

COMMITTEE ON MICHIGAN'S MINING FUTURE

Virtual Teams Meeting

July 14, 2020 – 9:00 a.m. to 3:00 p.m.

DRAFT MEETING MINUTES

ROLL CALL

Commission Members and Affiliation

Richard Becker (Aggregates) – present
Snehamoy Chatterjee (Research Faculty) – present
Timothy Eisele (Rep. Cambensy) – present
Harold Fitch (Sen. McBroom) – present
Sean Hammond (Environmental Nonprofits) – present
Matthew Johnson (Metallic Nonferrous) – present
Stephen Kesler (Research Faculty) – present
James Kochevar (Ferrous Mining) – present
Chad Korpi (Ferrous Mining Unions) – present
Jerome Maynard (Environmental Nonprofit) – present
Deborah Pellow (Municipality Affected by Mining) – absent
Evelyn Ravindran (Native Americans) – present

State Agency Members

Liesl Eichler Clark (EGLE) – absent
Adam Wygant (EGLE) – present
Dan Eichinger (DNR) – absent
Sharon Schafer (DNR) – present
Amanda Bright-McClanahan (MEDC) – absent
Mike Sweat (EGLE) – present
Susan Bishop (EGLE) – present

Others Present

Anna Ediger – Cleveland Cliffs
Representative Sara Cambensy
Justin Alexander – Aid to Representative Sara Cambensy
Melanie Humphrey – EGLE
Rick Henderson – EGLE
Mark Snow – EGLE
John Yellich
Bill Harrison
Dough Needham
Jason Evans
Joyashish Thakurta
Mike Cornelius – MOGA
Valoree Gagnon – Michigan Tech University
Ann McCammon Soltis – Michigan Tech University

Expected Outcome of Today's Meeting – Chair Wygant

Create subcommittees to work on different items. Adam Wygant provided an overview of objectives and needs for the meeting. Approve minutes; presentations on Land issues, Tribal issues, Sean (MEC).

Disposition of January and March Meeting Minutes – Chair Wygant

January 2020 meeting minutes – open for comment; no comment; approved w/out comment.

March 2020 meeting minutes – open for comment; no comment; approved w/out comment.

Minutes will be finalized, distributed, and posted on the CMMF SharePoint site.

Committee Governance Procedures – Chair Wygant

Members should review these procedures. They will be posted on the CMMF SharePoint website.

Presentations

Sean Hammond – Environmental Advocacy Group Perspectives on Mining

Mining is by its nature boom-and-bust in Michigan, as elsewhere. A mine opens, is exhausted, and then needs to have a plan for closure that is environmentally sustainable. Past mining often had no meaningful regulation, leading to significant environmental consequences.

The concern of the environmental community is that new mines don't repeat errors of the old. There is still considerable distrust of mining. They want to ensure protection of the environment over the long term. There have been difficulties with differing interpretation of laws, particularly of words like "significant". There has been some tension between the Department of Environment, Great Lakes, and Energy (EGLE) and environmental groups over the meaning of mining laws. The main concern is still the "what's after" aspect. Tourism, based on Michigan's nature areas, has been increasing, and we don't want to impair that by damaging lakes or rivers through poorly-regulated mining.

Everyone would like to avoid taking every mining activity to court, so their goal is to design a future of mining that will be acceptable to all without requiring continuous legal actions. The environmental groups recognize that there is a need for resources, but mining needs to be responsible, and if can't be done safely, they feel it would be better not to mine at all.

It is necessary to take precautions against release of toxins like heavy metals and dioxins. There are also concerns (which may or may not be well-founded) about materials like uranium in groundwater. It was noted that uranium is not present as an ore in the state, but it can occur at a low level in natural waters, and there are fears that this could be increased by mining activity.

It has been expressed to him by members of the public that there is fear that the committee will recommend throwing out existing environmental protectors, and so his objective on the committee is to ensure that protections stay in place or are improved. Steve Kesler notes that we need to worry not only about today, but also the future up to hundreds of years on.

