

Water Use Advisory Council (WUAC) Meeting

Hosted by the Department of Environment, Great Lakes, and Energy (EGLE)

Tuesday, October 8, 2024

1:00 p.m.- 4:00 p.m.

Lee Walker Conference Room, North Atrium, Constitution Hall
525 West Allegan, Lansing, MI 48933

Remote Option Available Via Teams

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AGENDA

1. Welcome

Laura Campbell greeted individuals to the WUAC at 1:06 p.m., with roll call following.

2. Roll Call

WUAC Members In-Person

Mike Frederick, Michigan Ground Water Association (MGWA)

Doug Needham, Michigan Aggregates Association (MAA)

Dave Hamilton, The Nature Conservancy (TNC)

Joe Victory, Consumers Energy (alternate for Rachel Proctor)

Katy Lindstrom, Barr Engineering

Dave Maturen, Michigan Lakes and Streams Association (MLSA)

Megan Tinsley, Michigan Environmental Council (MEC)

Abigail Eaton, Michigan Agriculture and Rural Development (MDARD)

Megan Napier, AKT Peerless

Adam Wygant, EGLE

Bryan Burroughs, Michigan Trout Unlimited (MTU)

Laura Campbell, Michigan Farm Bureau (MFB)

Pat Staskiewicz, Michigan American Water Works Association (MI-AWWA)

Ben Tirrell, MFB

Kelly Turner, Michigan Potato Industry Commission (MPIC)

WUAC Members / Alternates Present via Teams

Frank Ettawageshik, United Tribes of Michigan

Steve Kohler, Kalamazoo River Watershed Council

James Clift, EGLE

Elizabeth Morrisseau, Attorney General (AG) (alternate for Peter Manning)

Jay Wesley, DNR

Sara Pearson, Michigan Geological Survey (MGS)

WUAC Members / Alternates Absent

Rachel Proctor, Consumers Energy
Buddy Sebastian, MGWA
Charlie Scott, Michigan Golf Course Owners Association
Kyle Rorah, Wetlands Conservation
Rich Bowman, MLSA (alternate for Dave Hamilton)
Rex Vaughn (alternate for Dave Maturen)
Sue Hanf, (alternate for Doug Needham)
Tammy Newcomb (alternate for Jay Wesley)
Nikki Ghorpade (alternate for Kyle Rorah)
Jennifer McKay (alternate for Megan Tinsley)
Rick Solle (alternate for Pat Staskiewicz)
Steven Crider (alternate for Rachel Proctor)
Jason Walther, MPIC

WUAC Non-Members Present or Attending via Teams

Jim Milne, EGLE
Tom Frazier, Michigan Township Association (MTA) (Retired)
Andy LeBaron, EGLE
Adam Zwickle, Michigan State University (MSU)
Andrew Brann, Walther Farms
Morgan Pace, MPIC
Megan Cameron, EGLE
Marian Maier, EGLE
Simon Belisle, EGLE
Hannah Arnett, EGLE
Trisha Hagerman, EGLE
Briana Hammontree, JetCo Solutions (JetCo)
Emily Finnell, EGLE
Joel Henry, Environmental Consulting & Technology, Inc. (ECT)
Alyssa Olson
Aaron Asher, MSU
Seth Herbst, DNR
Lauren Schnoebelen, Tri-County Regional Planning Commission (MI-TCRPC)
Maria Young
Jolene Melchiori, EGLE
Katie Mika, EGLE
Todd Feenstra, Tritium, Inc.
Val Vail-Shirey
Jill Van Dyke, EGLE
Younsuk Dong, MSU
Lyndon Kelley, MSU-Purdue Extension
Lena Pappas, EGLE

3. Approval of Minutes-Roll Call Vote Discussion

Laura Campbell asked for any additional changes from the committee regarding the September Meeting Minutes.

Bri Hammontree noted she received edits from Katy Lindstrom via email. Katy Lindstrom noted Mike Ellis is not a WUAC member and provided some grammar/spelling modifications to narrative.

Consensus September meetings approved.

4. Approval of Agenda-Roll Call Vote Discussion

Noted quorum can be held. No objections or edits to Agenda.

5. Public Comment (Three Minute Limit)

No public comments.

