



ON THE ROCKS

A Newsletter of the Michigan Basin Geological Society

Founded in 1936 as an affiliated non-profit organization of the American Association of Petroleum Geologists

2015-2016 Edition 7

www.mbgs.org

March 2016

MEETINGS

MBGS Membership Meeting, March 9th, 2016

The March meeting will be held at Michigan State University, Natural Science building at 7:00 pm in Room 204. The speaker is Austin Fisher from Stoneco of Michigan presenting "Overview of Aggregate Production in Southern Michigan". Details are included in the newsletter.

ANNOUNCEMENTS

MBGS 2016 FIELD EXCURSIONS

- Detroit Salt Company Underground Salt Mine Tour, Detroit, Michigan – April 2nd, 2016. Details included in newsletter.
- Douglas Houghton Michigan Historical Marker Dedication, Eagle Harbor, Michigan – September 8th through September 11th, 2016. Details to be announced soon.



The students, Ric Rothney, and myself would like to thank you for your complimentary invite to let them attend the AIPG/MBGS dinner, socialize with geoscientists and professionals, and get to hear Bob Mahin's lecture presentation on "Exploration of the Eagle Mine". One of the goals of this HSAG (High School Advance Geology) course initiative is to promote and showcase career possibilities in the geoscience fields and I do not know any better way than the opportunity you afforded us on Thursday evening. The students were excited about the event before and talked about it on the way home. It open their eyes more to the science and engineering employed in mining and other geological fields in a "real world" fashion. I asked them if we could get another opportunity to attend a lecture, they said they would. – Chuck Schepke

Back row: Scott Henderson, Clay Jaskowski, Zach Sarsfield, Dave Disney Bob Mahin, and Chuck Schepke.
Front row: Bailey Perialas, Miranda Reed, Jim Gee, Josh Gee, Justin Flynn, and James Schwartz.



Michigan Basin Geological Society Membership Meeting March 9th, 2016

Austin Fisher



Stoneco of Michigan

Presenting

“Overview of Aggregate Production in Southern Michigan”

Speaker Bio

Austin Fisher is a Mine Engineer at Stoneco of Michigan, an Oldcastle Materials company and a member of the National Stone Sand and Gravel Association. He is a graduate of Michigan Technological University with a degree in Geological Engineering.

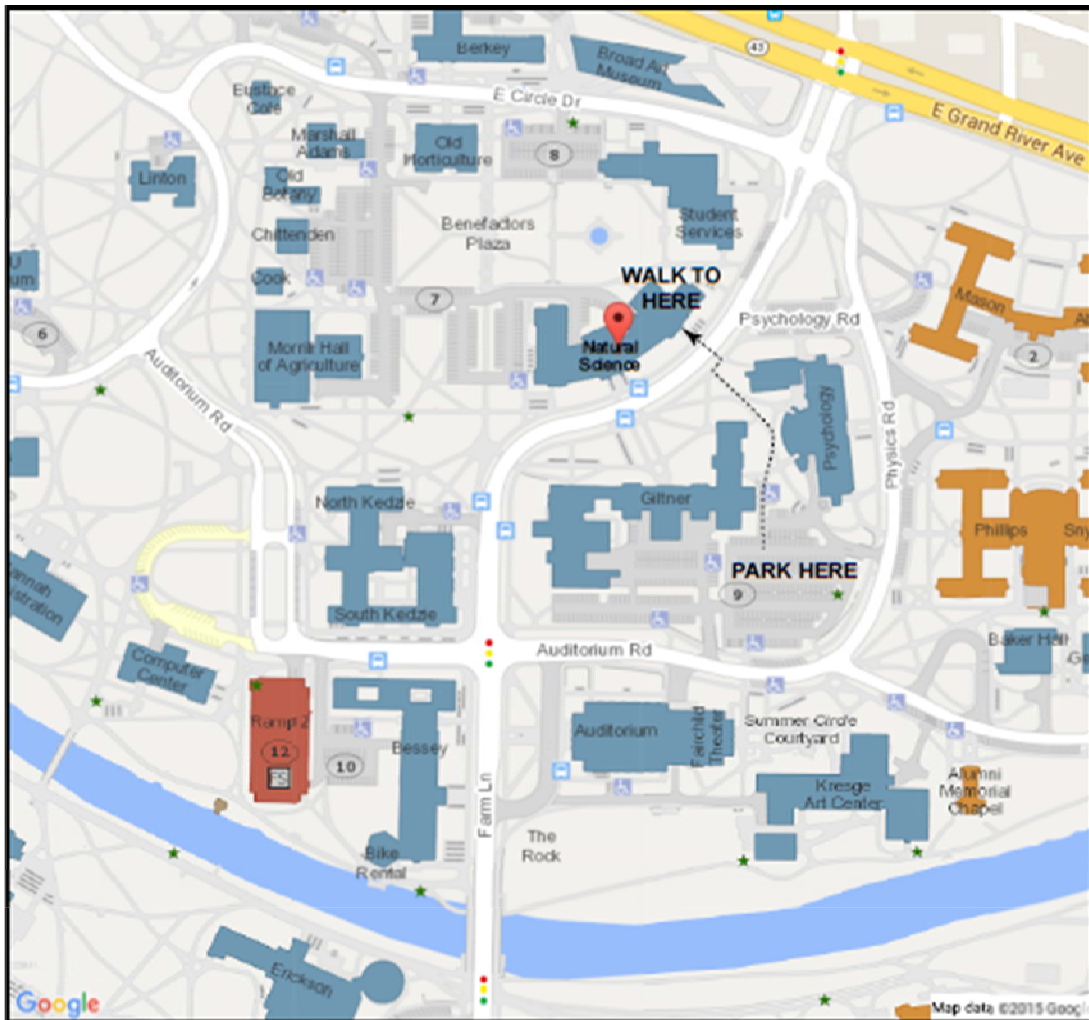
Since becoming involved in the mining industry in 2010, Austin has gained a variety of experience in the mining industry — from underground frac sand mining in Wisconsin to phosphate mining in central Florida. He is currently working to integrate unmanned aerial surveying in stockpile calculations, topography surveying, and mine planning.



