

ON THE ROCKS

A Newsletter of the Michigan Basin Geological Society



2020-2021 Edition 2

www.mbgs.org

October 2020



ANNOUNCEMENTS

MBGS Membership Meeting, October 15th, 2020, 7:00PM: Chris Christensen an Environmental Hydrogeologist with the Michigan Department of Environment, Great Lakes and Energy (EGLE), Remediation and Redevelopment Division (RRD) will present "A case for evaluating lead exposure risk using Incremental Sampling."

Join Zoom Meeting:

<https://zoom.us/j/95927911157?pwd=QXV4QXUyZzNqWjIHZmdHdW5TdM5GZz09>

Meeting ID: 959 2791 1157 **Passcode:** Y0Jciw

Opportunity for Presenters: MBGS is seeking presenters for Michigan Basin geologically-related topics for our 2020-2021 virtual membership meetings. Our intent is to host monthly one-hour meetings October 2020 through May 2021. Meetings will be recorded and available after the initial live presentation. If interested please contact Jennifer Trout at jennifer.l.trout@wmich.edu or at (269) 290-4048.

Volunteer Opportunity: MBGS is in search of a Vice President, Secretary and Treasurer for the 2020-2021 year. If interested, please contact any one of our executive members.

OTHER NEWS

MBGS E.Z. MANOS MEMORIAL SCHOLARSHIP AVAILABLE

The entire US has been impacted this year and we regret any inconvenience, but scholarship funding for students is important to MBGS. We will award two scholarships of up to \$500 to students conducting graduate or undergraduate research in geology related to Michigan. The scholarships will be awarded at an upcoming MBGS meeting and winner(s) will be notified in December 2020. Candidates should complete and submit the scholarship application form by October 16, 2020 to John Yellich (john.a.yellich@wmich.edu). Title the email to Mr. Yellich: RE: MBGS Scholarship Application. Applications and more information can be found on MBGS's website: www.mbgs.org

MBGS MEMBERSHIP DUES

MBGS continues to strive to provide a platform for geologist and environmental professionals to connect and offer learning and field trip opportunities. For the 2020-2021 our annual due will increase to \$35 for members. Student dues will remain at \$10. Renewal notices are included in the newsletter.

LED FIELD LENS AND MBGS LANYARD The Michigan Basin Geological Society is offering geological field hand lens and lanyards. The field hand lens is a large 21mm lens with a 20X magnification. A pair of white LEDs provides illumination for all those darkened close-up viewing of rocks, minerals and fossils. A case is provided for the field lens with a key to remove the batteries. Batteries are included. The green lanyard has MICHIGAN BASIN GEOLOGICAL SOCIETY printed on one side of the 1" wide webbing. This lanyard is designed with a breakaway buckle clip and detachable keychain for versatile use and comfortable wearing. MBGS is offering the Lanyard/LED Hand Lens and Case combo for \$15 each and the Lanyard alone for \$5 each if picked up at a meeting or field trip. If you request to have your purchase mailed, standard costs for mailing container and postage will apply. Please contact Mark Wollensak at wollensak@att.net to order.



October 2020 MBGS Virtual Membership Meeting

When: October 15th, 7:00 PM, 2020

Join Zoom Meeting:

<https://zoom.us/j/95927911157?pwd=QXV4QXUyZzNqWjIHZmdHdW5TdM5GZz09>

Meeting ID: 959 2791 1157

Passcode: Y0Jciw

Presentation: A case for evaluating lead exposure risk using Incremental Sampling

Biography:

Chris Christensen is an Environmental Hydrogeologist with the Michigan Department of Environment, Great Lakes and Energy (EGLE), Remediation and Redevelopment Division, in Grand Rapids since 1992. Chris works on both Leaking Underground Storage Tank sites as well as chlorinated solvent and surficial soil contamination sites. He is on RRD Technical Teams related to Incremental Sampling, Non Aqueous Phase Liquids, Risk-based Corrective Action and Groundwater Modeling. Chris has a BS in Geology from Michigan State University and a MS in Hydrogeology from Western Michigan University.



Abstract:

Case Study: Shallow soil sampling as a result of aerial lead deposition.

