertaining to specific geologic professions. As well as looking at how to make a professional resume they talked about what they look for in employees. AIPG professionals from all over the country and even a few from around the world were in attendance lending their experience and knowledge to the students that were there.

"One of the most influential events during the day was a meet and greet speed interview where students in attendance were spread out across several tables and spoke with professionals from all fields of geologic professions. This allowed for a one on one setting where I could learn about the more intricate details of what each profession was focused on and what their educational backgrounds were. In addition to hearing about current professionals' backgrounds, they asked about me and what I think would make me a good employee and my background, then gave me feedback on what were important points to note during an interview when trying to find a job in the future.

"All around this conference was amazing and will absolutely help me in my future geologic career. The weekend was full of vital information and influential discussions. Everyone in attendance was friendly and approachable making it easy to network and learn from anyone around you. Our group from Central Michigan University acted with respect and professionalism throughout the weekend. Our group was the largest in attendance showing our pride for AIPG and we are excited to send more students in the future."

-Noah Tibbits, CMU AIPG Student Chapter Member

## Eastern Michigan University Student Chapter Activities

**E** September 28th-October 1<sup>st</sup> students from Dr. Christine Clark's Global Tectonics class attended a field trip to West Virginia, Virginia, and Maryland. Students learned about the geological history of the area and how use Brunton compasses to map the Roundtop Hill outcrop. This annual fieldtrip was the first field experience for many students, and enriches the coursework learned in the classroom.



Students Marian Maier (top) and Tyler Bexton (bottom) taking strike and dips and analyzing outcrops in Maryland. Photos courtesy of Emily Nowacki.

Looking toward the future, our student chapter will be taking a trip to the Field Museum in Chicago, Illinois. This world-class museum features displays that give a historical perspective on many fields of study, including geology and its sub-fields. This will be a great way to get out of the classroom, despite the cold and long winters which we endure in Michigan.

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October 14<sup>th</sup> the Paleontology students are traveling to Milan, Michigan, with Dr. Steven LoDuca to study and collect fossils; an annual fieldtrip with which Dr. LoDuca conducts with much enthusiasm. The students are excited for this as always because of the near guarantee of walking away with a fossil. Many students in the past have found whole trilobites, among other organisms, making this trip an exciting prospect for students interested in the field of Paleontology.

In late October, two of our students, Matthew Schiffert and Clarissa Crist, will have their research presented at the Geological Society of America annual meeting in Seattle, Washington. Congratulations for all their hard work on their projects.

Our officers are collaborating with Eastern Michigan's GREEN Club to organize group discussions on topics that relate geoscience and environmentalism. These discussions have the goal of connecting students with different backgrounds over common topics which are relevant in science today. Discussions will be designed so that students can share their thoughts on the topic at hand, while being immersed in the ideas of students in other areas of study.

## Newsletter Notice via E-mail

Please be sure that you continue to receive the Section newsletters and other announcements. Submit an updated e-mail address to Adam Heft at [adam.heft@wsp.com](mailto:adam.heft@wsp.com). If you move or change places of employment, don't forget to send your new contact information to both the Section and to National. If you are not receiving announcements directly from the Editor, it is because your email address is not up to date.

## Michigan Department of Environmental Quality News

### Latest Proposed Changes to Law to Refined Petroleum Funds toward Closure and Redevelopment Direct Await Governor's Signature

House Bill No. 4583 has been passed by the both Michigan's House and Senate and now waits for Governor Rick Snyder's signature to become law. The bill targets closures and redevelopment with proposed amendments to Michigan's Natural Resources and Environmental Protection Act to direct Refined Petroleum Funds toward a new

legacy release program and Brownfield redevelopment.

This 2017 bill proposes that the Department of Environmental Quality (DEQ) establish and administer a legacy release program to reimburse eligible persons for corrective action costs. The Michigan Underground Storage Tank Authority (MUSTA) currently reimburses owners for corrective actions on new releases discovered after December 30, 2014. This legacy program would allow for reimbursement of corrective action activities for a release that was discovered prior to December 30, 2014. Opening the eligibility for reimbursement for historical releases is anticipated to promote completion of activities that can bring the release to closure.

In addition to offering reimbursement to eligible persons for corrective actions, the bill also gives MUSTA the ability to reimburse local units of government and county road commissions for any corrective action activities that they may need to perform when encountering contaminated soil or groundwater or vapors within their right-of-way. The benefit of this program is to provide a financial assurance mechanism that will help ease the burden of addressing contaminants in the right of way that were left in place through the alternate mechanism option. It is projected that with this financial assurance in place, more closures will be submitted for releases with contaminants left in place in public rights-of-way.

