



American Institute of Professional Geologists Michigan Section

January 2014

From the President's Desk

First, I'd like to wish you all a happy and productive new year. 2013 was an exciting year for the AIPG Michigan Section and 2014 is shaping up to be another great year full of educational opportunities and fun social events for our members. I'd also like to welcome new members and student affiliates, and hope that you find the AIPG a vibrant, exciting and relevant organization throughout your geological careers.

During January 2014, each of us on the Executive Committee advances to the next role in the succession of chapter officers: Linda Hensel will be our new Secretary. I'm sure Linda will find participation in the Executive Committee as exciting and rewarding as I and other members of the Executive Committee have. Brian Burke will take on the challenging role of Treasurer, and Dawn Prell, back by popular demand, is back in the cycle as your new Vice President. As I begin my fourth year on the Executive Committee, I will be serving as President and hope to live up to the standards set before me by Past President John Barkach and all the others before him.

During the past three years I've served on the Executive Committee, I have seen many changes as the Michigan Section has become a more modern organization and hopefully one with increasing relevance to our membership. We have evolved from using a manual system for collecting meeting and event registrations with payments only by check or cash to an organization that can now accept online registrations through our web-site and collecting payments via PayPal and credit cards. I would like to express appreciation to Kevin Lund for being the driving force behind these modernizing changes and reducing the Secretary's work load. Our meeting venues have moved from restaurants and small banquet rooms to University conference centers with full catering and audio-video services. This has allowed us to provide more comfortable space for meetings while at the same time

encouraging participation by student members attending those educational centers.

Three years ago, the Michigan Section conducted its first two day "work-shop" inviting guest speakers to provide case studies and technical presentations on in-situ remediation treatment technologies. This event was successful beyond our expectations, and has become a highly anticipated annual event, well attended by consultants, industry leaders, and regulatory officials from Michigan and other nearby states. This year's focus will be on groundwater/surface water interface issues and will again take place at the MDNR's RAM Center in Roscommon, Michigan. Keep an eye out for registration news, calls for abstracts, sponsorship requests, and agendas for this popular two day event scheduled for mid-June.

The Michigan Section hosts an annual golf outing to raise funds for educational grants and scholarships. The golf outing will be held on May 13 at Lyon Oaks Golf Course in Wixom. If you enjoy golf, put a team together or just sign up as an individual, and we can match you up with others to create a foursome. It is a great time and an opportunity to meet and socialize with your peers in a non-technical setting. This annual event has been a success largely due to the tireless efforts of Kevin Lund and Bob Reichenbach. See one of them or any member of the Executive Committee if you'd like to help in any way or if your company would like to be a sponsor.

We are in the process of planning a Section sponsored field trip this summer. If you have some ideas for an interesting outing or would like to help with the planning of a section field trip, see one of the Executive Committee officers and we'll see if we can make it happen.

Another event currently in the planning process is a brown-bag presentation to discuss upcoming important regulatory changes and issues that may impact you or your clients. Keep an eye out for news on this event, which will probably take place in Lansing. Sara Pearson is the lead organizer for that event and she will keep us posted as to the schedule

and venue for that event. We had great success conducting a similar brown-bag last year, which seemed to appeal to some members unable to attend our evening regular meetings held throughout the year.

Last year we saw an increase in cooperation and participation in joint events sponsored by other organizations related to the geological sciences. We have had several cosponsored meetings and field trips with the Geological Society of America and the Michigan Basin Geological Society. It is always interesting and educational to interact with our peers who work in different fields and industries. Cross-membership and cooperation with other geological organizations should be a goal for all of us.

For those of you who wonder what we do with proceeds from our meetings, golf outings and workshops, I'm pleased to inform you that we give most of it away. A major part of our mandate is to advance the practice of geology and to encourage education and academic pursuits in the geological sciences.

During 2013, the Michigan Section pledged \$1,500 in scholarship money for Michigan teachers participating in the Academy of Natural Resources. At the annual meeting, the Michigan Section awards educational grants to schools and educators for geologically related school activities. At our annual meeting in December 2013, we awarded two \$500 scholarship awards to two students based on the quality of their poster submissions. We continue to provide free meals to students attending our quarterly meetings and reduced the cost for members to attend from \$35 to \$30. In 2013, we have hosted about 40 students which equates to roughly \$1,500. We also provide financial support to related organizations.