Sixty (60) years of lead aerial deposition from a historical brass foundry onto fifty –nine (59) downwind residential lots created a tricky evaluation for the liable party, consultant and EGLE. Initial screening of the soil with over 375 X-ray Fluorescence (XRF) samples indicated high degree of lead heterogeneity at the sub 1-foot level. The EGLE teamed with the liable party and consultant to use the Data Quality Objective protocol along with Incremental Sampling methodology to provide a reliable, representative and reproducible evaluation of the residential direct contact risk that resulted in a residential No Further Action for all the properties.

EVENTS

Many organizations have switched to virtual platforms or have cancelled events. We are providing links for your reference. Please visit these sites to learn more about specific events and happenings. If you have an event to share, let us know!



American Institute of Professional Geologist – Michigan Section – <http://mi.aipg.org/newsletters.htm>

Central Michigan Lapidary and Mineral Society - <http://www.michrocks.org/>

Eastern Section AAPG - <https://www.esaapg.org/>

EGLE Calendar of Events - https://www.michigan.gov/egle/0,9429,7-135-3308_3333---,00.html

Flint Rock and Gem - <https://flintrockandgem.org/events>

Michigan Association of Environmental Professionals - <https://www.maep.org/>

Michigan Basin Geological Society – www.mbgs.org

Michigan Clean Water Corps - <https://micorps.net/about/>

Michigan Mineralogical Society - <https://www.michmin.org/>

Mid-Michigan Rock Club - <http://www.midmichrockclub.com/?Page=1>

Midwest Mineralogical and Lapidary Society - <http://www.mmls.us/>

Society of Petroleum Engineers - <https://www.spe.org/events/calendar/>

Currently Schedule Events

October 3, 2020: Livingston Gem and Mineral Society, Howell, Michigan, <https://livingstongems.com/>

October 9-11, 2020: Detroit Gem, Mineral & Fossil Show, Macomb Community College Expo Center

October 11-17, 2020: Earth Science Week

October 14, 2020: AIPG & MAEP Joint Meeting, virtual <https://www.maep.org/event-3975384>

October 15, 2020: MBGS Membership Meeting (virtual), Chris Christensen (EGLE) will present “A case for evaluating lead exposure risk using Incremental Sampling”

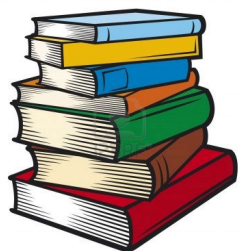
October 16, 2020: MBGS Scholarship Applications Due. Mail applications to John Yellich (john.a.yellich@wmich.edu) and title email “RE: MBGS Scholarship Application. Applications are available on the website at www.mbgs.org

October 27-28, 2020: Great Lakes PFAS Summit, Lansing, Michigan, virtual https://www.michigan.gov/egle/0,9429,7-135-3308_3333---,00.html

December 1-3, 2020: Great Lakes Water Infrastructure Conference, Novi. https://www.michigan.gov/egle/0,9429,7-135-3308_3333-500683--,00.html

December 3, 2020: AIPG Michigan Section Annual Meeting, Weber’s Inn, Ann Arbor, <http://mi.aipg.org/default.htm>

June 14-16, 2021: Annual Environmental Risk Management Workshop: “The Data Tell the Story” at the Ralph A. MacMullan Conference Center, Roscommon, Michigan.



ONLINE RESOURCES

- **Michigan Geology Maps Available:** <https://www.michigan.gov/deq/0,4561,7-135-3304-116670--,00.html>
- **Digital Geology Library Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2010-01-20_307979_7.pdf
- **GeoWebFace:** https://www.michigan.gov/deq/0,4561,7-135-3311_60700---,00.html
- **Digital Geology Library Mining Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2013_06_22_mining_425595_7.pdf
- **Michigan Geological Survey:** <https://wmich.edu/geologysurvey>
- **USGS Michigan Geological Map Data:** <https://mrdata.usgs.gov/geology/state/state.php?state=MI>
- **CMU, Clarke Historical Library, Michigan Geology:**
https://www.cmich.edu/library/clarke/ResearchResources/Michigan_Material_Statewide/Michigan_Oil_and_Gas_Industry/History_of_Michigan_Oil_and_Gas/Pages/Michigan-Geology.aspx



www.mbgs.org

MICHIGAN BASIN GEOLOGICAL SOCIETY OFFICERS 2020-2021

PRESIDENT: CHRIS CHRISTENSEN, Geologist
Michigan Department of Environment, Great Lakes and Energy Remediation and
Redevelopment Division
350 Ottawa NW, Grand Rapids, MI 49503
(616) 446-7582 christensenc@michigan.gov

