

ON THE ROCKS

A Newsletter of the Michigan Basin Geological Society



2021-2022 Edition 5

www.mbgs.org

February 2022



MBGS FEBRUARY MEETING

MBGS Membership Meeting, February 9th, 2022, 7:00PM: Allen Deming, Dave Farner, Mark Nida, Randall Schroeder, Mark Wollensak, members of the Michigan Basin Geological Society, present “Rafting the Colorado River through the Grand Canyon: A Summary of our Adventure”. A rollicking review of the MBGS May 2021 Grand Canyon Adventure as told by five MBGS members. Using slides, video and a sometimes salty narrative, these fellow travelers reminisce of their experience, feelings and insights on this Grand expedition.

JOIN ZOOM MEETING

<https://us06web.zoom.us/j/82682557674?pwd=VGlyYXVRRHpgSG4xdzIWL2dIQkVmdz09>

Meeting ID: 826 8255 7674

Passcode: YQ4ZtD

Call In:

+13017158592, 82682557674#

*528414# US (Washington DC)

+13126266799, 82682557674#

*528414# US (Chicago)

MBGS SEEKS EXECUTIVE COMMITTEE CANDIDATES FOR 2022-2023

Are you interested in becoming more involved with the Michigan Basin Geological Society? This summer we will hold elections for the position of Vice President, Treasurer, and Secretary for the 2022-2023 business year. Please contact any of our current executive committee members or visit our website to get information.

CORE DISPLAY EDUCATIONAL TOOL AVAILABLE TO MEMBERS

MBGS has a core display available for use that visually demonstrates permeability/porosity. There are educational posters available for use with the core display. Contact any of the officers to reserve this great educational tool.



LED FIELD LENS AND MBGS LANYARD AVAILABLE

The Michigan Basin Geological Society is offering to its members and non-members this geological field hand lens and lanyard (photo attached). 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 unfussy 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.





February 2022 MBGS Virtual Membership Meeting

Presentation: Rafting the Colorado River through the Grand Canyon: A Summary of our Adventure

Presenter: Allen Deming, Dave Farner, Mark Nida, Randall Schroeder, Mark Wollensak

When: February 9th, 7:00 PM, 2022

Join Zoom Meeting: <https://us06web.zoom.us/j/82682557674?pwd=VG1YaXVRRHpgSG4xdzlwL2dlQkVmdz09>

Meeting ID: 826 8255 7674

Passcode: YQ4ZtD

Abstract: A rollicking review of the MBGS May 2021 Grand Canyon Adventure as told by five MBGS members. Using slides, video and a sometimes salty narrative, these fellow travelers reminisce of their experience, feelings and insights on this Grand expedition.



The MBGS Grand Canyon Field Excursion was originally scheduled in May 2020 was postponed for one year because of the National Park System shutting down all activities early in the pandemic. Rescheduled for May of 2021, the group met in Marble Canyon to embark on an epic adventure few can do. This presentation will provide general information and some details on our trip of 28 Michiganders, one Professor of Geological Sciences, three Hatch River Expedition crew members and two rafts. This may provide those interested in such an adventure a primer on what may be encountered on a 7-day motorized river rafting trip through one of our planet's "Seven Greatest Natural Wonders". The presentation includes approximately 100 photographs/slides and a 5-minute video.

Biographies:

Allen Deming: Education: Michigan State University, BA, Business Administration/ Marketing; University of Dayton, Masters Certificate, Executive Leadership Development, Employer: Mackinaw Watercraft, LLC – Owner, A lifelong resident of Michigan, Allen grew up heavily influenced by the outdoor lifestyle. Raised in the building business he took up wood working early and kept at it as a hobby until 2006. A corporate buy-out afforded him the opportunity to leave a career in corporate sales and management and turn a hobby into a profession.

Dave Farner: Education: Northern Michigan University graduate - Earth Sciences, Northwestern Mich College graduate - Petroleum Engineering Technology, Retired after working nearly 40 years in a variety of geological and engineering positions in the Oil & Gas Industry, Second river trip on the Colorado and this one was just as exciting as the first one in 1974.

Mark Nida: Education: Michigan Technological University, Retired Geological Engineer, Lifetime member of the Michigan Basin Geological Society and has held numerous positions including running field excursions for the last 35 years.