In October 2013, I had the honor of attending the annual AIPG National meeting in Denver, Colorado. Each Chapter presented their Annual Section Report that summarized the Chapter activities that were completed during 2013; plans for 2014, and problems and issues within each State Chapter. The take away from the National Meeting is that the Michigan Section is one of the more prolific, active, and well-funded AIPG chapters within AIPG. Our membership is the third largest among the 25 active Chapters. A returning focus with AIPG for the coming year will be recruitment of student members and encouragement to our younger members to be more active in AIPG governance and to participate in committees and event planning groups.

Speaking to that focus, don't be shy; don't wait for someone else to do the leg work and make these events happen. Step up if you have the interest and volunteer to help. Our Section's past success is

because of you, our members. Our future success depends on your continuing participation and involvement. We want and need your input and welcome your opinions regarding the focus of the Section and what you want to see from AIPG. We want to keep this Section a valuable part of your professional portfolio. Put your hat into the ring for the Secretary position at the end of 2014. If you don't have the ability or interest in becoming a part of the Executive Committee, there are many other ways to actively participate in the Section activities. As we grow and plan more and bigger events, we can use all the help we can get. You can assist with planning committees, or help us collect money or set up exhibits at our many functions and events. Just let someone on the Executive Committee know you want to help and we'll put you to work.

I have found the past three years on the Executive Committee to be even more rewarding than I ever expected. I have a better understanding of our organization's mandate, and a better appreciation of what it means to be a Professional Geologist. It's not just about a certification or license number; it's about having a passion for our profession and for the earth sciences. I have had the opportunity to meet many fascinating people in this profession and have learned so much through our technical speakers and workshops. I thank you for electing me to Secretary in 2010 and look forward to serving as your President in 2014.

Craig Savage, CPG – 2014 Michigan Section President

Section Officers Reports

President: Information presented in the "From the President's Desk" article above.

Vice President: No report.

Treasurer: We are in good financial standing. Our account balance is strong. We are currently investigating alternatives to typical savings accounts and certificates of deposit due to the low interest rates. We are considering low risk bond funds. If anyone is interested in more detailed financial information, you are welcome to attend an executive committee meeting.

Also, we are seeking alternate forms of payment. We may soon be able to accept credit card payments not only on-line but at our quarterly meetings.

Secretary:

Minutes from December 5, 2013 Executive Committee Meeting

Participants: John Barkach, Brian Burke, Adam Heft, Dawn Prell, Craig Savage, Sara Pearson.

I. Call to Order at 4:10 pm at the Kellogg Center, Michigan State University, East Lansing

II. 2014 Michigan Section AIPG Workshop

- One paper has been received so far. Will request that the cost will be determined. The Workshop is scheduled for June 17th and 18th, 2014. The main expenses for the workshop are printing, transportation, block of rooms to reserve, entertainment, and banner printing.
 - Organization: Need 3 to 4 people on the Committee.
 - Executive Committee roles: Treasurer: Brian Burke, Program Coordinator: Rick Dunkin, John Barkach, Director State of the Art: Sara Pearson.
 - Need sponsors: CRA, ECT, ARCADIS, SOMAT – Need to match last years, different tiers, thumb drive with logo from each sponsor
 - Monthly Conference Call
 - Abstracts for two (2) days. Bob Wagner – Keynote Speaker
 - First Meeting Tuesday January 16, 2014

III. News from National (Craig)

IV. 2013 Financial Report (Dawn): 72,000 income, \$57,000 expenses – 2012, 2013 Financials not available yet

V. Discussed 2014 Contributions

- Student Scholarships \$2,000 in 2013
- MDNR Academy of Natural Resources
 - Pledged: \$3,500
 - 2013 Contribution: \$1,000 plus 500 papers
- Michigan Alliance for Environmental and Outdoor Educators: \$1,000 in 2013
- Michigan Section Annual Meeting Poster Presentation Awards: \$500 on December 5, 2013
- Student member attendance of Section events
- Other Opportunities
 - 2014 Student Chapter of the Year (\$500 plus travel for one student)

VI. Discussed 2014 Funding Sources

- Dues

- Workshop
- Golf Outing
- Sponsors/advertisers

VII. Adjourned at 5:20 pm

Coming Events

February 12, 2014: MBGS's monthly membership meeting.

February 20, 2014: Michigan Section AIPG Meeting, Cleary College, Howell. Mark Sweatman will be speaking about "GWUDI Evaluation for the City of Charlotte, Michigan."