Redevelopment of properties where leaking underground storage tanks existed is also promoted by this bill. The bill allocates \$5,000,000 annually of Refined Petroleum Fund dollars for Brownfield grants and loans exclusively to these properties to improve blighted areas in communities and promote the creation of jobs.

Appropriately managing risks, closing releases and redeveloping blighted properties are a major focus for the DEQ. The DEQ encourages parties addressing contaminants at properties with leaking underground storage tanks to work with the department to achieve this common goal. The Refined Petroleum Fund provides a stable source of dollars for both private and public efforts to address petroleum releases from UST systems and is essential to making the leaking underground storage tank program work in Michigan. The dollars make the reimbursement program administered by the Michigan Underground Storage Tank Authority possible assisting and encouraging

eligible parties to perform corrective action activities. The program also helps by providing an option beyond private insurance for required financial assurance obligations. The dollars also help support the DEQ's efforts to address orphan sites through the Triage program where at least 200 open leaking UST sites are investigated and evaluated for risk annually. The latest proposed changes to the law will also allow the DEQ to remove orphan tanks and perform some limited remediation which will open the door for more closures. The Refined Petroleum Fund also is an important source for funding DEQ staff to audit the required submittals for privately managed sites.

In recent years, a series of amendments to Michigan's leaking underground storage tank (LUST) law have been enacted to promote risk-based corrective action for releases and preventing exposure to contaminants. This practice allows for focusing of resources on the true exposure risks from the contaminants at the site, saves on the overall project costs by only spending on activities that are necessary to prevent exposure, and helps improve the decision making process for achieving closure. For example, institutional controls like deed and right-of-way restrictions have been put in place at many sites as a way of managing exposure risks. Many properties across the state have met the goal for closure using risk-based corrective action evaluations and risk management options.

Additionally advances in the scientific understanding of what happens to petroleum when it is released into the environment have dramatically changed the way contaminants are evaluated and managed. For example, releases may now be closed even when measurable quantities of petroleum collect in a monitor well when the appropriate risk evaluation is conducted. The DEQ also looks to the expertise of nationally recognized organizations that provide guidance on the scientific and technical aspects of addressing contaminants in the environment and other related issues like the Interstate Technology and Regulatory Council for information on these topics and often adopts the recommended practices. The DEQ has recorded 249 closed releases for 2017.

Article provided by Sara Verbrugge-Pearson, CPG – MDEQ RRD

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## Section Website Reminders

As you may have noticed, the Michigan Section is building a database of geologic photographs on our website. Please submit photographs to Adam Heft at [adam.heft@wsp.com](mailto:adam.heft@wsp.com). Don't forget to include your name and a short explanation of what the photograph depicts. The photographs will be uploaded to the website periodically.

If you have suggestions on other items that we can include on the History page, please let a member of the Section Executive Committee know.

## What Geology Means to Me



### The Multi-Faceted Meaning of Geology

The room was dark and rain lightly pattered the small window panes. The air smelled of musty old books and silica with a slight tinge of metals. Three rows of tables filled the space and students sat hunched over their assigned petrographic microscopes, with the light

coming through the stage casting soft glows onto their chins. Thin sections of felsic granite were being rotated and objective lens were being spun in the search for an identifiable mineral grain of quartz or muscovite. Occasionally, a dial near the eyepiece was rotated, usually followed by a frustrated sigh. Eventually, one student let out a gasp and began slowly rotating the stage of their microscope, she had finally found the hidden cross locked away within her mineral.

This is the point that she, being me, became fascinated with geology. Never before had I considered pursuing a degree in this field of science until after I had registered for my mineralogy class at Wayne State University (WSU) five years ago. It was a required class for the program, Environmental Science, that I had originally committed to. Since graduating from L'Anse Cruese High School North in the year 2005, I had been relentlessly pursuing a degree in biology, but through many personal struggles (i.e. lack of financial stability, lonely study sessions, etc.), I found myself most happy among my peers in the geology department. I have always loved the natural world since a very young age and thought that I would spend my life staring at the creatures and plants of the Earth whilst feverishly writing notes in a little

book. How is it then that I found myself thrilled with an interference figure that I had just found in my very un-living thin section of quartz? After some self-reflection, I knew it to be because of various reasons.

One of the easier to recognize reasons for my love of geology was the people that I found myself surrounded by. I felt almost immediately that I had found my clan of fellow natural world enthusiasts in geologists as opposed to biologists. I was surprised to find that the biology classes at WSU were saturated with medical students, a field that I was not at all interested in, and they tended to be less colorful in nature than I was hoping for. I longed to find a diverse group of people that were fascinated with unlocking revelations about the natural world which I eventually realized lay within the lower halls of the local "castle" lovingly referred to as Old Main, a recognizable building of WSU. Staying late in the mineralogy lab was not a burden, it was looked forward to, and I enjoyed sharing my dreams and aspirations with my classmates. Not only did I find myself amongst people with the same ambitions as me, but I also found the same sense of humor, that of sarcasm, wit, and of course, puns. The diversity was there too with many students representing different genders and cultures. Not only was I learning

academically, but I was learning socially as well.