Randall Schroeder: Education: BS Chem Eng., The Ohio State University, MBA, Michigan State University, Work Experience: Shell Oil Company (6yrs), Dart Oil & Gas Corp (20yrs), Consulting (20+yrs), First trip on the Colorado River.

Mark S. Wollensak, PG, CPG: Education: BS in Geology and Geophysics, College of Natural Sciences, Michigan State University, 1982 Employer: Senior Geologist/Project Manager, Hamp, Mathews & Associates, Inc., Bath, Michigan. Active Officer with the Michigan Basin Geological Society since 1987, President, Vice President, Field Trip Director, Newsletter Editor, Digital Publications Manager, positions held., Employed since 1992 with Hamp, Mathews & Associates, Inc., and EarthFax Engineering, Second MBGS Rafting trip, first one in 2005, Active in Dimondale BSA Venture Crew 43 as Advisor (6 years) and Associate Advisor (present)

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/>

EGL E 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/>

On the Calendar

February 9th, 2022: MBGS Monthly Meeting, Mark Wollensak, MBGS Grand Canyon Field Excursion

February 10th, 2022: Michigan Section AIPG meeting, Howell, Michigan. Stacey Hannula of Arcadis will be speaking on “Ozone Fractionation for PFAS Removal in Leachate at the DSC McLouth Steel Gibraltar Superfund Site.

March 9th, 2022: MBGS Monthly Meeting, John Esch, LiDAR

April 13th, 2022: MBGS Monthly Meeting

June 14-15th, 2022: Environmental Risk Management Workshop at the Ralph A. MacMullan Conference Center, Roscommon, Michigan

August 6-9th, 2022: 58th Annual AIPG Meeting to be held in Marquette, Michigan

www.mbgs.org

ONLINE RESOURCES

- **Central Michigan University, 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
- **Digital Geology Library Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2010-01-20_307979_7.pdf
- **Digital Geology Library Mining Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2013_06_22_mining_425595_7.pdf
- **GeoWebFace:** https://www.michigan.gov/deq/0,4561,7-135-3311_60700---,00.html
- **Michigan Department of Natural Resource Calendar:** [Michigan.gov/DNRCalendar](https://www.michigan.gov/DNRCalendar)
- **Michigan Geological Survey:** <https://wmich.edu/geologysurvey>
- **Michigan Geology Maps Available:** <https://www.michigan.gov/deq/0,4561,7-135-3304-116670---,00.html>
- **USGS Michigan Geological Map Data:** <https://mrdata.usgs.gov/geology/state/state.php?state=MI>
- **USGS Publications:** [U.S. Geological Survey Publications Warehouse \(usgs.gov\)](https://www.usgs.gov/pubs)



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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.

AIPG 2022 National Annual Conference, Marquette, Michigan

Call for Abstracts and Student Poster Contest, Submit by May 9, 2022

AIPG is currently accepting abstracts for oral presentations and poster presentations for the 59th American Institute of Professional Geologists' National Conference that will be held in Marquette, Michigan, on the beautiful shores of the world's largest freshwater lake.



**Geology:
The Cornerstone
of our Future**
August 6-9 | Marquette, MI

This year's meeting theme is "Geology: The Cornerstone of our Future". Geology plays a significant role in today's society and will become ever more important in the years to come. Our reliance on basic resources and building materials such as sand and gravel for roads, limestone for concrete, iron for structural purposes, and other base metals for electronics and other applications will not diminish; rather, it will become a greater concern as existing deposits are depleted or rendered inaccessible.

The ever-increasing number of applications of rare earth elements has created a greater demand on extraction and several of these elements will be needed in ever greater quantities to assist in the transition to a reduced carbon emission future. Geologists will be needed to identify, quantify, and yes, help with extraction of these mineral deposits.

A reliable source of clean freshwater is a basic necessity for life, and the onset of climate change is impacting these resources. Changing climate patterns mean that widespread areas may become stricken with drought. This will mean that significant depletion of groundwater aquifers and surface water reservoirs will occur in these areas as withdrawals exceed natural replenishment. This is already affecting agricultural practices and driving migration of human populations to areas where this precious resource may be found, resulting in conflict and/or political unrest. In addition, anthropogenic activities have contaminated some water resources and have made these resources locally unusable or require expensive treatment.

The national conference provides opportunities to present and learn from experts in various geology and geoscience fields, with networking opportunities throughout the conference. Earn CEUs too!