6. Committee Chairs Report

a. Data Collection Committee

Bryan Burroughs noted that the Data Collection Committee have no new recommendations for the 2024 report. Noted will be providing good updates on past recommendations. Noted there are one or two from the 2020 recommendations that are things the committee would like to continue working on. Noted there are several in progress with the Models Committee. Noted one of the key projects is the Long-Term Data Planning recommendation, which will serve as the foundation and future for the committee to provide a robust and detailed recommendation for future data collection. Noted all members realize there is a need for more data collection but agree that the Long-Term Data Planning is the basis for future justification causes and therefore will prioritize it moving forward.

Noted will have the 2022 recommendations done for the 2024 report. Noted they are trying to track with the Models Committee for the Downstream Accounting related work. Noted also tracking the Inland Lakes ARI platform recommendations. Noted this year and the next will be focusing on implementing those projects. Asked for any additional questions or comments. Pat Staskiewicz question on tackling Inland Lake ARI. Bryan Burroughs noted the group can have a discussion on creating a standalone committee for the ARI or have a workgroup within the Data Committee. For now, the Inland Lake ARI work group will stay in this committee, given they made the recommendation, unless it's decided later to make this a standalone committee.

b. Models Committee

Dave Hamilton provided a recap on current workgroups. Noted Michigan Hydrologic Framework (MHF) is active and noted is a bit behind, with a deadline of October 2026 to complete. He discussed the project schedule with Jeremiah Asher to and noted it'll be close. Noted working on Compiling Key Aquifer Properties for use in the WWAT. Noted the project is looking at aquifer transmissivity and aquifer storage coefficients and noted once it is done, it will be used to build a recommendation then to update the tool using more updated information.

Noted was held up due to request for proposal (RFP) taking a long period of time, but the RFP is now out and hope it will be finished quickly. Noted 3D Glacial Aquifer Mapping in two counties is active and noted Dave Lusch is chairing this work group. Noted data is underway and BARR Engineering is under contract for the opportunity. Noted if good data comes from this, will assist in building a proposal to use as interim measure. Noted may take years to get the full geological information pulled together, whereas this project could be performed rather quickly. Noted Michigan Integrated Water Management Database (MIWMD) has been folded into the Michigan Hydrologic Framework (MHF) project. Noted it's still a small, distinct project that will have a sub-workgroup overseeing the work. Noted the work being done is very close to the MHF project, hence why they were combined for efficiency and practicality. Noted WWAT User Interface update has taken on a life of its own and will touch base with the department when it is complete. Noted will work with the Implementation Strategy Committee to provide a status on these items for the 2024 report.

Dave Hamilton noted the Models Committee workgroups being formed through the funded 2022 recommendations. Noted this include the Conduct Downstream Accounting Research which will be led by MSU, with the DNR having funded similar work. Noted will be looking for a way to coordinate these items between the two as a result. Noted the next project is the Evaluate Streamflow Depletion Effects Downstream Through a Stream Network which is largely a modeling work with stream flow measurements. Noted USGS will lead the work and that agreements are underway, with the hope they will be issued in the near future. Noted asked Troy Zorn if would be willing to chair the workgroup for the project, which Troy confirmed, and that this will include people from both Models and Data Committee involved in the work. Noted will work with the Implementation Committee to provide a status on these items for the 2024 report.

Dave Hamilton asked if any questions. Kelly Turner asked where Troy is from. Dave noted Troy is from the DNR Fisheries Division and worked on the original tool and was one of the main researchers looking at the fish populations.

Jim Milne noted an update on the Downstream Accounting Research and that they had contacts with the DNR Fisheries. Noted EGLE administrative staff will be talking to DNR administrative staff and MSU to use the Partnership for Ecosystem Research and Management (PERM) agreement that the DNR Fisheries has with MSU and will work through that. Dave Hamilton noted we should simplify the administrative side of things. Jim Milne noted it would. Jim Milne also noted the Evaluating the Depletion Effects project will likely be a new joint funding agreement with EGLE and USGS.

Laura Campbell asked questions on status of other projects, such as site-specific review (SSR) work. Dave Hamilton noted the SSR Technical Issues Work Group put out a draft report and received various comments, so the department is taking the work and redrafting the proposal based on feedback. Noted is unsure how long it will be but will send out another version of the proposal once a draft is complete. Currently EGLE is reviewing additional comments received on the draft Aquifer Performance Test Guidance.