Michigan Basin Geological Society

March 2016 Membership Meeting

When: Wednesday, March 9th 13th, 2016
Location: MSU, Natural Science Building, 7:00 PM in Room 204
Topic: Overview of Aggregate Production in Southern Michigan
Presenter: Austin Fisher, Stoneco of Michigan
Costs: No charge for this meeting for members.
Executive Committee Meeting: 4:30 PM at Claddaugh's Irish Pub, Lansing.
Members are welcome to attend.



Between 5pm & 6pm you can park in Lot 9 behind Giltner Hall and the Psychology Building (former Physics and Astronomy building) for free. Otherwise you can try your luck with the metered slots clustered around the Natural Science Building and the adjacent Student Services Bldg, no charge after 6.



UPCOMING EVENTS

March 9, 2016: MBGS Membership Meeting at Michigan State University. The speaker is Austin Fisher from Stoneco of Michigan presenting "Overview of Aggregate Production in Southern Michigan". Details are included in the newsletter.

March 16, 2016: Ohio Geological Survey Meeting, Hilton Easton, Columbus, OH, Determination of Wellbore Orientation in the Utica Shale of Southeast Ohio, Joseph P. Smith - PDC Energy, Inc., www.ohiogeosoc.org

April 2, 2016: MBGS Field Excursion, Detroit Sale Mine, Detroit, Michigan email Mark Wollansak at wollansak@voyager.net to get your name on the attendees list. Limited space.

April 12, 2016: SPE Michigan Section Meeting, Lansing, Michigan, Daniel Tormey, First-Ever Comprehensive Environmental Characterization of Hydraulic Fracturing for Shale Oil and Gas Production, <http://michigan.spe.org/home>

April 13, 2016: SPE Northern Michigan Section Meeting, Traverse City, Daniel Tormey, First-Ever Comprehensive Environmental Characterization of Hydraulic Fracturing for Shale Oil and Gas Production, <http://michigan.spe.org/home>

April 18–19, 2016: The Geological Society of America, North-Central Section, Champaign, Illinois, Call for papers until January 26, <http://www.geosociety.org/Sections/nc/2016mtg/index.htm>

April 29 - May 1, 2016: Kalamazoo Rock, Gem, Fossil, Jewelry and Mineral Show, Kalamazoo County Expo Center, <http://kalamazoorockclub.org/2016-kalamazoo-rock-and-mineral-show>

May 5-6, 2016: Institute on Lake Superior Geology - Annual Meeting 2016, Duluth, MN, <http://lakesuperiorgeology.org/Duluth2016/index.html>