To have your abstract considered for an oral presentation or poster presentation, please complete the Abstract Submittal Form by the deadline of May 9, 2022. Abstracts must be in Word format, single-spaced, 12 point Times New Roman or Arial, and should not exceed one page. No tables or pictures will be accepted. You will be notified by May 23, 2022, if your abstract has been accepted. Technical presentations will be scheduled for Monday, August 8th. Posters will also be presented on Monday, August 8th. Authors who wish to publish a paper in AIPG's *The Professional Geologist* (TPG) can contact AIPG for additional information at aipg@aipg.org.

AIPG will review, edit, and publish a digital pdf of the conference abstracts on their website and in the conference app. A printed program will also contain all accepted abstracts.

An author who submits an abstract must have the intention of attending, registering, and presenting at the conference once the submission is accepted for either an oral presentation or poster presentation. Repeated or consecutive last-minute cancellations by presenters may result in future submissions being denied.

AIPG Student Poster Contest

Students can submit an abstract for a poster presentation and enter the poster contest to win cash prizes! The two categories for the student poster contest are:

Undergraduate Cash Prize - 1st Place: \$500, 2nd Place: \$200, 3rd Place: \$100

Graduate Cash Prize - 1st Place: \$600, 2nd Place: \$250, 3rd Place: \$100

- To be entered into the student poster competition you must be a student member of AIPG. Go to www.aipg.org to join for free.
- Poster contest categories (undergraduate and graduate) will be based on the student's enrollment at the time the abstract is submitted.

Playing the Knox Unconformity: Reconnaissance and High Grading Prospects in Knox County, Ohio by Integrating Geological, Petrophysical and 2D/3D Geophysical Interpretations

A one-day workshop led by GVERSE-GeoGraphix offered by the Ohio Geological Society and sponsored by the Ohio Oil and Gas Association in conjunction with the Ohio Oil and Gas Association 2022 Winter Meeting

Instructors: Fred Poland and Hamid Ali Shahid, GVERSE – GeoGraphix, LMK Resources Inc.

When: Wednesday, March 2nd, 2022 from 10:00a.m. to 4:00p.m. with one hour for lunch.

Where: Hilton at Easton, 3900 Chagrin Dr, Columbus, OH 43219, [\(614\) 414-5000](tel:6144145000)

What: Representatives from GeoGraphix software will review the fundamentals of the GeoGraphix software package and instruct attendees through multi-data visualization exercises using conventional exploration targets from Knox County, Ohio and the U.S. There will be a limit of 15 GeoGraphix temporary licenses (Paperspace) for those with laptops. This workshop will also accommodate a limited number of those wishing to observe without a laptop. CEUs will be offered.

Who should attend: Entry level to experienced geo-scientists interested in an introduction or refresher course in exploration using the GeoGraphix digital data visualization tools.

Cost : Professional registration rate is \$99 and includes a temporary PaperSpace license, but requires you to supply your own laptop computer; Student registration rate is \$79 and includes a temporary Paperspace license, but requires you to supply your own laptop computer (student rate limited to 3 total individuals). Professional and student observers rate is \$59 and does not require a laptop.

Registration: For online registration and additional course information go to the Ohio Geological Society website at: <https://www.ohiogeosoc.org/events/geographix-workshop/>

Overview: This course covers surface substitution, mapping anisotropic data, mapping unconformities, faulting, integrating well and seismic data, and, if time allows, volumetrics. An overview lecture introduces each topic, followed by in-depth exercises using Ohio data designed to reinforce the practical points of the lesson. Geological, petrophysical, and 2D/3D geophysical data has been compiled for portions of Knox County, Ohio and will be integrated into the exercises.

OGS will offer a certificate for CEUs (0.5) or PDHs (5.0) to those that mark the CEU/PDH checkbox found in the online-registration process.

IMPORTANT: Registrants designated to use the PaperSpace software license provided must bring a laptop to the workshop to participate in the exercises.