After some time, I realized that the science that deals with the earth's physical structure and substance, its history, and the processes that act on it did actually include the study of life. Of course, the planet's physical structure does not reproduce or need to consume energy to exist but there is movement to it and the rock record is the only way for humans to learn anything about ancient life. This revelation unlocked the whole history of life in the universe for me. During my biology years, the only span of time I examined was the Holocene. Now that I function within the realm of geology, relative time for me reaches all the way back to the Late Heavy Bombardment or even the Big Bang. Knowing geology has given me a new set of eyes; a set that can see mountain building events, rivers carving canyons, tectonic plates recycling, mafic ocean crust forming, hydrothermal veins cutting, and molten planets coalescing. The past has not only been revealed for me but the future as well. One of my favorite things to wonder about is how Homo sapiens will look in the rock record. I imagine a very thin layer of plastics and odd radioactive signatures with millions of fossils. I am sure that one day we will make a reliable index fossil.

By far the most important facet of geology to me is the supportive community after college. This I have mainly enjoyed with my participation with the American Institute of Professional Geologists (AIPG). After being a college student from 2005 until 2015, I found myself lonely and bored after school even though I was employed full-time. Thankfully, the AIPG had become a part of my life early in my geology career when a student chapter of the AIPG was established at WSU in my first semester. It has been an integral part of my life ever since.

I am very lucky to be a member of the active Michigan AIPG section. Having such a broad network of fellow geologists at my fingertips has proven to be very beneficial in many ways including the networking that led to my acquisition of my current job with Golder Associates. The quarterly meetings, annual field trips, and the summer workshop are vital to my happiness as a young adult professional. As I mentioned earlier, geology not only satisfied my intellectual needs but my social needs as well. Not having my professors and classmates by my side after graduating was like losing a part of what I had originally been seeking. When I decided to make the move to geology I did it because, not only was I interested in the science, but I was also committed to

surrounding myself with the unique breed of human beings known as the geologist. Both aspects of geology had to be a part of my life if my passion for geology was to continue to grow. The science is easy to come by, but the communal sense of acceptance and security is harder to achieve and I am grateful for the AIPG in that aspect.

In summation, the meaning of geology for me is multi-faceted. Not only do I get to see differently the amazing planet that I have had the mind-bogglingly miniscule chance of even existing on, but I feel as if I am part of a "people" that I am eager to call my own. Because of my experiences with this, I see the importance in bridging the gap between college life and the "real world". Many people are not aware of this gap even though it should be taken more seriously as it is juncture where so many young professionals fall into nothingness, merely because they did not have the right equipment to make the crossing. I have made it one of my top priorities to help others to be more conscious of this gap and I think that with the support of organizations such as the AIPG, this goal can be accomplished. Geology has given me a future in so many ways and I look forward to making it a future for many other people as well.

Erica L. Volansky, YP-3835

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## Call to Members

Hey, all AIPG members! The Section Executive Committee is requesting your help. One of the things that the Committee is planning to accomplish is the placement of geologic signs, similar to historical markers, at important locations around the state. The process will be slow, with only a few signs placed each year. The Committee is requesting your help with the identification of specific outcrops or other features of geologic interest at which to place the signs. Please submit your suggestions to the Editor at [adam.heft@wsp.com](mailto:adam.heft@wsp.com) with the name of the feature/formation, a photograph if possible, and a brief description of why you think the location would be important or of interest.

## Interesting Geology Links

The Editor has received links to various interesting geology-related sites. Some of the more interesting links are included here. If you have any links to geology-related links that you would like to share, please forward them (with a citation, if applicable) to the Editor.

Thanks to Mark Francek of Central Michigan University for sharing via the "Earth Science Site of the Week" emails.

Formation of an Ore Deposit: <http://geologylearn.blogspot.com/2016/05/formation-of-ore-deposit.html>.

Dramatic Footage of red-hot lava spewing from the side of a cliff: <https://www.dpreview.com/news/5781062080/this-is-why-you-should-follow-posted-signs-in-national-parks>.

## Regulatory Roundup

What's the latest news from the capitol? We encourage you to stay informed and get involved. There were 76 bills introduced in 2017 to just amend Michigan's Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended and several

more amending the Safe Drinking Water Act and the Gas Safety Standards. Many new rules are also proposed. We have the ability to inform policy makers and shape policies affecting our profession.