Dave Hamilton noted Models Committee recommendations. Noted the first project is to Fund a project to investigate streamflow depletion in an area with significant large quantity withdrawals using detailed data and modeling. Noted there has been a question that comes up regarding how well we understand streamflow depletion. Noted there are analytic models which are used now, but what the Models Committee would like to do is try to gain insight by looking at area that has been actively pumped by streams, by reviewing data collection of both stream wells and monitoring wells, pump tests, and modeling. Noted a similar Wisconsin study he shared. Noted similar techniques will be used in this project and are currently working on a proposed scope of work. Noted no drafts in the works yet, only concept, but hope to have some kind of draft by the next meeting. Dave Hamilton asked if there were any questions or comments on the concept.

Kelly Turner noted that Cass County Pilot project had a lot of data and addressing issues with the groundwater model would've cost a lot of money. Noted commodity groups did not want to fund these changes further as it wouldn't change the outcome. Kelly Turner asked if the data and modeling conducted under this Pilot project be used in the Streamflow Depletion recommendation. Dave Hamilton noted it was possible, but that ultimately for this project to work well, they will need cooperation from irrigators to collect pumping data and history. Kelly Turner asked how much data was in it. Dave Hamilton noted that he's unsure of how much data is out there. Kelly Turner there may be five years or more of data there. Dave Hamilton noted will want to look at considerations of data out there and review the geological setting to ensure it is something that can be worked with.

Laura Campbell asked if looking at numeric models for the work. Dave Hamilton noted yes and don't need more numeric models.

Dave Hamilton noted the second recommendation would like to revise timeline requirement for the SSRs. Noted was a part of initial negotiation and during those conversations, they decided to come to 10 working days. Noted the problem of the timeline came to a head with the audit that had been performed. Noted the department will be responding to this audit and as a result, will be coming forward with something that will make a recommendation on how to revise the timeline. Noted the committee workgroup does believe a modification should be made but have been unable to work it out. Noted brought forward a few suggestions in a few meetings ago which received pushback, while also receiving some suggestions as well. Noted would like to invite Laura Campbell and Doug Needham to join Dave Hamilton in discussions to draft something out, with the involvement of Jim Milne as well. Noted he wants something that the department and the committee like that they can bring forward to legislature that will also like. Laura Campbell verified for the 2024 report. Dave Hamilton noted yes. Laura Campbell stated they will need to meet fast to meet this deadline.

Adam Wygant noted the department has had legislative interest in this given the audit finding. Whatever council does propose may have synergy with legislative champions. Dave Hamilton agreed, noting many have consensus on the recommendation which will speak a lot to the legislature.

Dave Hamilton noted the third recommendation is the Streamflow Depletion Tool regarding improving the calculation in the WWAT. Dave Hamilton provided a summary of the previous presentation given on the topic. Noted that in the middle of the diagram is a pumping well and that the arrows are connected to every neighboring water management area and every streamflow management area is located. This distance is then calculated from that to the well. Noted this makes a depletion calculation from that point, resulting in sometimes nonsensical answers. Noted that in order to try to eliminate these excesses, the Half-Max Rule was established. Noted essentially this was used to eliminate nonsense answers and bring the method closer to reality of small, far away depletions. Dave Hamilton provided an example of depletions to demonstrate this idea. Noted the way the Half-Max rule works is it looks at the highest depletion and divide it by 2. Any depletions below this volume are ignored (not reapportioned among the debited water management areas). Noted there is an error in this. Noted what the tool is trying to do is identify the streams most likely to be depleted from this withdrawal, which it does well, but that the tool should be also recalculating the depletion based on those streams and then determine from there, which it is not doing. Was initially told this tool could not complete this task but could be done now to fix the error.

Dave Hamilton noted that rather than fixing this, the Models Committee has a better solution to propose. Dave Hamilton asked if any questions from that. Bryan Burroughs noted it identifies false positives, but it could miss some of them, which Dave Hamilton agreed. Bryan Burroughs then noted that it shows where the watershed boundary is. Dave Hamilton noted it looks at water management boundary and surrounding stream (always looking for a stream).