JOB OPENINGS

Environmental Project Manager, Wood Traverse City, MI

Key Responsibilities

- Manage environmental projects, site characterization, remedial designs, and preparation of reports and other related documentation,
- Network with clients to effectively position for and develop work opportunities,
- Prepare contract proposals and cost estimates,
- Manage project contracts, staff, budgets and schedules,
- Manage clients and associated project work with the support of key staff in accordance with state and Federal regulations and protocols,
- Perform, analyze and report on specific environmental project tasks,
- Research and recommend solutions to technical problems in accordance with accepted scientific/engineering practices and principles, and
- Participation and collaboration with other Wood offices and staff on larger, multidisciplinary assignment

Project Consultant, SMEUSA, Lansing, MI

Responsibilities for this position include:

- Identifying and securing clients and business/project opportunities both independently and in support of other local, regional and corporate business development activities.
- Preparing successful proposals, negotiating professional service fees and contracts.
- Identifying and participating in professional and business organizations and other networking activities that will foster relationships with clients and potential clients.
- Learning about other SME services to assist in promoting and expanding environmental and other SME services to new and existing clients.
- Developing and implementing environmental site investigations, brownfield redevelopment strategies and environmental response actions.
- Mentoring and leading project team members to successfully complete assigned responsibilities.
- Ability to build a practice by bringing or establishing a network of prospects and clients.
- Demonstrable experience in project management; site investigation; data evaluation; validation and visualization; due diligence; report preparation; report review; interaction of environmental conditions and regulations with construction and development; brownfield incentive procurement and management; and working with owners and regulators to achieve and implement regulatory closures.
- Candidates must be well versed in state and federal environmental regulations and applications.
- Demonstrated client maintenance capabilities and strong understanding of project economics, contracting, and liability management.
- Exceptional ability to synthesize data and communicate effectively, both orally and in writing, with other team members and clients.
- A minimum of 10 years of experience (preference will be given to candidates with experience in Environmental Consulting), 40 Hour OSHA HAZWOPER training, and a BS or MS in Environmental Engineering, Geology, or Hydrogeology preferred.

Property Specialist 13, State of Michigan Lansing, MI

Job Description

This position within the Lease Management (LMU) unit serves as a staff specialist, responsible for administering the direct leasing programs related to the leasing of all oil and gas, mineral, and underground gas storage rights owned by the DNR as well as all other State agencies. Duties include analyzing and evaluating complex direct lease applications and acting as a technical advisor and liaison to the public and other staff members.

This position is responsible for negotiating initial bonus, royalty rates, and terms of direct leases issued through the direct lease process for all oil and gas, mineral, and underground gas storage rights owned by the State of Michigan. This position is also responsible for reviewing and negotiating lease extension requests for all State of Michigan leases, managing lease reclassifications, changes in lease restrictions, variances of lease terms, MMS Land Ownership Tracking System (LOTS) business Co-leader, and ensuring compliance with administrative rules and department procedures. In addition, this position coordinates, and assists when needed, the processing by coworkers of lease assignment requests.

This position requires a high degree of expertise and advanced knowledge of Michigan's Natural Resources and Environmental Protection Act (NREPA) as well as the Administrative Rules for Leasing on State Lands, the LOTS database, the Parcel Review System (PRS), Michigan Dormant Minerals Act, the Marketable Record Title Act, experience in Michigan mineral title examination, and current real estate laws and practices.

Permit Coordinator (Geologist 9-P11), State of Michigan Lansing, MI

Job Description

This position is responsible for processing of applications and issuance of permits to drill oil and gas wells pursuant to Part 615, Supervisor of Wells, of the Natural Resources and Environmental Protection Act (NREPA), 1994 Act 451, as amended. Proper review of applications ensures protection of environmental values and prevents waste and damage to, or destruction of, surface and underground resources, neighboring properties, and public wellbeing.

Assistant Environmental Project Manager, Haley & Aldrich Ann Arbor, MI

Duties/Responsibilities

- Work collaboratively with multi-disciplinary project teams.
- Work with and support Project Managers on all aspects of projects to address client goals and objectives; with primary focus on:
 - Site investigations to delineate the extent of contamination in soil, groundwater, surface water, etc.
 - Developing remedial alternative analysis assessments and remedial action work plans; and preparing proposals, project report/deliverables, and regulatory compliance submissions.
- Be capable of managing financial and technical aspects of project tasks
- Execute projects to meet technical, quality, budgetary and scheduling requirements.
- Build and maintain trusted client relationships.