VICE PRESIDENT: VACANT

SECRETARY: *acting* JOHN A. YELlich, Director
Michigan Geological Survey, Western Michigan University
1903 West Michigan Ave, Kalamazoo, MI 49008-5241
W (269) 387-8649 C (303) 901-2886; john.a.yellich@wmich.edu

TREASURER: *acting* MIKE POZNIAK, Senior Geologist
Arcadis
300 S. Washington Square, Ste 315, Lansing, MI 48933
W (517) 324-5054 C (517) 898-3839 mike.pozniak@arcadis.com

BUSINESS MANAGER: PETER ROSE, Geologist
Office of Minerals Management, Michigan Department of Natural Resources
W (517) 284-5901, RoseP1@michigan.gov

PAST – PRESIDENT: JENNIFER TROUT, Staff Geologist
Michigan Geological Repository for Research and Education
1903 W. Michigan Ave., Kalamazoo, MI 49008-5241
W (269) 387-8633 C (269) 290-4048, jennifer.l.trout@wmich.edu

NEWSLETTER EDITOR: ARLENE ANDERSON-VINCENT, Natural Resource Manager
Nestle Waters North America
19275 Eight Mile Road, Stanwood MI 49346
W (231) 823-8451 arlene.anderson-vincent@waters.nestle.com

PUBLICATIONS: JOHN SHOOK, jshook@detroitssalt.com

ELECTRONIC PUBLICATIONS: MARK WOLLENSAK, CPG, wollensak@att.net

WEBMASTER: JOHN ESCH, eschj@michigan.gov

MBGS PUBLICATIONS

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

Historical publications now available on USB Flash Drives". Each USB Flash Drive is 8GB

Prices include postage, handling and any applicable sales tax.
Orders for publications should be prepaid in U.S. Funds and addressed to:

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

Historical CD #7: 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. Cercione 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.

INVOICE

ANNUAL DUES FEE:

INVOICE NUMBER	MBGS 2021 Dues
INVOICE DATE	October 5, 2020
OUR ORDER NO.	
YOUR ORDER NO.	
TERMS	30 Days
SALES REP	
SHIPPED VIA	USPS or EMAIL

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	MBGS 2021 Annual Dues	\$ 35.00	\$ 35.00
		SUBTOTAL	\$ 35.00
		TAX	
		FREIGHT	

MAKE ALL CHECKS PAYABLE TO:
Michigan Basin Geological Society
Attn: Treasurer - 2021 Annual Dues
P.O. Box 14044
Lansing, Michigan 48901

\$	35.00
PAY THIS AMOUNT	

Return this copy
with payment

THANK YOU FOR YOUR CONTINUED SUPPORT!

INVOICE

STUDENT ANNUAL DUES FEE:

INVOICE NUMBER	MBGS 2021 Dues
INVOICE DATE	October 5, 2020
OUR ORDER NO.	
YOUR ORDER NO.	
TERMS	30 Days
SALES REP	
SHIPPED VIA	USPS or EMAIL

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	STUDENT MBGS 2021 Annual Dues	\$ 10.00	\$ 10.00
		SUBTOTAL	\$ 10.00
		TAX	
		FREIGHT	
DIRECT ALL INQUIRIES TO: Mike Pozniak			MAKE ALL CHECKS PAYABLE TO: Michigan Basin Geological Society
			\$ 10.00 PAY THIS AMOUNT

MAKE ALL CHECKS PAYABLE TO:
Michigan Basin Geological Society
Attn: Treasurer - 2021 Annual Dues
P.O. Box 14044
Lansing, Michigan 48901

Return this copy
with payment

THANK YOU FOR YOUR CONTINUED SUPPORT!