(There was a question at this point about how visitors, who are not formal members of the committee, can participate in the meeting. The recommendation was that they could provide questions through chat, and that there would be a period for questions and comments by general public at the end of the meeting.)

There are concerns about mining legacy, and after-effects of mine activities. Part 632 was supported by Michigan Economic Corporation (MEC), and concerns have arisen since. There is a difference of opinion on terminology, specifically “significant”. MEC support has eroded over time owing to changes in legislation, and interpretation. Concerns revolve around “what happens after” all the mines are gone. We work toward clarifying questions and concerns about mining and laws.

We need to have an environment where we can invest jobs. The environmental community sees it as not mining at all. Uranium extraction is a concern in the Upper Peninsula (UP). When the mine is done, things need to be safe. It can be reclaimed and used for something else. We want to see Michigan protected. We want to see the land preserved for recreation to be of interest in the future for mineral production.

Matt Johnson notes that Lundin Mining is strongly committed to minimizing long-term impacts. He also notes that there are multiple pressures on land use. He has been looking into uranium issues, says there are no actual uranium deposits, just small background levels that naturally occur. There are many misperceptions about it, and many people attribute natural occurrences to mining. Sean Hammond notes that there is a need to be aware of real sources of contaminants, which may be either natural or man-made.

Adam Wygant concurs that need to ensure no major long-term damage. He expects that there will be some disagreements, and we need to give everything an honest look. Residents of the State are going to need minerals whether from within Michigan or outside.

Sharon Schaefer notes that we need to keep a balance, and note benefits of mining, and not just the downside. She notes that state parks receive a great deal of revenue from mining, as per the state constitution. Sean Hammond notes that groundwater and resource mapping are supported by the environmental groups, as they are as interested in this as the mining concerns are.

Steve Kesler – comment about retaining natural spaces.

Sean – not directly a concern of MEC but definitely on their radar.

Bill Harrison – Adam deferred him to public comment period.

Matt Johnson – mining companies are concerned about this as well and its part of their

operating plans. There was a comment on Uranium mining and exploration in UP; it does exist at background levels but at extremely low levels.

Adam – task at hand to make an honest assessment and are aware of and will consider all concerns. We will give all issues an honest look.

Sharon Schafer – Need to remember benefits as well, specifically revenue.

Jason Evans – Mineral Rights and Exploration and Drilling

Background: MTU-trained geologist, currently works with Lundin Mining. Expertise in lands management and mineral rights. Land's laws are somewhat tricky in Michigan; he will start with challenges and pitfalls that Eagle Mine has encountered.

Title of presentation: Mineral Rights, Royalties, and Mining

The Eagle Mine consists of two sites: Eagle Mine and the Humboldt Mill. They truck ore 80 miles, then ships out concentrate on a rebuilt railroad spur to Ishpeming. Ore goes to Canada.

Other resources in area of the mine include lumber. An area had been extensively logged by Escanaba Paper Company. Eagle leased the mine surface site from the State of Michigan. In the reclamation phase, they will be trying to return the surface environment to equal or better than original.

The process from discovery of the ore body to start of production went from 2002-2014, a period of 12 years. The area had been known to be mineralized for some time, but there were several exploration efforts to decide what economic minerals were actually there. It took some time to decide that nickel/copper ores were most likely and to seek them out.

Initial permitting required passage of laws for nonferrous metal mining, as the legal framework in the state was not really in place. From 2006-2010, we dealt with legal challenges.

Sale by Rio Tinto to Lundin changed the mine from being a minor, low-priority part of a massive company to be the flagship project of a much smaller company, which made it a major focus and was overall beneficial in moving the project forward.

Mineral Rights are transferrable real estate rights that can be conveyed by deeds or inheritance. When lands in the State were first transferred to private ownership, the surface rights included the mineral rights.

The big question on any site is whether at some point surface and mineral rights were severed, in which case they may be owned by different entities. Many of the UP mineral rights are severed from the surface rights.