May 19, 2016: SPE Midwest Gas Storage Section Meeting, Pontiac, Illinois, Duane McVay, The Value of Assessing Uncertainty (What You Don't Know Can Hurt You), <http://michigan.spe.org/home>

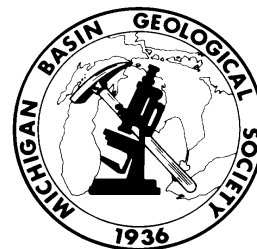
June 1-4, 2016: Canadian Society of Civil Engineers – Annual Conference, London, Ontario, <http://www.csce2016.ca/technical-program/>

June 14-15, 2016: MI AIPG Michigan Section Summer Workshop, Topic TBD <http://mi.aipg.org/default.htm>

September 9-13, 2016: 53rd Annual AIPG Meeting to be held in Santa Fe, New Mexico. Details available on the National AIPG website www.aipg.org



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MBGS PUBLICATIONS

<http://www.mbgs.org/publications.html>

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MBGS — Publications
P.O. Box 14044
Lansing, MI 48901-4044

Historical CD #1: Nine out-of-print publications from 1949 through 1965 and 1998, 2000, \$15

- The Stratigraphy of Manitoulin Island, Ontario, Canada, June 19-20, 1954
- The Devonian and Silurian Rocks of Parts of Ontario, Canada and Western New York, June 22-23, 1951
- The Traverse Group of the Northern Part of the Southern Peninsula of Michigan, June 16-17, 1949
- The Devonian Strata of the London-Sarnia Area, Southwestern Ontario, Compiled by Erwin C. Stumm, Lewis B. Kellum and Jean Davies Wright, June 9-10, 1956
- The Ordovician Rocks of the Escanaba-Stonington Area, Led by R. C. Hussey, June 2-3, 1950
- The Niagara Escarpment of Peninsular Ontario, Canada, June 18-19, 1955
- Lower Paleozoic and Pleistocene Stratigraphy Across Central Wisconsin, Compiled by C. E. Prouty, Led by L. M. Cline, J. L. Hough and R. F. Black, 1960
- Classic Silurian Reefs of the Chicago Area, by Donald G. Mikulic and Joanne Kluessendorf, June 27, 1998
- Geology of Central Ontario, Canada, 1965

Historical CD #2: Four out-of-print publications from 1947, 1959, 1983 and 1991, 2001, \$15

- Copper Country Field Trip, Michigan, June 20-22, 1947
- Geology of Mackinac Island and Lower and Middle Devonian, South of the Straits of Mackinac, June 12-14, 1959
- Tectonics, Structure and Karst in Northern Lower Michigan, August 1983
- Geology of the Pictured Rocks, Upper Peninsula, Michigan, July 11-13, 1991

Historical CD #3: Six out-of-print publications from 1948, 1952, 1990 - 1995, 2001, \$15

- Pleistocene and Early Paleozoic of the Eastern Part of the Northern Peninsula of Michigan, June 18-21, 1948
- Stratigraphy and Structure of the Devonian Rocks in Southeastern MI and Northwestern OH, June 20-21, 1952
- Lower Ordovician and Upper Cambrian of Wisconsin, May 10-12, 1990
- Guidebook to the Precambrian Geology and Metallogeny of the Central Upper Peninsula of Michigan September 12-13, 1991

Historical CD #4: Six out-of-print publications from 1957, 1958, 1961, 1967, 1968 and 1970, 2004, \$15

- Silurian Rocks of the Northern Peninsula of Michigan, 1957
- Cambrian Geology of Parts of Dickinson and Iron Counties, Michigan, June 1958
- Geologic Features of Parts of Houghton, Keweenaw, Baraga and Ontonagon Counties, Michigan, May 19-21, 1961
- Correlation Problems of the Cambrian and Ordovician Outcrops Areas, Northern Peninsula of Michigan 1967
- The Geology of Manitoulin Island, June 1968
- Devonian Strata of Alpena and Presque Isle Counties, Michigan 1970

Historical CD #5: Five out-of-print publications from 1971, 1989, 2001, and Oil & Gas Fields Vol. 1 & 2, 1969 & 1992, 2006, \$50