Location: Johnson Center, Cleary College, Howell.

Dinner: Manicotti with Meat Sauce, Grilled Vegetable lasagna and Chicken Alfredo served with Antipasto Salad, Garlic Bread Sticks and Cannoli's.

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

Cost: Students free, Members \$30.00, Non-members \$50.00.

RSVP by February 17, 2013: RSVP for the meeting on the Eventbrite website no later than February 17th at: <https://www.eventbrite.com/e/michigan-section-aipg-meeting-tickets-10116078463>.

March 14-16, 2014: Michigan Gem & Mineral Society Gem and Rock Show, 2014 Jackson County Fair Grounds, Jackson, Michigan.

April 24, 2014: Michigan Section AIPG Meeting, meeting details TBD.

May 2-4, 2014: Kalamazoo Geological & Mineral Society Annual Gem & Mineral Show, Kalamazoo, Michigan, <http://kalamazoorockclub.org/>.

May 13, 2014: Michigan Section AIPG 10th Annual Golf Outing, Lyon Oaks Golf Course, Wixom. See flyer attached to this newsletter for registration details.

May 15-16, 2014: Institute on Lake Superior Geology Annual Meeting, Hibbing, Minnesota, <http://www.lakesuperiorgeology.org/>.

May 2014: MBGS Field Trip "Salem Limestone and Karst, Bedford Area, South Central Indiana." Includes Victor Oolitic Quarry, Central Quarry, Crown Quarry, Blue Springs Cavern, and Sullivan or Donahue Cave.

June 17-18, 2014: Fourth Annual Michigan Section AIPG summer conference, Ralph A. MacMullen Center, Higgins Lake. This year's topic is Groundwater Surface Water Issues. For information, please contact Sara Pearson at pearsons@michigan.gov.

August or September 2014: MBGS Field Trip "Silurian and Ordovician, Eastern Upper Peninsula, Michigan." Trip to be led by Dr. Peter Voice, Michigan Geological Survey, Western Michigan University.

September 13-16, 2014: 51st Annual AIPG Meeting, Prescott, Arizona.

October 2, 2014: Michigan Section AIPG Meeting, meeting details TBD.

December 4, 2014: Michigan Section AIPG Annual Meeting and awards presentation, meeting location TBD.

2014 Golf Outing

It is not too early to begin planning for our 10th Annual AIPG Golf Outing. We hope to continue to add to our numbers of golfers and sponsors this year. To do this, we are asking for your help. Please make a point to do your best to spread the word and participate in this event which takes place on Tuesday, May 13, 2014 at the Arthur Hills designed Lyon Oaks Golf Course in Wixom, MI. Also, please pass this information along to your service providers/subcontractors/suppliers. This event offers excellent exposure for companies that support our profession.

This event has become a great opportunity to spend time with clients, network with colleagues, and celebrate the return of warm weather to Michigan. This event is open to everybody, so please come and take advantage of the opportunity.

The money raised is put toward the Michigan Section's K-12 Educational Grant recipients. To insure continued success, please assist us by participating, sponsoring, soliciting sponsors, and/or donating prizes or items. Call Bob Reichenbach at 248-773-7986 or Kevin Lund at 888-417-4440 to register or to offer your time to assist with the event.

The registration and sponsorship form is included in this newsletter and has been posted to the Michigan Section's website <http://mi.aipg.org/>. Click on "Golf Outing". Forms can be faxed to (248) 924-3108. We hope to see you May 13.

Bob Reichenbach and Kevin Lund, Golf Outing Co-Chairs

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 of us would be glad to hear from you. AIPG is your organization. Please help keep it relevant and interesting for all by participating.

December 2013 Annual Section Meeting

The Michigan Section held its annual meeting on December 5, 2013 at MSU's Kellogg Center in East Lansing. Approximately 50 members and students attended the meeting.



Members enjoying dinner before the technical presentation. Photograph courtesy of Adam Heft.