Mineral rights include: Oil and gas, nonferrous metals, ferrous metals, nonmetallic minerals, sand and gravel, and radioactive materials. These rights can be kept together, or sold/leased individually, so the mineral rights for a given property could potentially be owned by several different entities.

The big questions are:

1. How much control does the surface owner have? Can they block development even if they don't own the mineral rights?

Answer is "Maybe", depending on what rights they retained. This is really variable depending on what is on the surface (forest, farmland, structures, etc.)

2. How do you know who owns the mineral rights?

Answer: Need to spend a lot of time with attorneys. The State knows what mineral rights they own on state lands, but private owners mostly do not.

Under the Mineral Rights and Marketable Title Act, to determine the mineral rights ownership you need to know:

- type of mineral
- competing title
- Named owners/heirs
- year when ownership transfer occurred (to determine laws in force at the time)
- Deed exceptions
- Notices of claims filed
- Title Chain
- Improper deeds

It is very complex to determine mineral rights on private property. Sometimes it may be necessary to trace several generations of heirs, and whether original deeds followed the law at the time.

A chart was shown for determining mineral rights. The chart starts with initial issuance of deed by government, follows the fate of original owners, heirs, sales, etc.

Sometimes in tax repossessions of property that includes mineral rights, the state retains mineral rights when the surface is resold.

There is a huge incentive to lease mineral rights from state lands for exploration rather than from private lands, because the State knows whether they have mineral rights to state lands, shortening the legal process for determining ownership dramatically

Basically, lawyers must be involved for some years through a very convoluted process.

Leases are similarly complex. Another flowsheet was shown for determining title. Have to lease from appropriate owners (private, state, federal).

In principle, mineral rights have no bottom, and run from the surface to the center of the earth.

Royalties can be fixed rate, gross sales, in-situ value, or net smelter return. He recommends net smelter return as giving the best return for the rights owner.

May also pay royalties in advance, or rent rights, or purchase rights outright.

Eagle Mine is a major source of Michigan land lease revenues, and has paid around \$50 million in leases, royalties, and rentals. This does not include numerous other fees paid to the state.

Mineral rights start at different depths depending on mineral. Usually it starts at bedrock for metals rights, at the oil-bearing formation for petroleum rights, and at the surface for sand and gravel

Questions

Kesler: If it is impossible to identify owners, is it allowed to put royalties/rents in escrow and file a quit-claim in court? Yes, this is an option.

He noted that the state of mineral rights in Michigan definitely holds back development. There is general consensus that creating a register of mineral rights holdings in the state would be of great benefit, although it would also be a monumental task. He also noted that if there were a mineral rights registry, this would introduce scope for taxing them, which would add incentive for owners to keep track of what they did and did not own.

The entire presentation will be put up as a PDF on the shared site.

Representative Cambensy asked whether there is an inventory of state mineral rights. Apparently, the Department of Natural Resources (DNR) has a lot of this in their landowner tracking system, but it is incomplete. Can state land have mineral rights owned by a second party? Yes, and sometimes state owns mineral rights for privately owned surfaces.

Note: the time it takes to establish title ownership is a minimum of one to two years. This should be planned for, but we need to have a Michigan-based attorney who is familiar with the peculiarities of state law. It is believed that Michigan and Minnesota have the most complex mineral rights system out of all the states.

There have been some efforts to simplify the system, but sometimes this just makes it more complicated.

Mineral rights with aggregates: This mostly deals with properties where mineral rights are not severed from the surface rights. Sharon Schafer says that after 1964, sand and

gravel rights cannot be severed from surface rights. This is separate from other mineral rights. Limestone is included as a resource that remains with the surface rights.

Matt introduced Jason. Jason shared his presentation. Eagle Mine – Mineral rights, royalties, and mining. The Eagle Mine and State of Michigan property was used as commercial forest products. They leased property to run Eagle Mine. It was a journey to get production for Eagle Mine. The first discovery was in 2002 which was massive sulfide of economic grade. Rock types in the UP were proper types to contain uranium; however, uranium was not viable in this area.