- Oil & Gas Fields Symposium, Volume 1, April 1969, 200 pp., maps, illus., second printing with updates
- Oil & Gas Fields Manual of the Michigan Basin, Volume 2, 1992, 520 pp., maps, illus.
- Glacial Geology of Southwestern Michigan, 1989, 53 pp. by A. Kehew, L. J. Schmaltz, and W. T. Straw
- Geology of the Lake Erie Islands and Adjacent Shores, 1971, 65pp., maps, illus. by Jane L. Forsyth
- Glacial Geology of Southwestern Michigan, Landforms of the Lake Michigan Lobe, Southwestern Michigan, 2001, AAPG Eastern Section Meeting Field Trip, 32 pp., maps, illus. by A Kehew and A. Kozlowski

Historical CD #6: Six out-of-print publications from 1946, 1953, 1963, 1966, 1978 & 1987 plus the Richfield Challenge, 1952 & Tom Knapp's MS Thesis, 2007 \$15.

- Guidebook for Ordovician Stratigraphy of the Cincinnati, Ohio and Richmond, Indiana Areas, June 12, 13, 1953 by W. H. Shideler and B. T. Sandefur
- Guidebook for Ontario Geological Excursion to Kettle Point – Owen Sound- Waubesa, June 21, 22, 23 1946 by W. A. Roliff, C.S. Evans and J.F. Caley
- Guidebook for the Stratigraphy of the Silurian Rocks in Western Ohio, May 31-June 2, 1963 by C. H. Summerson, Jane L. Forsyth, Karl V. Hoover and J. R. Ulteig
- Guidebook for Cambrian Stratigraphy in Western Wisconsin, May 21, 22, 1966 by Merideth E. Ostrom
- Geology of the Manitoulin Area, Special Papers #3, September 29, 30 and October 1, 1978 by J. T. Sanford and R. E. Mosher
- Middle Devonian Cratonic Carbonates and Shales in Southwestern Ontario, November 14, 1987 by Bruce Wilkinson
- The Richfield Challenge, A Review of the Richfield Developments in Michigan, 1952 by Gordon H. Hautan
- A Theory of Rogers City and Dundee Relationships in Central Michigan, Masters Thesis, 1947 by Tom Knapp

(NEW) Historical CD #7: Six out-of-print

Field Guidebooks from 1962, 1969, 1977, 1980, 1985 & 1988, \$15

- Silurian Rocks of the Southern Lake Michigan Area, 1962, James H. Fisher, Chairman, MBGS Annual Field Conference
- Studies of the Precambrian of the Michigan Basin, by Harold B. Stonehouse, 1969
- The Geology of the Marquette District: a Field Guide By F. W. Cambray, 1977
- Ordovician and Silurian Geology of the N. Peninsula of Michigan, 1980, R.B. Votaw, 40 pp., illus., maps
- Special Paper #4: Ordovician and Silurian Rocks of the Michigan Basin and its Margins, 1985 K.R. Cercone and J.M. Budai (eds.), 96 pp., illus.
- Upper Keweenaw Rift-Fill Sequence, Mid-Continent Rift System, Michigan, 1988, P.A. Daniels and R.D. Elmore, M.S. Wollensak, ed., 150 pp., illus., maps

OTHER SPECIAL OFFERS

- **Historical CD Set - # 1 – 7 (detailed above) for a special purchase price of \$95**
- **NE Lower Peninsula Geological Field Conf., 2004, T. Black, M. Wollensak, On CD \$10**
- **Stratigraphic Lexicon for Michigan, 2001, prepared by MBGS and published by DEQ, \$4**
- **Robert E. Mosher Geological Studies** A lifetime of geological research on Silurian Rocks with John T. Sanford. The disks are organized chronologically and include field work in North America and Europe. 2007, 2 CDs \$35.



MICHIGAN BASIN GEOLOGICAL SOCIETY FIELD EXCURSION SPRING 2016



The F3 Salt of the Michigan Basin Detroit Salt Company Detroit, Michigan

Saturday April, 2nd, 2016

This field excursion will allow participants a rare and unique opportunity to witness the F3 Bed in the Salina formation from the Late Silurian Period at a depth of approximately 1,160 feet below metropolitan Detroit. The Detroit Salt Mine has mined rock salt since 1906 making it one of the oldest underground room-and-pillar mines in the United States still in production and boasting over 100 miles of roads. The Detroit Salt Company operates the Detroit Salt Mine and specializes in the manufacturing and distribution of bulk rock salt, bagged rock salt and specialty ice melters.

The mine tour will be lead by E.Z. Manos and John Shook.

Cost is \$25 per person payable at the time of the trip. MBGS members only.