Dave Hamilton noted Sam Zipper was looking at this project and noted he liked the project and was able to improve the work. Noted one of the first things to do with his proposed work is you would identify what type of stream segments would be included in streamflow depletion calculation. Noted Models Committee chose the Expanding – Adjacent for their method. Noted would then show what portions of the streams would be included in the depletion calculation. Noted committee chose the Web-Squared method (web^2) of calculating stream flow depletions. Noted for the depletion calculation they would use Hunt equation. Noted the change is how you chose which stream should be depleted and how you choose what stream reaches are actually being depleted. Noted method is picking the streams networks and will pick up the elements of the stream close to the well and determine streamflow depletion factors. Noted it does a good job picking up the geometry of the streams, how its identified, and what is nearby.

Dave Hamilton noted a table specifying the amount of detail that went into making this recommendation. Noted looked at 30 irrigation wells to provide a good summary of what is happening. Noted as you look at the table, it provides the well ID number, it gives the tool depletion number, and how many water management areas are being depleted. Noted if you drop off those that are half-max and recalculate based on those items, it gives you a different number. Noted this is then compared to the web^2 method. Noted the web^2 goes off the speed of points of each neighboring stream based on proximity to the well. Noted looked at Single Wells and Water Management areas, understanding that this may look different for areas

where multiple wells are managed. Noted web² conducted the same review of criteria and depletions as the WWAT. Noted these are then aggregated to classify the water management areas and noted that at least three of these wells were identified as worse off in depletion (C to D) while others may improve (B to A).

Laura Campbell asked does web² look at any sub-surface level items? Dave Hamilton noted use it uses the Hunt 1999 analytical method, which is the same as the tool, so it does capture those aquifer properties.

Frank Ettawageshik asked a question about how this new system may affect existing wells and permits. Dave Hamilton noted that for implementation he doesn't believe it should be applied to everyone/everywhere at once. Noted this would take a lot of time and effort. Noted there may be areas where it is appropriate to go back and review, which could be triggered by SSRs. Noted would not suggest applying it everywhere and at once. Jim Milne noted to remember that the statute has a rebuttable presumption that WWAT and SSR registrations are not likely to cause an ARI. Dave Hamilton noted we have enough problem areas to focus on, especially given how labor-intensive reviewing everywhere would be.

Kelly Turner asked how do we verify this is the case in the real world? Dave Hamilton noted that as an issue that the council will need to look at, as the department has not declared any water management areas as having an ARI yet. Noted this should be done. Noted there are huge policies and technical issues that go along with that, and it would be beneficial to provide the department with insight into this.

Bryan Burroughs noted without knowing that the cone of depression has a uniform shape and using spatial data, we will continue to struggle. Noted believes doing this doesn't change the possible error of having a different dynamic under one well that couldn't be solved with an analytical solution. The method would probably still assume a uniform cone of depression. Did note it would probably try to address some of the issues created when picking singular points along a stream. Dave Hamilton noted there isn't a screening tool to look at this and years away from this work.

Laura Campbell noted web² should not be used to replace half-max. Dave Hamilton clarified it would replace half-max rule as a screening tool and would still use Hunt 1999 equation. Laura Campbell noted once something is altered in the data it would then go to SSR. Dave Hamilton noted yes.

Pat Staskiewicz noted it is more accurate, but another point is there is a lot of work. Dave Hamilton noted there are thousands of calculations/roles within the current system. Dave noted that means thousands of calculations are done, but they must interact with one another and that is not a trivial problem. Noted that given the scale of that it would be a project all on its own and that it wouldn't be worth addressing. Noted he believes the items being put into place would help SSRs, increase speed/accuracy of modeling, and resolve areas where there is conflict. It would also make the screening tool more accurate. Noted ultimately this would help

in SSR where the real decisions are being made. Pat Staskiewicz noted how would we know when things are occurring, i.e. just letting know when something happens and using the new method. Dave Hamilton noted this would be the goal and create a package of how it works. Jim Milne noted one approach could be the department could use the SSR methodology and if an answer is still no, would then target zone D areas and apply the web² solution to see if this gets us to a yes and how if it would say no would use alternative methods (collect more data, etc.).

Todd Feenstra noted it is still theoretical, thus one of his hang up points with it. Noted it does look more logical with studies being done on it, but we still don't know if it is still accurate. Noted web² looks at what streams to calculate depletions from and noted the analytical tools have a lot of errors. Summarized it's theoretical and still being applied to analytical models, in which people are unsure this would be useful and accurate enough for SSRs.

Dave Hamilton noted that if you don't want to use an analytical model, then you could do numerical model. Dave Hamilton noted the point of this was to find a screening tool that was quick and worked and believe he did that. Noted this is an improvement over what has been done.