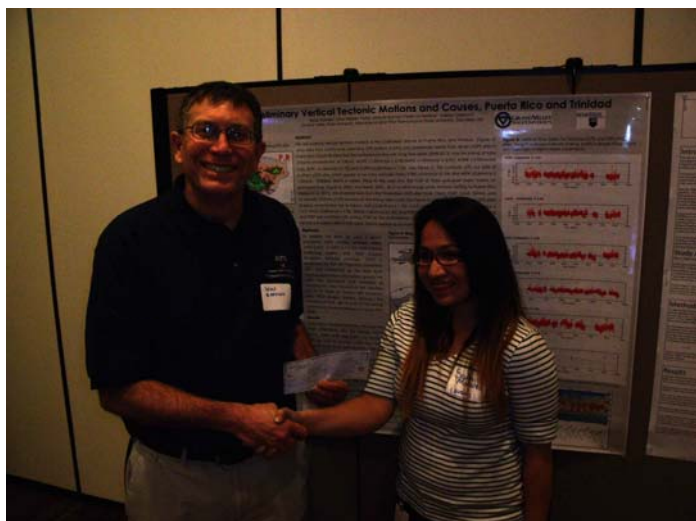
Dr. William B. Harrison III was the guest speaker, and presented on Michigan's "newly rediscovered" resource: an extensive deposit of potash in the Salina A-1 formation in the central portion of the Michigan Basin. Estimates of the deposit suggest that at current prices, the deposit may be worth \$65 billion, and would likely be minable for about 100 years.



Dr. William B. Harrison III presenting on Michigan Potash Resources. Photograph courtesy of Adam Heft.

The Section Executive Committee also held its annual student poster contest. Students were invited to bring a poster depicting their research studies to the meeting. Up for grabs was an award of \$500 for the best poster. Two of the attending students

brought posters and explained their research to members.



John Barkach presenting a check for \$500 to student poster contest winner Saray Morales for her poster titled "GPS –derived Preliminary Vertical Tectonic Motions and Causes, Puerto Rico and Trinidad." Photograph courtesy of Adam Heft.

Both of the student posters depicted original and interesting research. The judging committee found themselves deadlocked, and consequently, both students were awarded prizes of \$500. Congratulations to both Saray Morales and Chris Vanderlip on your posters!



John Barkach presenting a check for \$500 to student poster contest winner Chris Vanderlip for his poster titled "Self-Organized Criticality Applied to a Meandering Stream, White River, Plainville Quadrangle, Indiana." Photograph courtesy of Adam Heft.

The Executive Committee also announced other awards following the presentation by Dr. Harrison. Longevity awards for various members from 10 years to 35 years were announced; members will receive their certificates in the mail shortly if they have not already. The following is a list of members who will be receiving longevity awards this year: Robert Hilty (35 yr); Philip Hampton (30 yr); John Rabideau, Mark Shellhorn, Thomas Pavlik, and Bruce Baker (25 yr); Mark Sweatman, Amy

Hoeksema, Gregg Brettmann, John Wise, Bob Reichenbach, and Mark Siegman (20 yr); Joseph Esseichick, Adam Heft, Walter Bolt, Frederick Simms, Vincent Buening, Michael Kasenow, Todd White, Mark Peterson, Dawn Prell, Paul Bartz, Bridget Klueger, and Scott Park (15 yr); Douglas Saigh, Michael Adams, Joseph DeGrazia, Michael Friedhoff, Arlene Anderson-Vincent, Tracy Repp, James McLaughlin, Michelle Racz, Robin DeWyre, Tammy Rabideau, Michael Kovacich, Nicholas Larabel, Thomas Simpson, Randall Glass, Michael Ingersoll, Kristine Shimko, and David DeYoung.



Most of the Michigan Section 2014 Executive Committee. Left to right: Linda Hensel (secretary), Craig Savage (President), Brian Burke (Treasurer), John Barkach (Past President), and Adam Heft (Newsletter Editor). Dawn Prell (Vice President) not pictured. Photograph courtesy of Adam Heft.

To all those receiving longevity awards, the Executive Committee would like to express its appreciation for your years of support to AIPG and the Michigan Section!

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:

Joey Barker, Derek Marranca, Robert Fortney, Tonia Hack, Callie Mahan, Joe Bolin, Krishna Stephen, Nick Adamowicz, Anna Clinger, and Scott Feldpausch.

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

Michigan Department of Environmental Quality News

Cleanups on the rise

Sweeping changes to Michigan's Leaking Underground Storage Tank Act in 2012 fueled a significant rise in the number of petroleum release closures this year in Michigan.

The DEQ's Remediation and Redevelopment Division announced 285 closures in 2013. Closure numbers have been lagging since 2006, when the department saw 320 LUST closures.

Michigan's caseload includes 9,000 LUST releases at 7,000 facilities. Changes in the law enacted in 2012 promote the use of nationally recognized, risk-based approaches to manage petroleum releases. The new LUST amendments have enabled closures at sites that would not have been eligible under the previous version of the law.