Mid-Level Geologist/Hydrogeologist, Wood Traverse City, MI

Key Responsibilities

- Manages the development of work scope, schedule, and budget definition for proposals
- Directs the execution of work, including subcontractor procurement
- Assists the Project Manager and team in ensuring effective client and regulatory agency communication and relations
- Prepare reports, work plans, health and safety plans, and quality control plans under the supervision of senior staff
- Performs data quality assurance review of field and laboratory work product to determine whether data quality objectives have been met
- Direct multi-media sampling, including soil, groundwater, vapor, indoor air, asbestos, and other regulated materials
- Assists the Project Manager on technical assignments and management of specific elements of the project in the field as well as in the office (i.e., task management)

- Evaluates compliance of subcontractor work against technical specifications and scopes of work
- Demonstrates competency in a combination of areas including field supervision, technical knowledge and task management
- Conducts moderately complex scientific assessment and analysis
- Prepares or assists in preparing remedial investigation reports, remedial/corrective action plans, remedial designs, due diligence reports, and related documents; Includes work summaries, data summaries, data synthesis (e.g., conceptual site models), engineering calculations, summary tables, figures, engineering drawings and specifications, and report text
- Assists Project Manager with cost and schedule control
- Reviews payment applications, requests for information, change order requests and other subcontractor submittals
- Demonstrates and maintains competency in a diverse set of local, state, and federal environmental regulations
- Motivates, trains, and mentors subordinate staff assigned to his/her tasks or projects
- The position may entail approximately 90% office work and 10% field work on a variety of projects, primarily for industrial and commercial client

Assistant Project Manager, Arcadis Novi, MI

Role Accountabilities-

- Assist Project Managers with managing scope, schedule, and budget for tasks including site investigation, remediation system operations maintenance and monitoring, environmental sampling (soil, groundwater, vapor) and other field work
- Evaluate data to support conceptual site models for environmental investigations, delineate the nature and extent of contamination, evaluate of remedial alternatives, and modify and optimize environmental-monitoring programs
- Technical report writing and review
- Prepare cost estimates and proposals
- Work effectively with project teams, clients, and all other stakeholders
- Coordinate work schedules with Arcadis staff and subcontractors
- Health and safety stewardship, including local field visits
- May require some regional travel for field visits up to 20% of the time

Staff Geologist / Engineer, Tetra Tech Ann Arbor, MI

- Performance of field tasks including treatment system operation, optimization, and maintenance, soil and groundwater sampling, vapor intrusion sampling (soil gas, subslab and indoor air); environmental assessments and site inspections, remediation implementation including both self- performance and oversight of subcontractors
- Performance of office tasks including work plan development, remediation design, data evaluation and reporting. Tasks associated with reporting may include preparation of text, tables, charts, and figured.
- Management of tasks and small projects under guidance of Senior Project Manager supporting development as a Project Manager

Project Manager / Scientist (LUST), PM Environmental, Inc. Berkley, MI

Desired Qualifications Include

- Seven (7) to ten (10) years of Leaking Underground Storage Tank experience (LUST/Part 213)
- Bachelor's degree in Geology, Environmental Science, Engineering, or a related field.
- Knowledge of Michigan's environmental regulations
- Mix of office experience (Initial Assessment Reports, Final Assessment Reports, Closure Reports, project & budget management, etc) and field experience (subcontractor oversight, soil/GW sampling, etc)
- Excellent communication, analytical, organization and time management skills are critical to success in this position
- Must be detail-oriented and a team player
- A valid driver's license is required
- Ability to work in various settings and climates
- Ability to work flexible hours and be available for travel

Environmental Quality Analyst 9-P11/12, State of Michigan Lansing, MI

The person in this position will be involved in the development of strategies to meet federal Clean Air Act requirements, including the development of new and revised administrative rules; development of attainment plans and demonstrations; analysis of control measure options; preparation of revisions to the State Implementation Plan (SIP) for submittal to the United States Environmental Protection Agency (EPA); and the analysis and interpretation of federal and state laws, regulations, guidance, and technical data related to the attainment of National Ambient Air Quality Standards (NAAQS). This work will require coordination with other state, local, and federal agencies, as well as private sector stakeholders. Duties will also include technical writing; and outreach/communication about activities, analysis, and requirements to internal and external stakeholders.