Todd Feenstra noted that equating aquifer analytical equations to streamflow depletions is not a direct comparison nor a fair comparison. Noted that it isn't fixing the problem, proof of concept problem, and is not addressing the scientific method. Dave Hamilton noted if there are inherent issues with screening tool and believes that the SSR would be the decision place. Todd Feenstra specified we don't know if it is an improvement.

Bryan Burroughs noted Todd is specifying the type of factors that would be used to make a prediction. Dave Hamilton explained Todd may be onto something from looking at it in a transient case and we need to figure if it is a problem and what does it fix. Bryan Burroughs noted is just an apportionment piece of streams around a well and if we fix how cone of depression occurs in the future, that is great, but this is something that is just a portion of a method that could be modified for future work when transitioning from analytical to numerical modeling. Dave Hamilton agreed and noted would simply modify. Doug Needham noted if the current model shows an impact, wondered if this became a department standard to see if it has an impact. Noted would that be something to make it a formal process. Jim Milne noted could be a tool 2.0 that would note it would have an impact and if a no would lead to an SSR evaluation.

Laura Campbell noted that the bigger problems with the Hunt 1999 problem are not actually what web² would do. Todd Feenstra noted it is the same problem with both. Noted we have an analytical solution that does the job of predicting depletion, we have an apportionment tool that specifies which streams to debit. The noted problem is we don't know which is accurate and which isn't, lacking evidence. Noted he does agree it makes more logical sense, but is it making a fix? Noted Michigan geology is difficult. Noted it might be good to better understand if it does make an improvement and how much the improvement is.

Bryan Burroughs asked a couple of questions about burden of proof? Asked how much time would it take to determine a code of depression state-wide? Dave Hamilton noted doesn't believe there will ever be proof. Bryan Burroughs asked if there was a burden of proof with half-max. Dave Hamilton noted no, it was an expedient to help cut out material. Bryan Burroughs asked does this represent a better, fairer more realistic approach? Dave Hamilton noted if web² had been available at the time, he would've chosen it without question rather than half-max.

Katy Lindstrom noted that the models are based on laws of physics and noted reality is not always what we expect. Noted it is probably two separate conversations: web² was compared to a numerical model, raising question of trust. But noted that is an appropriate way to model this. Noted whether this is representing reality is another question. Noted the more complex a model is, the more closer it will be to reality. Kate noted that web² is probably better than Half-Max. Laura noted for a screening tool, it doesn't mean analytical solutions are wrong. They may not be appropriate for the hydrogeologic setting.

Laura Campbell asked is the web² model more reflective of reality? Dave Hamilton noted when the program began, he was always wondering how this project would look better for reality, but it has never been answered. Noted there is no real way to prove one is better. Noted it will ultimately help to have intensive monitoring of wells to understand streamflow depletion and noted that would be immediately beneficial for SSR. Noted unsure if it would immediately impact the tool. Noted it will answer the fundamental question of what we know about streamflow depletion.

Bryan Burroughs noted the tight timeline for 2024 report and would ideally have everything written for proposed recommendation. Noted will need to see things in writing and reach the consensus ideally by November rather than December. Noted there could be an additional report if needed for 2025.

Bryan Burroughs noted to reach out to Dave Hamilton or other committee members with any questions. Dave Hamilton noted implementation is critical and would like to work on it within the Models Committee on how it would be implemented. Laura Campbell wondered if proposal could be made before November. Dave Hamilton noted it is possible. Doug Needham noted would have to look at timelines and was wondering if this would be all new stuff. Adam Wygant asked if there are any beta versions? Lena Pappas noted there is a beta code and EGLE was able to do it in house. Bryan Burroughs noted Dave Hamilton envisions this would wait on aquifer property (transmissivity and storage coefficient) project to review what the aquifer material tells us.

c. Conservation and Efficiency Committee

Kelly Turner noted there was no meeting. Noted will not have recommendations for this report. Noted working on information/statements to be talking about climate migration and impact on water resources. Noted Frank Ettawageshik, Emily Finnell, and others have a rough draft of this proposal to pay attention to climate migration and why it is important for the State. Noted is waiting to see how 2022 funds are going to be used to be able to move forward with some projects, essentially in a holding pattern.