Perhaps more importantly, the change in law came with a change in approach. The division – and the entire DEQ – are working to engage the regulated community and collaborate on solutions to problems as part of a customer service-oriented philosophy. Staff report site operators seem more willing to report problems and ask for DEQ help.

"We are excited about what has been accomplished this year," said RRD Chief Robert Wagner. "It reflects a new relationship with the regulated community, a lot of work by DEQ staff and a long-overdue change in the law that allows us to get the job done."

Wagner said decentralizing cleanup caseloads to district staff also has shown early benefit. Empowering district managers to work directly with site operators and be responsible for local closure determinations not only speeds the process, but helps build important relationships at the local level.

Many of the closures reported in 2013 were the result of the partnerships between DEQ staff, owners and operators, and qualified consultants. Working collaboratively with all stakeholders achieves a shared goal to reduce cleanup costs and ensure that exposure risks are appropriately managed as sites are closed.

In addition to the department's work with private parties to close sites, RRD closed 53 of the 285 sites this year using Refined Petroleum Fund dollars to address orphan sites.

Another encouraging trend is the declining number of new releases reported every year. In the past seven years, the number of new releases has steadily decreased from 305 in 2006 to 134 in 2013.

"The industry and the department have a lot to be excited about this year," Wagner said. "We have a long way to go, but I'm proud of our staff and I believe we are on the right track."

Sara Pearson, MDEQ RRD TAPS Team
Coordinator, CPG #10650

Support our Sponsors!

The Section Executive Committee would like to remind its members to support the companies advertising in the newsletter. Consider working with these companies, and when you speak with their representatives, let them know that you saw their ad in the Michigan Section newsletter.

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 heft@pbworld.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.

Section Website Reminders

As you may have noticed, the Michigan Section is working on building a database of geologic photographs on our website. We would like to continue building this collection. Please submit photographs that you are willing to share to Adam Heft at heft@pbworld.com. Don't forget to include your name and a short explanation of what the photograph depicts. The photographs will be periodically uploaded to the website once several have been received.

If you have suggestions on other items that should be included on the History page, please let a member of the Section Executive Committee know.

4th Annual Michigan Section AIPG Workshop – Coming Soon

Groundwater/Surface Water Interface - Characterization, Evaluation, and Compliance

The AIPG Michigan Section has hosted three well attended technical conferences focusing on important topics, including in-situ remediation, light non-aqueous phase liquids and regulatory changes. This year's conference will provide valuable information to consultants, regulators, and owners of properties where hazardous substances have been released to the environment and have the potential to impact the groundwater/surface water interface (GSI) exposure pathway.

The Conference will offer a variety of technical case studies as learning tools for managing risks associated with these properties and will present a detailed analysis of the 2012 legislative changes to the environmental remediation program which resulted in more options for evaluating and managing risks associated with hazardous substances and the GSI pathway.

The 4th Annual Workshop promises to provide the same level of high quality technical presentations as our previous workshops. Be sure to save the date!

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.

I have always been a baseball fan, Detroit Tigers, and loved being outdoors. I played softball in high school and on local ladies teams in 1980's in Brighton and Mt. Pleasant, MI. My father Stanley and I always looked and picked many buckets of stones along the shore whenever we were on the Great Lakes during vacation. My Uncle Heinz had been an investor in mining stock investments with a group of men in Windsor, Ontario in the early 1960's. My father and Uncle Heinz were very good friends and they soon started prospecting in the Bancroft area, the well known mineral locality, north of Toronto, in the complex faulted area of deep plutonic and metamorphosed rocks in the southern Canadian Shield. They both obtained their Ontario Miner's Licenses and purchased mining claims for various types of minerals (such as pyroxenes, garnets, graphite, etc.). Uncle Heinz bought a summer home near Paudash Lake, south of Bancroft, and he opened a rock shop in the late 1960's. Our family spent time with my Aunt and Uncle and I helped with prospecting, collecting, cleaning and preparing specimens for sale in the shop. I loved it so much that I became a rockhound and avid amateur mineralogist. I decided in my junior year of high school to become a geologist. I applied to several schools and attended Michigan Technological University, Houghton, Michigan. I changed my major to Geological Engineering my sophomore year and received my B.S. Geological Engineering in 1980.