Two tour times are available:

1. 7:30am - 10am, arrive at 7:15 to pay and prepare for underground visit.
2. 11am - 1:30pm, arrive at 10:45 to pay and prepare for underground visit.

There is a ½ hour safety talk and two hour mine tour.

Please wear closed toe boots and jeans or other sturdy clothes.

No photography or video is permitted in the mine.

Space is limited to 17 participants per tour.

Contact Mark Wollensak, MBGS Field Trip Director at wollensak@voyager.net to register.



OTHER SPECIAL ANNOUNCEMENTS

Subject: Michigan Gem and Mineral Society scholarship

Each year the Michigan Gem and Mineral Society gives out two scholarships to graduating seniors from Jackson, Washtenaw, Ingham, Livingston and Hillsdale Counties, for their college education. Each scholarship is worth \$750.00. .

The deadline has been extended to April 1, 2016. These scholarships will be for the 2016-2017 college school year. Please ask if anyone may have a student who can use this scholarship. The application is on our website at: www.mgmsrockclub.com/ under Education Scholarships.

Subject: AIPG Michigan Section, Call for Sponsors



American Institute of Professional Geologists
MICHIGAN SECTION

Call For Sponsors:
American Institute of Professional Geologists
Michigan Section
6th Annual Technical Workshop
"Environmental Risk Management"

Break Sponsors:
Tuesday
Morning – \$150
Lunch –\$250
Afternoon – \$150
Dinner (2) – \$350
Social Event (4) - \$300
Wednesday:
Breakfast – \$200
Morning – \$ 150
Lunch(2) - \$250
Ice Cream Social - \$200

Leadership Sponsors
Huron: \$600 • Superior: \$1,100 • Michigan: \$1,600

Sponsorship Includes	Huron	Superior	Michigan
Free Workshop Registration	X	X	X(2)
Free Overnight Accommodation at RAM or Local Hotel		X	X(2)
6-foot Display Table in Sponsor Room		X	X
Advertisement and Company Logo in AIPG MI Section Publications for 1-Year		X	X
Advertisement in Workshop Materials	X	X	X

For More Information Please Contact:

Dawn Prell, AIPG Logistics Coordinator, at dawn_prell@golder.com; or

Subject: AIPG, Eastern Section, 2016 Annual Meeting

Eastern Section, American Association of Petroleum Geologists 2016 Annual Meeting Lexington, Kentucky



www.esaapgmtg.org

ES-AAPG 2016, c/o Ky. Geological Survey
2500 Research Park Dr., Lexington, KY 40511

ES-AAPG annual meeting set for September 2016 in Lexington, Kentucky

Several hundred professional geologists, as well as educators and students from around the eastern U.S., are expected to converge onto Lexington, KY, for the annual meeting of the Eastern Section of the American Association of Petroleum Geologists, September 25-27, 2016. With a theme of "Basins to Barrels," the meeting's program will focus on the opportunities and challenges of energy resources in the Appalachian, Illinois, and Michigan Basins, while offering participants the opportunity to sample the region's famous variety of bourbon whiskeys.

Co-hosted by the Geological Society of Kentucky and the Kentucky Geological Survey in the heart of Bourbon Country, the 2016 meeting will be at the Lexington Convention Center complex and adjoining Hyatt Regency Hotel in downtown Lexington. Meeting organizers are planning technical sessions and workshops on current industry issues, regulations, and research. Pre- and post-meeting field trips to unique geologic features in the Bluegrass Region will be offered on the 24th and 28th.

The meeting will kick off Sunday night with an icebreaker in the exhibitor hall followed by the popular "Jammin' Geologists" event, with entertainment by musically-inclined meeting participants. There will also be an off-site event Monday night, and networking breakout sessions throughout the meeting.

Professional organizations and energy-sector companies are encouraged to rent exhibit space or sponsor events during the meeting to promote their products and services. An "Exhibitors/Sponsors" link at the top of the meeting web site, <http://www.esaapgmtg.org/>, provides information about exhibit space and sponsorship levels.

Interested in presenting a paper at the meeting? The abstract deadline is May 20. Here is a sample of suggested broad topical areas for participants to consider. See the web site for more suggestions.