Emily Finnell noted they were working on the University of Michigan master's project concept and were planning to submit, with the hope of having Drew Reynold be their faculty sponsor. Noted he is going on sabbatical and therefore timing wouldn't work. Noted they pivoted and are examining if this could be an integrated assessment project and have it cofounded by the Office of the Great Lakes and Sea Grant Protection Fund or elsewhere as a research project. Noted climate migration is going to be examining the way people are moving, how water is used, to help create scenario planning and identify policies/tools/strategies to mitigate these potential changes.

Bryan Burroughs asked would this be pitched as a section of the report? Kelly Turner noted it would be a section of the report. Kelly Turner noted is only about a page and a half and should at the very least be mentioned in the report to demonstrate importance for future work. Frank Ettawageshik added that the main thing is to have placeholder for the climate mitigation in the report and noted it will be having an impact on us. Simon Belisle noted quick update that the 2020 recommendations for water efficiency for best practices is moving along and first meeting is tomorrow.

d. Implementation Strategy Committee

- **Discussion of Draft Legislative Report**

Laura Campbell noted the draft isn't going on website as of right now and was just trying to summarize what has been done with the status of these recommendations and reflect how we got this money. Noted big question is how to request ongoing funding. Noted items for operations/maintenance will continue to cost money. Asked if it should be a part of normal operating budget or could the process be made easier to ensure funding is available on a consistent basis. The downside is a lot of coordination early on to make sure funding is set aside early enough and allow EGLE to have in their budget report. Noted there is a two-year lag on getting funding.

Laura Campbell noted that she doesn't want this to impact projects. Dave Hamilton noted that it could be on an annual basis. Noted for ongoing work, should make a definite assessment of how much it will take to keep specific projects going. Noted it should be a part of the department's budget and be clear on saying that the governor/department undertake it as a responsibility.

Doug Needham noted just like 2022 Recommendation funding and noted not ready to spend it yet as EGLE needs to give out funds. Noted it might be worth knowing where EGLE's funds go first in terms of allocation. Noted should be an EGLE request but have it be a separate line item from request from WUAC.

Bryan Burroughs noted that if the legislature appropriates funds for WUAC recommendations, that EGLE should work with WUAC to identify where it goes and that the report should specify ongoing projects for funding. Noted reports may be seen as one-off needs and could accidentally be viewed as double dipping. Noted special projects proposed would see about

getting better at executive budgets. Noted it will need to be very specific and may be good to have an example of ongoing funding and having a mention that it goes into the EGLE ask, and simply reinforcing the need.

Dave Hamilton noted does it look at funding already received. Laura Campbell noted no, this would look at extra additional costs that the 2022 funds would not cover (i.e., fixing items and ongoing expenses) that are not included in the implementation budget. Dave Maturen noted that for 2022 recommendation, people were probably thinking that EGLE would advocate.

Abigail Eaton noted EGLE cannot lobby. Dave Maturen noted they can make a budget. Laura Campbell wondered what would be beneficial for EGLE. Adam Wygant noted that the items from 2020-2022 Recommendations will be taking care of this and ensuring that it reaches a common end point. Noted Groundwater PFC and other projects are becoming active and noted worry is towards the ongoing costs. Noted that some projects can have ongoing operation and maintenance needs.

Dave Hamilton noted that it is important that WUAC reinforces these needs and rely on the department budget and government support to maintain infrastructure. Jim Milne noted from a program perspective, i.e., if the WUAC asks for 5 million and want A/B/C done and find out the legislature gave that money, EGLE would have to find out how much money would be needed and how much operations and maintenance would cost.

Laura Campbell noted 2022-2020 recommendations had funding set aside for MGS and wanted Sara Pearson's input. Sara Pearson noted it is critical and having additional support for it. Dave Hamilton noted that MGS is representing a state agency and that some of that money will be built into their budget and it's important we don't double dip. Noted MGS will need to have a very specific request for expansion. Adam Wygant noted have been successful with State Survey and has noted what was done with Western and making sure funding would be sent to where it goes. Frank Ettawageshik noted it's important we get strong support for the work, rather than specific work, and that in the case of Tribal, they can support the work although funds cannot go to them.