I had wanted to work in mining, but petroleum exploration jobs were plentiful. I took a position with Gearhart Industries, Fort Worth, Texas. Gearhart Industries performed wireline logging, and I ran a truck on newly drilled oil and gas wells from 1980 into 1986. I worked onshore Texas Gulf Coast, Mid-Continent, Northeast, and Michigan Basin.

I have been in the environmental consulting business since 1990. I obtained my CPG in 1997. It has always been interesting and continually evolving with technologic and computer advancements as well as regulatory changes. I worked for several companies and started my own company, Go To Consulting LLC, in fall 2009. My specialty is UST system upgrades, Leaking Underground Storage Tank site management (site delineation, remedial design and implementation and closure) and providing my clients with quality product at a fair price.

I am very glad to be able to assist AIPG with keeping our section growing and furthering interest and enrollment in the geologic and hydrology fields.

Linda M. Hensel, CPG, 2014 Secretary

Employment Opportunities/Seeking Employment/Member 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.

AMEC's Novi, Michigan office has several openings and is seeking qualified candidates for entry and mid level Geologists, Environmental Scientists and Engineers. Must be legally able to work in the U.S. Interested applicants can send resume to Mike.Delong@amec.com.

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**Michigan Chapter
American Institute of Professional Geologists
MEETING ANNOUNCEMENT**

February 20, 2014

GWUDI EVALUATION OF THE CITY OF CHARLOTTE, MI

Featured Speaker

[Mark Sweatman](#)

Location: Johnson Center, Cleary College, Howell, MI (Map attached)

Cost: Students Free, Members \$30.00, Non-members \$50.00. **Registration is payable electronically via Eventbrite (see link below) or at the door by cash or check; however, prepayment is preferred and speeds up the check-in process at the door. Please note: Cancellations made within 48 hours of the meeting and/or “No Shows” will be charged and expected to pay the registration fee.**

Dinner: Manicotti with Meat Sauce, Grilled Vegetable lasagna and Chicken Alfredo served with Antipasto Salad, Garlic Bread Sticks and Cannoli's.

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

RSVP: On the Eventbrite website no later than February 17th at: <https://www.eventbrite.com/e/michigan-section-aipg-meeting-tickets-10116078463>. You can select your meal choice and pay online if you choose, or pay at the door by cash or check if you prefer.

Mark Sweatman has nearly 35-years experience in completing remedial investigations and water supply evaluations in Michigan. He is a Certified Professional Geologist, past president (2 terms) of the Michigan Section AIPG, past National executive committee member and past National AIPG treasurer. He currently serves on the National AIPG screening review committee. Has been qualified and testified as an expert witness in State and Federal courts on water supply and contaminant issues. Born and raised in Massachusetts, BS from Fitchburg State University in 1979, Mark moved to Michigan and received his MS in 1983 from Eastern Michigan University.