From 2002-2006, they worked to get laws passed to guide/protect natural resources. There was nothing on the books on how to do nonferrous metallic mining. Construction was completed in 2010 as it took four years to complete.

Question – where do mineral rights start? No hard and fast rule, generally where bedrock occurs and below. Mineral rights within Michigan's dedicated rights to be transferred to landowners through deeds and inheritance. They are considered real estate. The owner can keep the rights and sell surface if the property changes hands. Minerals can be oil and gas, nonferrous metal, ferrous metals, nonmetallic minerals, sand and gravel, and radioactive materials.

Some deeds keep rights to radioactive materials, but gave away all other rights. There are different rights if they keep the mineral rights. Is the mineral or surface title superior? This question is always asked, but there is no good answer.

The Marketable Title Act is an interpretation of the act in Michigan. There is a process and procedure to determine who owns the rights. There are agreements with private owners, and the State of Michigan has timelines, documentation, and people to help well planning and set up. If it is a private well, it can take years to find the owners.

Steve Kesler – what happens if you can't identify owners? Money is put into escrow or quiet title action where you work with courts to identify heirs or identify unclaimed property.

There are royalty rates which vary for different owners. Everyone has a percentage interest no matter where you are on the land parcel. There are different types of royalties: fixed per ton (coal and salt), fixed rate/barrel (oil), gross sales value, and net smelter return.

Most owners don't understand what rights they have.

Steve Kesler – does this complex property ownership hold back companies in Michigan? Yes, if you don't have resources to find owners you can't explore those properties. A register of mineral owners would simplify process. You can be taxed on mineral holdings; a register would create a new revenue source.

Representative Cambensy: Do we have a registry of rights on state owned land?
Adam: the Michigan Department of Transportation (MDOT) has some records; DNR may have some as well. It is very difficult work trying to determine who may hold.
Sharon Schafer: DNR does have some records but not necessarily accurate or current.

Steve Kesler – Does state land hold all rights to land, or is there a split estate? Sharon Schafer: no, split estate in many cases.

Matt Johnson – general comments about investigating who owns mineral title, difficulty of determination, and resources needed. You need state-specific attorneys to research mineral title; Michigan has the most complex mineral title in the United States.

General discussion of mining, oil and gas, aggregates and rights.

BREAK – 10:35-10:45 a.m.

PRESENTATIONS CONTINUED

Evelyn Ravindran – Tribal Perspectives on Mining – Evelyn introduced two invited speakers:

1. Val Gagnon-Presentation on treaty rights in Michigan

Background: Director of University-Indigenous Community Partnerships at the Great Lakes Research Center, Michigan Tech University.

This is mainly based on UP agreements, not necessarily downstate or Wisconsin.

Tribal sovereignty in Michigan is not "granted" to tribal nations; they already had it, and have retained it.

There are 12 tribes that interact with Michigan, and there are numerous laws and treaties. The western UP is primarily Ojibwa Tribes, and the Eastern UP is mainly Ottawa tribes.

Treaties are only between sovereign nations. So, they are between the tribes, the state, and the federal government. Tribes may enter into partnerships with non-government groups.

All partnerships must address the questions of reverence, respect, reciprocity, and responsibility. This is done by exchanging knowledge, analysis and synthesis, relationship building, and planning/prioritization.

2. Ann McCammon Soltis, Director, Division of Intergovernmental Affairs, Great Lakes Indian Fish and Wildlife Commission (GLIFWC).

GLIFWC is an intertribal agency with 11 Ojibwa member tribes, many of which have connections to Michigan. It was noted that some tribes that are geographically outside of Michigan still retain certain treaty rights to ceded territory within Michigan.

By treaty, the tribes have hunting & fishing rights on ceded territories, not just on reservations.

GLIFWC deals with relevant natural resources for these treaty rights.