Environmental Scientist/Geologist/Engineer, Jacobs Kalamazoo, MI

Here's What You'll Need

- Bachelor's degree in geology or related field
- Professional experience with various media (e.g., soil, soil vapor, groundwater, surface water, and sediment) investigations, data assessments and evaluations, remediation technologies, groundwater well installation, past and current client relationships, agency correspondence, and a construction management emphasis
- Professional experience in field work methodology and procedures used in the environmental industry
- Experience working on active project sites and overseeing subcontractors
- 40-hr HAZWOPER certification or the ability to attain this certification
- Ability to perform 70-100% local (Kalamazoo, MI) field work

Geologist, Beam, Longest and Neff, LLC Wixom, MI

Summary of Duties and Responsibilities:

- Conduct Phase I Environmental Site Assessments
- Site inspections
- Research (historical record searches and file record reviews)
- Report preparation
- Conduct Phase II Environmental Site Assessments
- Logging soil cores
- Sampling environmental media (soil, groundwater, soil gas/vapor)
- Mapping
- Data analysis
- Generating boring logs
- Generating analytical tables
- Work plan preparation
- Coordination with subcontractors and property owners
- Assist with risk analysis
- Assist with vendor procurement

Environmental Quality Analyst 9-P11/12 - Warren District Office, State of Michigan Warren, MI

Under the direction of a Unit Supervisor, manage state funded investigation and corrective action activities at sites of environmental contamination in accordance with Part 213 and Part 201 of the Natural Resources and Environmental Protection Act (NREPA), PA 451, 1994. The position also reviews reports submitted by private parties and oversees site investigation and response activities conducted by private parties and their contractors, consultants, project managers consistent with all the requirements of Part 201 and Part 213. Direct oversight of on-site cleanup activities at private and state-funded sites, including sampling and cleanup verification.

MDOT Transportation Technician 11 (Lead Construction Technician) - Grand Rapids TSC

Serve as lead worker and participate in the full range of duties in all areas of inspection, surveying, and office work on construction of highways, bridges, and allied transportation facilities. Oversee lower-level Transportation Technicians by assigning and reviewing work assignments, determining priorities, and training employees. Monitor, maintain, adjust, and document all work zone operations. Participate in winter assignments throughout the Region such as design, traffic and safety, and other duties as assigned.

Sr. Associate Geologist - Project Manager, Wood United States

Key Responsibilities

- Manage environmental projects / programs including, site characterization, remedial designs, and preparation of reports and other related documentation
- Prepare proposals and assist in the preparation of large-scale proposals including developing work scopes, task-level budgets, and cost estimates
- Maintain successful client relations while working on multiple projects at one time
- Manage project contracts, staff, budgets and schedules
- Manage clients and associated project work with the support of key staff in accordance with state and Federal regulations and protocols
- Perform, analyze and report on specific environmental project tasks,
- Research and recommend solutions to technical problems in accordance with accepted scientific/engineering practices and principles
- Participate and collaborate with other Wood offices and staff on large, multidisciplinary assignments
- Motivate, train, and mentor staff assigned to his/her tasks or projects.

Civil Technician IV, AECOM Grand Rapids, MI

Job Summary/Responsibilities

- Responsible for performing onsite construction inspection and performing engineering activities to support planning, designing, construction, maintenance, and alteration of buildings, highways, bridges, airports, dams, tunnels, water/sewage systems, power plants, and transportation system projects.
- Includes estimating and determining feasibility based on analysis of maps/aerial photographs, soil composition, terrain, hydrology, geology, and environmental impact studies.

Environmental Engineer / Scientist / Hydrogeologist (Entry-Level), GHD Farmington Hills, MI

Specific responsibilities will include:

- Providing technical and project management services to our existing and future clients on a variety of projects
- Developing and implementing scopes of work, budgets, and schedule
- Completing both office- and field-related responsibilities
- Communicating with internal and external clients
- Coordination with and management of contractors and service providers
- Preparation and review of reports
- Assisting with Emergency Response associated with train derailments, pipelines, or other response needs throughout Midwest region
- Participation in a proactive safety culture, aspiring for continuous improvement
- Travel and field work up to 75% of the time (can vary based on project needs)
- Field work to include, but not be limited to: soil, soil gas and groundwater sampling, monitoring well installation oversight, contractor oversight, operations and monitoring of remediation systems

Industrial Hygienist / Environmental Scientist, DLZ Corporation Detroit, MI

Duties & Responsibilities

- Perform industrial hygiene field measurements (including post asbestos abatement air monitoring) and evaluations, prepare complete and accurate technical reports of survey finding, and provide recommendations for corrective actions.
- Determine appropriate monitoring and sampling strategies
- Evaluate and interpret monitoring and sampling results, make determinations, and develop corrective strategies
- Advise/provide technical guidance regarding Industrial Hygiene issues and effectively address Industrial Hygiene standards while meeting business needs
- May assume lead role in a segment of a project and/or coordinating work of specialty groups related to assigned project.
- Perform work with general guidance and supervision or provide support to more experienced personnel.
- Field work 50 – 90% of the time, may require overnight stays and work in other States with DLZ offices.
- Prepare written technical reports and assist in proposal preparation.
- Perform all work in a safe and responsible manner, in accordance with the Health and Safety Plan.
- Perform other duties as assigned.