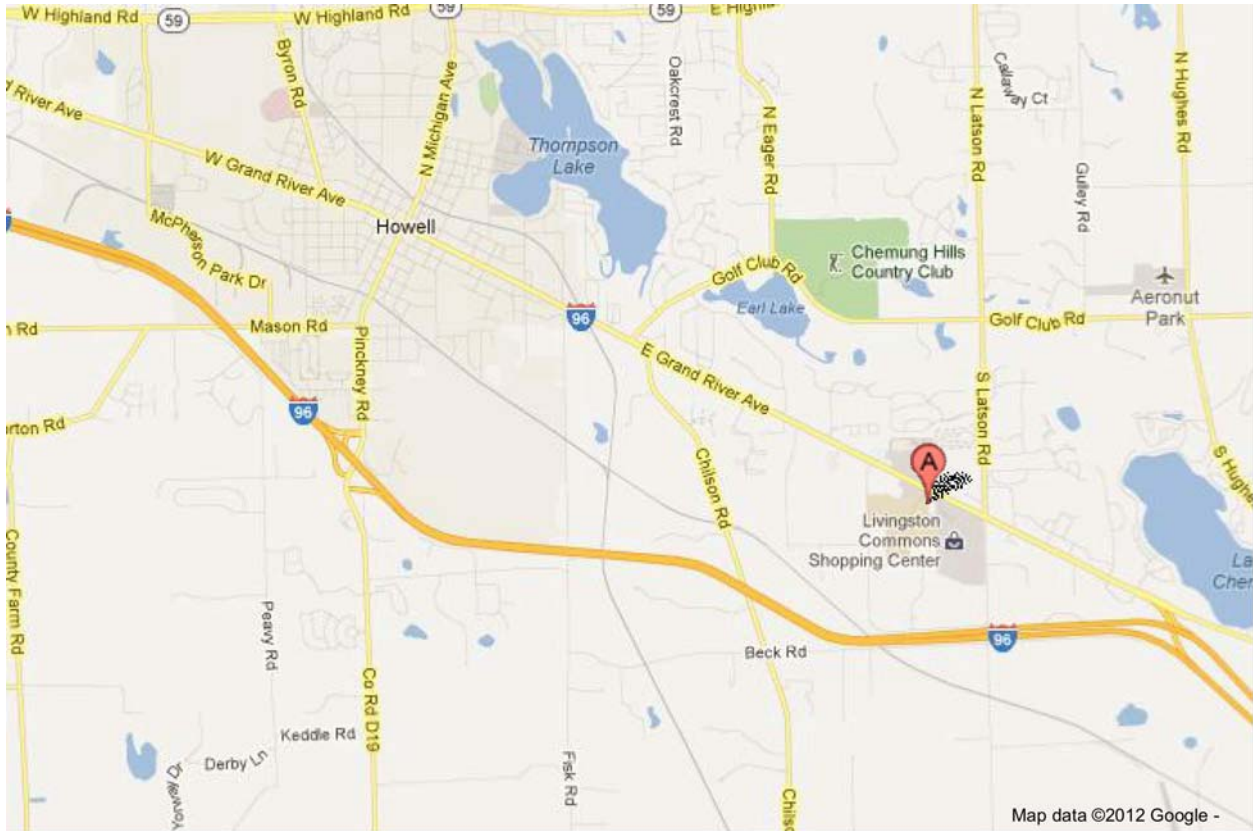
The Surface Water Treatment Rule (SWTR) introduced the concept of groundwater under the direct influence of surface water (GWUDI). The basic concept of GWUDI is that certain groundwater sources that receive recharge from surface water bodies may be at risk for contamination by Giardia and Cryptosporidium. Sources deemed GWUDI are considered as surface water sources and are therefore required to provide filtration in order to remove these microorganisms. EPA defines groundwater under the direct influence of surface water as: “Any water beneath the surface of the ground with significant occurrence of insects, other macroorganisms, algae, or large diameter pathogens such as Giardia lamblia” or “Any water beneath the surface of the ground with significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH that closely correlate to climatological or surface water conditions” (40 CFR 141.2). Additional site specific criteria are also considered including history of waterborne disease outbreaks linked to the supply, well construction, wellhead protection, well integrity, and distance to a surface water source.

The City of Charlotte, Michigan operates three production wells which provide potable water to the City. The well field is situated in glacial outwash deposits near the Battle Creek River. The production wells in the well field are screened across the bottom portion of a sand and gravel aquifer that has been determined through aquifer testing to be unconfined or weakly confined by overlying sandy and gravelly clays.

Relying primarily upon historical total coliform bacteria results, MDEQ made a determination of GWUDI for all three wells. Several independent hydrogeologic evaluations concluded that the wells are not GWUDI. To further address MDEQ concerns, the City undertook a year-long study of the wells and river by measuring temperature, conductivity, pH and turbidity weekly and Microscopic Particulate Analysis (MPA) monthly in an attempt to demonstrate that the wells are not GWUDI and require no further treatment.

AIPG Section Meeting February 20, 2014

Johnson Center, Cleary College, Howell



From I-96 West: I-96 West to Exit #141 (Grand River), west onto Grand River. Go through the light at Latson Road, then through the next light at the Meijer entrance. Turn left onto Cleary Drive (immediately past the Meijer entrance) and follow the drive back to campus.

From I-96 East: I-96 East to Exit #137 (Michigan Avenue/D-19), north onto Michigan Avenue. Turn right on Grand River. Follow Grand River through town to Grand Oaks Drive. Turn right onto Grand Oaks, then left onto Cleary Drive; OR, go through the lights at Grand Oaks and in front of the Speedway station, and turn right onto Cleary Drive.

From M-59: (east- or westbound) South onto Latson Road; follow Latson to Grand River Avenue (2nd traffic light). Turn right onto Grand River, go through the next light (at the Meijer entrance) and make an immediate left onto Cleary Drive. Follow the drive back to the campus.