Conventional and Unconventional Petroleum Exploration
Hydraulic Fracturing, Waste Water Disposal, and Induced Seismicity
Structural geology of reservoirs and tectonic effects
Innovations in drilling and completion technologies
Regulations: state and federal oil and gas policies

Abstracts should be submitted at this web page: <http://goo.gl/Ea63nE>

For information and updates, check the meeting site regularly. Contact information, early registration, and booking for Hyatt hotel rooms at the meeting rate are posted there, along with links to web sites about the Lexington area.

To keep up with meeting news and the developing agenda, follow us on Facebook, <https://www.facebook.com/ESAAPG2016>, or connect with us through our Twitter feed https://twitter.com/es_aapg2016.

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Subject: Job Posting, University of Michigan



Stormwater Specialist
University of Michigan, Ann Arbor, MI
Date Available: Immediately

This posting is for an intermediate level storm water management professional that will work collaboratively as a member of the University of Michigan Occupational Safety and Environmental Health (U-M - OSEH) Department's Environmental Protection and Permitting Program (EP3). The primary focus of the position will include, but not be limited to, the overall management of the University's National Pollutant Discharge Elimination System (NPDES) Stormwater Permit and other related stormwater compliance issues. For consideration, applicants must have a minimum of 3 years' experience managing a MS4 NPDES permit, which includes all reporting and compliance requirements of the permit. Additional responsibilities may include: Joint Permit Applications, Threatened & Endangered Species Report evaluation, Wetland & Stream Delineation Report review, TMDL sampling, Floodplain Evaluation & permitting, and sanitary sewer sampling, permitting, & compliance.

The University of Michigan (U-M) is one of the best public universities in the country, and demonstrates a strong commitment to the protection of our natural resources and the environment. This open position is located in Ann Arbor, MI which is a diverse and vibrant community that offers a wide variety of social and cultural opportunities and a high-quality of life. The U-M offers a generous benefits package, details of which can be found at: <http://www.benefits.umich.edu/>

For more information regarding the Stormwater Specialist position (U-M Job ID 120768), please see the University of Michigan jobs webpage located at <http://umjobs.org/>.

Subject: The Kalamazoo Rock, Gem, Fossil, Jewelry and Mineral Show

A poster for the Rock & Mineral Show. The background is green. On the left, there is a large image of a dinosaur's mouth with sharp teeth. Text on the left includes the dates 'April 29-30 May 1 2016', the title 'Rock & Mineral Show' in large white letters, and the location 'Kalamazoo County Expo Center 2900 Lake St. Kalamazoo, Michigan'. On the right, there is a white box with text about the show's location, a list of items (Rocks, Minerals, Gems, Jewelry, and Fossils), a list of items (Fossils, too!), a list of items (Adults \$3 Kids under 12 free with paying adult), and a list of dates and times (Friday April 29 4pm-8pm, Saturday April 30 10am-6pm, Sunday May 1 10am-5pm). The website 'KalamazooRockClub.org' is listed at the bottom right. The text '501(c)3 nonprofit' is visible at the bottom left and bottom right.

June 14-15, 2016
6th Annual AIPG Michigan Section
Technical Workshop –
Environmental Risk Management: Why, When, Where, and How
Ralph A. MacMullen Conference Center, Roscommon

The AIPG Michigan Section is pleased to announce that registration is open for the 6th Annual AIPG Workshop. Environmental Risk Management is the selected theme this year with presentations ranging from managing risks for specific pathways like vapor intrusion to tools and methods used to make risk based decisions and lessons learned from these processes. The workshop brings together a broad base of topic expertise from consulting, regulatory, academia and owner perspectives in the environmental field. This unique workshop forum promotes collaboration for solving tough environmental problems through real site case studies as valuable technical learning tools to develop strategies for managing risks associated with releases of hazardous substances to the environment.

The why, when, where and how of the Environmental Risk Management workshop will provide the same thoughtful, high quality technical presentations and discussions as have come to be expected of the Michigan Section's annual workshop. Environmental Risk Management is the foundation for evaluating hazardous substances that have been released to the environment that often pose a threat to human health, safety, welfare and the environment. As professionals working in the environmental industry, we make decisions regarding potential and real exposures daily using tools developed from the latest advances in science and technology, statutory requirements, and professional experience

This is not a conference to be missed and registration is limited. If you are a practitioner, local, state or federal government regulator, tribal representative, environmental consultant, attorney, owner of contaminated property, or vendor of environmental equipment or services, this conference is for you. Be sure to sign up early. For more information, go to <http://mi.aipg.org/workshop/workshop.htm>.