Transportation Technician 8-E10 (Construction) Brighton TSC

- Participate in and oversee the following: Construction and quality control inspection activities designed to ensure that highways, bridges, and allied transportation facilities are constructed to the plans and specifications contained in contractual construction agreements. Review and document project records for adherence to standards. Perform engineering technical support activities, including materials testing, inspection, and compliance. Ensure right of way permit activities are performed and are completed consistently within standards and specifications. Assist in the right of way permit activities and the traffic technical activities. Participate in design technical and/or automated drafting activities. Perform surveying technical work of a variety of surveying activities that provide assistance in the surveying of roads, building sites, bridges, environmental sites, and determination of land boundaries under the guidance of a professional surveyor.

Experienced Field Scientist, PM Environmental, Inc. Berkley, MI

Desired Qualifications Include

- Minimally five (5)+ years of environmental experience, preferably Leaking Underground Storage Tank (LUST) Part 213 experience
- A Bachelor's Degree in geology, environmental science, environmental engineering, or a related field preferred but not required
- Proven environmental field work experience
- Mechanical background
- 40-hour OSHA HAZWOPER 29 CFR 1910.120 training and current refresher
- Ideal candidate must be dependable and have excellent communication skills
- Ability to work outdoors in all climates and weather conditions
- Must be able to lift 50 pounds
- Must be available for overtime and travel
- A valid driver's license is required. Candidates may be required to acquire a Commercial Driver's License (CDL) within 90 days of hire

MDOT Transportation Technician 8/9/E10 (Construction Technician) - Newberry TSC, State of Michigan, Newberry, MI

- Participate in and oversee the following: Construction and quality control inspection activities designed to ensure that highways, bridges, and allied transportation facilities are constructed to the plans and specifications contained in contractual construction agreements; review and document project records for adherence to standards; perform engineering technical support activities including materials testing, inspection, and compliance; ensure right-of-way permit activities are performed and are completed consistently within standards and specifications; design technical and/or automated drafting activities in such specialized areas as engineering, electrical, right-of-way, cartography, or architecture for the purpose of laying out and preparing drawings of new or existing facilities, roadways, bridges, property, and maps; traffic technical activities designed to enhance highway safety and user efficiency through the collection, analysis, and application of traffic and highway safety data and principles to specific traffic control, signing, signaling, and marking situations; and perform surveying technical work of a variety of surveying activities that provide assistance in the surveying of roads, building sites, bridges, environmental sites, and determination of land boundaries under the guidance of a professional surveyor.

Principal Reservoir Engineer, DTE Energy_ Detroit, MI

Key Accountabilities

- Maintains storage field and well deliverability to meet peak day requirements, many times under immediate time constraints.
- Economically driven maintenance and enhancement via state-of-the-art techniques.
- Storage field design for both current and future multi-million dollar investments.
- Advanced well and reservoir performance simulation.
- Interprets corrosion and related logs and /or determination of required remedial work to proactively prevent well leaks.
- Advanced reserve and flow rate forecasts for use in multi-million dollar projects or equivalent.
- Integrated well capability and gathering pipeline design and cost minimization.
- Financial analysis of technical alternatives including cost-of-service and cost/benefit analysis.
- On-site work direction during stimulation, work overs and/or well drilling or plugging as needed.
- Inventory verification and well integrity preservation.
- Database development and maintenance.
- Advises management on departmental technical needs to improve inventory and deliverability requirements.
- Selects vendors for services and materials, completes or coordinates material procurement, landowner contacts and state filings.
- Directs field and office projects (with both internal employees and external contractors) for drilling, testing, maintenance and stimulation of storage wells.
- Responsible for maintenance of Reservoir Department equipment, tracking inventory and disposing of surplus equipment as required.