10th Annual AIPG Michigan Section Golf Outing

Tuesday May 13, 2014

Sponsor Information

Exclusive Dinner Sponsor- \$1,500

Investment includes:

- 1 foursome
- Highest Visibility Signage at the Event
- Corporate recognition*

Beverage Sponsors - \$600 (2)

Investment includes:

- Signage at the club house and on the Beverage Cart or Oasis.
- Corporate recognition*

Luncheon Sponsor - \$800

Investment includes:

- Signage at the grill/tent.
- Corporate recognition*

Hole-in-one Sponsors - \$400 (4)

Will have visible exposure on Par 3 Holes.

If a golfer hits a hole-in-one, the prize will be, either \$10,000, a golf vacation or a deluxe set of irons.

Tee Sponsor - \$200

(18) Available

Investment includes:

- Tee box signage

Skill Sponsors – \$400

Investment includes:

(4) Available

"Longest Drive" "Closest to Pin" awards to Male/female for each.

Putt-4-Dough – \$600 Signage on the putting area, corporate* recognition during the event (includes contest coordination at the turn and following golf provided by you).

Goodie Bag Sponsor - \$100 plus give-away items

*Dinner and Beverage Cart/Oasis Sponsors will receive AIPG membership. All sponsors will be recognized in the Quarterly News letter and on the Michigan Section Web Site.

Practice Tee Sponsor - \$300

(1) Available

Investment includes:

- Practice Tee/Range signage

Door Prize Sponsors - \$100 cash or 2 prizes with \$50 value minimum.

Logo on signage at prize table. Corporate recognition.

This event is our annual Fund Raiser. The Michigan Section of AIPG Golf fundraiser benefits the Michigan Section's ability to support K-12 education grants and scholarships.

Place: Lyon Oaks Golf Course

Event: 18-hole Scramble

Date: May 13, 2014 Tuesday

Registration: 8:00 to 9:30 AM

Tee Time: 9:30 AM

Rainout Date: May 14, 2014 (based on course availability).

Includes: Continental Breakfast, green fees, range balls, Lunch at turn, networking opportunities, and DINNER.

Also includes: 50-50 and Grand Prize raffles along with other prizes including, \$10,000, vacations, or sets of clubs for a "Hole in One", Putt-4 Dough \$2,500, men's and women's Longest Drive and Closest to Pin contests, \$20 gas cards to the four golfers traveling the furthest and goodie bag for all golfers.

Registration

Individual = \$150 if paid by April 1, \$180 thereafter

Foursome = \$520 if paid by April 1 \$600 thereafter

Player One: _____

Player Two: _____

Player Three: _____

Player Four: _____

Contact Name, Company and Phone Number for your Foursome:

Accepted forms of payment include:

PayPal™

OR

Make Checks to:

Michigan Section-AIPG

c/o ERG, LLC

28003 Center Oaks Ct., Suite 106

Wixom, Michigan 48393

Contact:

Kevin Lund klund@g-eri.com

Bob Reichenbach bob.reichenbach@ergp.net

CALL 248-773-7986 or FAX 248-924-3108 to reserve your place!

The AIPG-MI Section is a nonprofit 501(c)(6) Organization

10th Annual AIPG Michigan Section Golf Outing Tuesday May 13, 2014



Arthur Hills-designed 18-hole course on 230 acres

- "Up North" feel in southwest Oakland County
- Par-72 championship golf course
- Hardwood forests and wetlands enhance natural golfing experience
- "Nature, Of Course!" interpretive signs along cart paths point out natural features of interest or significance
- Wide fairways enhance playability
- Wetlands and ponds increase challenge of play
- Sand bunkers and freshwater lakes provide a strategic challenge for accomplished golfers
- Multiple tees on every hole make the course playable and enjoyable by all level players
- State of the art practice facility with target greens and sand traps



Accolades

- Included in The Oakland Press' "Ten to Try This Summer" listing of Oakland County Public Golf Courses
- Member of *Arthur Hills Golf Trail*, featuring acclaimed Art Hills courses throughout the state
- Garnered a 4.5 star rating by *Golf Digest* and named the #2 course in Detroit to play in ESPN's *Sports Travel Golf Course Guide* of the Best Places to Play
- Named #4 in Jeff Lesson's Top 10 Public Golf Courses in southeast Michigan. (Lesson hosts "Lesson on Golf" on WXYT and WWJ radio stations)
- Named in Detroit Free Press *Top 10 Public Courses*