It is important as professionals in the environmental industry to stay up to date on legislative changes and progress and to speak up and be heard when you have expertise to lend or a concern about the issue.

We have changed the format of the Regulatory Roundup in an effort to streamline the information and improve the readability of the document. We have provided quick links to the rules and bill search capability so that you may customize the information that you are seeking. For example, if you are interested in searching for bills that have been proposed in 2017 to amend Michigan's Natural Resources and Environmental Protection Act, just click on the bill search button below with the act's name and type in 451 of 1994 in the search fields provided. All bills that have been introduced will appear.

We are also featuring a Bill Spotlight section where we will be posting bills that are moving through the legislature and likely to be passed into law. Today's featured spotlight bill establishes a legacy underground storage tank cleanup program.

**Emergency Rule**  
 1,4-Dioxane

**Proposed Rules**

**Resolution for Nestle Waters**

Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, bill search

Safe Drinking Water Act, PA 399 of 1976, as amended, bill search

Gas Safety Standards, PA 165 of 1969, as amended, bill search

**MDEQ Budget \$**

**Plan for Environmental Justice**

**Proposed Water Ombudsman**

## Bill Spotlight

HB 4583 - Underground Storage Tanks

## Employment Opportunities

To serve our members, and provide added value, the Michigan Section Executive Committee has decided to allow ads for employment or other opportunities to be posted in the Section newsletters. Employment ads will run for one edition unless renewed. There is no cost to our members or sponsors for this service. Send your employment opportunities to the Editor.

No employment opportunities or member seeking employment information were received for this edition of the newsletter.



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## 2017 Michigan Section Executive Committee

Here are the current officers of the Michigan Section. Be sure to talk with them at the Section's events when you see them...

### Member's Corner

The Member's Corner includes information about the Section's membership. This is your chance to provide information on where you are and what you are doing. Simply send the information to the Editor for inclusion in this section.

No Member's Corner articles were received for this edition of the newsletter.

### Coming Events

**October 20-22, 2017:** Ingham County Gem, Mineral, Fossil, Lapidary & Jewelry Show, "Main Arena" Ingham County Fairgrounds, Mason, Michigan. Additional information at: <http://www.michrocks.org/annual-show/show-info.html>.

**November 9, 2017:** MAEP Meeting, Block Brewing Company, Howell. Topic will be "Continuing the Conversation on Vapor Intrusion." Speaker panel to be announced. Registration information at: [www.maep.org/events](http://www.maep.org/events).

**November 30, 2017:** Michigan Section AIPG Annual Meeting, Weber's Inn, Ann Arbor. Speaker and topic TBA. This meeting will be free to all AIPG members!

Dinner: TBA.

Schedule: Cash Bar 5:30-6:30 PM, Dinner 6:30 PM, and Speaker 7:30-9:00 PM.

Cost: Students and members free, Non-members \$50.00.

**June 12-13, 2018:** Annual Michigan Section Technical Workshop to be held in Roscommon, MI.

**June 16-21, 2018:** Resources for Future Generations: Energy – Minerals – Water – Earth. Vancouver, Canada.

**September 8-11 2018:** 55th Annual AIPG Meeting to be held in Colorado Springs, CO.

**Fall 2019:** 56th Annual AIPG Meeting to be held in the Burlington, Vermont; dates TBD.

**Fall 2020:** 57th Annual AIPG Meeting to be held in Sacramento, California; dates TBD.

**Fall 2021:** 58th Annual AIPG Meeting to be held in Marquette, Michigan; dates TBD.

## 2017 AIPG Michigan Section Executive Committee



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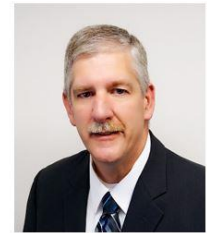
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Adam Heft



**Top:** Field Trip participants in the underground Gordonsville Zinc mine.

**Bottom:** Adam Heft presenting Stephen Testa with the 2017 Ben Parker Award.



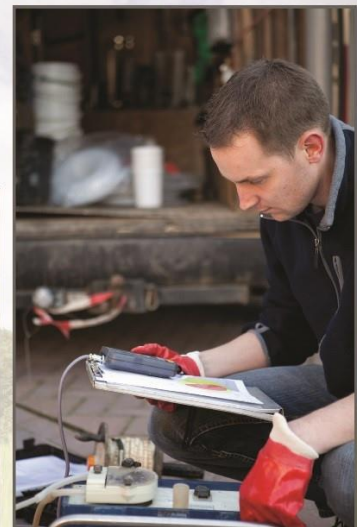


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