Resources harvested are mostly plants & animals. The tribes have an interest in maintaining ecosystems so that whatever plants or animals they have the right to harvest by treaty, continue to exist.

GLIFWC is concerned with water quality and mercury maps in fish. Consultation with tribes is needed for any action affecting plants or animals on ceded territories.

Recommends that deliberations by this committee should take tribal interests into consideration when we make our recommendations, not just depend on the state to work things out with the tribes.

Need to account for: cumulative impacts, climate predictions, most up-to-date, and environmental protection technology.

Questions:

What about consultation with the tribes at private level, not just state level?

This varies a lot depending on the company, and on which tribe. There is not really a standardized approach. Some tribes may simply not want to talk to particular companies. In general, "consultation" is government to government, for private organizations it is a question of "relationships".

So, the Consultation between sovereign governments, should be preceded by relationship-building conversations with the mining interests.

A common mistake is for companies to come to tribes and tell them "This is what we will do" and not "This is what we would like to do." If the company ruins the relationship right away, it may not be recoverable.

Representative Cambensy notes that by the time they reach the permitting process, frequently it is already a standoff between the company and the tribe. How could this be taken care of earlier? Evelyn recommends trying to settle disagreements before the official comments stage, and establish relationships as soon as possible. The problem is that many companies fear that outside entities might change the permit conditions if plans are released before the permit is issued.

Ann McCammon Soltis suggests that the state should also have some conversation with the tribes regarding expected permit applications. The state generally knows that a permit application is coming for quite some time before it is filed, and so there is opportunity for them to see what is going on in advance.

It is sometimes beneficial for a third-party organization to act as a bridge between companies and tribes. Organizations that have experience with the tribes can advise on how to set up a fruitful relationship.

How do goals of the tribes differ from those of the environmental groups?

- NGOs may want wilderness areas where people are severely restricted or excluded
- Tribes are interested in maintaining access to resources that they have treaty rights to, and do not want human activities excluded.

History of Native American treaties and lands. Overview of Tribal relationships and histories, and Native American theories and philosophy of life. Tribal Nation Sovereignty is described as authority and power, but it is also about having strength, autonomy, self-determination, self-governance, diplomacy, rights, responsibilities, and are inherent. Each tribe is distinct. There are 12 federal tribes dating from 1936-1995.

There are Anishinaabe Sovereign Nations organized into three fires of confederation:

- Ojibwe – keepers of faith
- Odawa – keepers of the trade
- Potawatomi – keepers of the fire

Human nations are sovereign. Diplomacy is between many nations. We need to establish and strengthen partnerships in Michigan by:

1. Analysis and synthesis – seek and learn from others.
2. Relationship Building – create and hear shared voices and vocabulary through shared experiences.
3. Planning and Prioritization – align and design different goals, creating and achieving values and shared visions.
4. Knowledge Exchange – learn from each other and the natural world like rocks and trees, and remain curious and humble, and be open to learning.

Matt Johnson – consultation, cumulative impacts – topics on today's agenda. Should there also be industry to Tribal Government consultation, in addition to government-to-government?

Val/Ann/Evelyn – government to company not about consultation but more about building relationships w/ each tribal community. Should be about a partnership that is equitable and realizing that there will likely be some areas of disagreement.

Adam – at Eagle there was both government-to-government, and tribal staff with government permitting agencies, and corporate w/ tribal staff.

Ann – each tribe must have its own say.

Jerry Maynard – commenting but getting walked on by an open mike. Not just a two-party program but a multi-party program.

Matt – conversation should be this is what we'd like to do, not this is what we're going to do.

Long discussion of how communities relate to each other, interact, and also have independence; need for honesty and openness;

Steve Kesler – is there any move in the US towards First Nations status similar to Canada?

Ann/Val/Evelyn – not really, tribes have more diverse views about land use and coordination among tribes

Adam – IOGCC relations with tribes include US and Canada tribes and find that there are situations in which tribes speak with a common voice, and those where specific tribes have specific interests different from the whole

Sara Cambensy – understanding among tribes that mining is needed but the disagreements are about process.

Matt – United States companies need to move beyond the minimum requirements and work with tribes and communities to be more accommodating to their desires and needs while still accomplishing company goals.

BREAK for LUNCH – 12:00 – 12:20; resumed meeting at 12:28 p.m.

Committee Governance Procedures

Adam & Matt discussion about draft governance procedures, primary topic is that subcommittees are subject open meetings act. This will require 10-day notice.

Select Report Topics, Determine Draft Report Structure, Subcommittee Assignments

Matt did a screenshare of Committee Assignments, committees derived from opportunities and challenges document. Grouped opportunities and challenges by thematic areas and derived four subcommittees from this. They are: Regulatory Policy, Research and Mineral Mapping, Social, Economic, and Labor Opportunities, and Mining Methods, Environment, and Reclamation.

Committee Assignments Discussion

In order to spread the workload of the committee, four subcommittees are proposed:

1. Regulatory policy

2. Social, Economics, and Labor
3. Research and Mineral Mapping
4. Mining Methods, Environment, and Reclamation

Need to assign members, and set a timeframe for committees to report back. Matt has prepared a document where he divided up the opportunities and challenges from the last meeting as bullet points and assigned them to each of the subcommittees. It was proposed that the first task of the subcommittees will be to refine the bullets.

The subcommittees will need direction on setting up their meetings, which will be subject to the Open Meetings Act.

A 10 day notice will be required before meetings, to be posted on the EGLE website.

Members volunteered for the various subcommittees. Each consists of a core of voting members, and ad-hoc members who have interests in the topics of the subcommittees.

The meeting schedule for each subcommittee will be provided to the entire CMMF membership. Members who are not specifically named as subcommittee members are still welcome to participate in meetings of subcommittees where they have an interest.

Committee meetings may include additional ad-hoc personnel, but while welcome to participate are not official voting members.

Adam will prepare documents clarifying how the subcommittees will work.

An outline will be made for committee structures. At the EGLE homepage (<https://www.michigan.gov/egle/>), in the lower right corner the "Regulations" menu includes a "Boards and Advisory Groups" entry. Clicking on this takes you to a page which includes a link to "Committee on Michigan's Mining Future", where committee & subcommittee meetings will be posted.

Also, we will set up a listserv for meeting notifications. Matt and Adam will put together a list of committee members and guidelines. The chair of each subcommittee will then schedule the dates for the subcommittee meetings.

The next full committee meeting will be on October 13, 2020, prepare for it to be held as a Microsoft Teams meeting, as this one is, with the option to meet in person at Michigan Tech University as originally planned if things open up. All subcommittees should meet at least one to two times before the next full committee meeting, so that they can report back.

There have been some issues with printing documents from Outlook; this is not allowed on most system. IT will work on making it possible to print documents from the email list.

However, we can currently print from the SharePoint site

To get to SharePoint from the Outlook site:

- Click on the icon that looks like a small map of Michigan in upper left
- In next window, click on “SharePoint” which appears next to the map icon
- Should now have access to all the documents posted on SharePoint.

Note that going directly to the SharePoint site may not work, as you need to log in with the state of Michigan credentials.

Twelve members assigned by the governor/EGLE Director; how do we deal with (assign) state employees?

Adam – representing Liesl on committee, has flexibility and authority to add people to work groups. State representatives such as Adam and Sharon are able to serve, as are others from their and other agencies.

Matt – need to determine composition of subcommittees and their charge, such as draft outline, timing, and review. Able to sit in on any subcommittee as interested.

Sean – address bullets from list today in open discussion or in subcommittee meetings

Matt – subcommittees should decide their principle topics and narrow or expand the list as they see fit. Each will come up with its own draft outline and document.

Adam/Matt – need to be an official member to serve on committee.

Matt – need to assign committees, starting by asking for volunteers.

1. Regulatory Policy
 - Hal Fitch – chair
 - Sean Hammond – voting
 - Adam Wygant – voting
 - Jerry Maynard – voting
 - Sharon Schafer – ad hoc
 - Jim Kochevar – ad hoc
 - Ad hoc experts as needed
2. Research and Mineral Mapping
 - Timothy Eisele – chair
 - Steve Keslar – voting
 - Snehmoy Chatterjee – voting
 - Adam Wygant – ad hoc
 - Sharon Schafer – ad hoc
 - John Yellich – ad hoc expert
 - Ad hoc experts as needed
3. Social, Economic, and Labor Opportunities
 - Matt Johnson – chair
 - Chad Korpi – voting
 - Rick Becker – voting
 - Evelyn Ravindran – voting

- Amanda Bright-McClanahan – voting
 - Adam Wygant – ad hoc
 - Sharon Schafer – ad hoc
 - Ad hoc experts as needed
4. Mining Methods, Environment, and Reclamation
- James Kochevar – chair
 - Hal Fitch – voting
 - Evelyn Ravindran – voting
 - Steve Keslar – ad hoc
 - Adam Wygant – ad hoc
 - Sharon Schafer – ad hoc
 - Ad hoc experts as needed

The Oil, Gas, and Mineral Division will organize paperwork for each subcommittee, including noticing, record keeping, posting, etc. Ad hoc and non-committee members are advisory only without a vote.

Other New Business

- Future meetings will be planned as virtual unless situation changes.
- Discussion and demonstration of how to access SharePoint documents and how to print .
- Mike/Susan to prepare help document to illustrate how to access CMMF SharePoint site .
- Matt to post governance document to SharePoint site.

PUBLIC COMMENTS

Mark – How can we introduce some solutions to these mining companies that might be able to help on both fronts?

Bill Harrison – In regard to Uranium in the deposits of the UP, we are involved in an assessment of Critical Minerals for the USGS. Uranium has been identified in various mineral deposits of the UP, but nothing is commercial so far, however there is analytical data that quantifies the concentrations in numerous deposits.

John Yellich – John Yellich here, I was exploring for Uranium in Michigan in the 70's and there is no economic, however, the thorium is naturally occurring in the ground water that the Survey is already working with the tribes on mapping water resources. A report had gone to the previous governor, and he wants to make sure this is followed up on. The Survey is also one of the recipients of a federal grant to compile geological information for Michigan. This is being done using the geological core repository that they maintain. The goal is to produce open file data so that everyone can find out what is available.

The state has two core repositories, one at Western Michigan University that primarily covers the Lower Peninsula, and one being commissioned at KI Sawyer near Marquette

to cover the Upper Peninsula. These repositories are invaluable for determining what is available in the state. Sawyer site should be ready by late August.

Bill Harrison – Also there is NORM associated with the Antrim Shale and one component is Uranium.

Mark Cooper – asks if he needs to be appointed to the team or can be appointed. Adam answered about how Act 47 of 2019 limits to governor appointments; however, he can participate by attending all meetings of interest. Mark is an environmental consultant.

Horace Schmidt – wants to know when the next meeting will be Adam/Matt – most likely virtual but could be in Houghton, depending upon circumstances. Horace – do we have an agenda for October 13, 2020, meeting. Adam – not yet but anticipates reports from subcommittees, discussion of reports, and broader topics for the committee of the whole

John Yellich – comment on Tribal discussions, Michigan Geological Survey (MGS) discussing support from tribes for MGS funding for mapping groundwater of the state.

MGS/MGREE proposal to USGS for mapping critical minerals geology, not minerals specifically.

Adam – location of core repositories, both MGREE and UP.

Next meeting

The next meeting will be 9:00 a.m. to 3:00 p.m. on October 13, 2020, and it will be a virtual meeting.

Future meeting dates

- January 12, 2021, Michigan Environmental Council, 602 W. Ionia Street, Lansing; 9:00 a.m. to 3:00 p.m.

The meeting was adjourned at 1:30 p.m.