Bryan Burroughs noted some of this is data and planning for what is being done, what needs to be installed, what is preferred levels, and will hopefully clear up ongoing budget work. Laura Campbell noted she wants a section in the report that calls for continued funding for ongoing expenses for projects, by identifying what the funding amount will look like (but not specific) as EGLE will provide specifics in their budget request. Dave Hamilton noted will want to be clear what the funding is for. Laura Campbell confirmed would just be listing out projects (not the specifics within this) and how much annual funding would be requested. Laura Campbell noted would then draft, send to committee to look at before November meeting. No objections. Laura noted to work with Bri to send out documents to members for review prior to November meeting.

7. Adam Zwickle to Present Water Users Committee Project

Pat Staskiewicz introduced Adam Zwickle to provide a presentation on Building Capacity for Collaborative Water management.

Adam Zwickle introduced himself and represented the project team for Building Capacity for Collaborative Water management. Noted project goals include to 1) Learn the current barriers associated with convening of a water user committee (WUC); 2) Determine what is needed to overcome these barriers; 3) Understand what strategies and tool are needed for a WUC to reach an agreement and what is the best process; and 4) Communicate this information in a broadly accessible WUAC guide. Noted fifth project goal, which they were unable to meet, as 5) Pilot the effectiveness of the guide by convening 2-3 pilot WUC's using the developed guide.

Noted a brief overview of the timeline was they scheduled a stakeholder advisory board and strove to have a diverse group of water users and had several meetings and 1:1s. Noted this included several state/legal partnerships. Noted first data collection was Water User Survey in Fall 2022. Second data collection was focus groups in Spring 2023. Noted development of WUAC guide in Summer 2023-2024 and noted tried to do participatory case studies in Spring 2024.

Noted presented a water user survey in 2022. Sent first wave to MDARD and second wave to EGLE with positive reviews. Noted individuals may watch the WUAC presentation from WUAC 10/10/2023 meeting if interested.

Dave Hamilton asked if the guide was sent to water users. Adam Zwickle confirmed, noting high water users' response rate with about 30% feedback.

Adam Zwickle noted there was limited knowledge of Michigan Water law. Noted that level of knowledge tends to impact how others view this. For instance, if a community is unfamiliar to these requirements, they have a pre-contemplative perspective and focus on vulnerability. Those aware of WUC or legal requirements (e.g., EGLE) and are knowledgeable are motivated by efficacy and will request a WUC to reduce a risk. Noted survey also showed a low trust in state with 20% individuals not trusting the state. Other key takeaways included salient risks facing water users: water quality, government overreach, and water quantity. Noted perception is that water is abundant. Noted followed up in focus group in 2023 online and in-person. Stakeholders included other scientists. Noted general discussion was communication, specifically behind how SSRs, Zone C&D classifications, and WUCs are communicated to water users is hard to understand for water users and leads to a breakdown of trust.

Adam Zwickle noted they did a participatory modeling exercise to look at connections between water quantity (usually focused by State) and quality was highlighted based on perception from focus groups. Noted focus groups were beneficial to provide insight into the guide. This then led to the main deliverable of the project: the development of WUC Guide(s) between 2023-2024. Noted earlier feedback indicated having multiple guides. Noted they

determined three different guides: A Convener guide who is responsible for assembling a WUAC group. This person has local and historical knowledge and has connections. The Facilitator guide was written for someone who knows how to facilitate and focused on process and leading a group to a decision acceptable for water users and EGLE. The third guide was Participant, which looked at large quantity water use representative of local government and was the initial focus of the project. Adam Zwickle noted these should not be set in stone and that they will update as future updates in water user groups occur.

The next step was the participatory case studies done in the beginning of 2024. Noted two water management areas were chosen in collaboration with the leadership team and local extension agents helped establish initial meetings. Noted both groups declined to participate, and Adam Zwickle noted individuals are allowed to decline to participate, with MSU's Institutional Review Board of ethical research prohibits negotiating with individuals to have them opt back in. Noted since group feedback was not performed, have been reaching out to individual water users to try to get some feedback. Noted final conclusions included a lack of clarity surrounding the regulatory process – such as what role WUC can play in helping water users. Noted another barrier was limited understanding of how the WWAT works and how it is used to make watershed determinations and when data is collected to verify it – leading to confusion and miscommunication.

Adam Zwickle noted there is a clear need for communication. Noted there is a lack of incentive or support for participating in WUC. Noted there is no precedent or guidelines for what constitutes an acceptable WUC agreement, such as rubric or guidelines. Noted EGLE encourages creativity to create this, but due to lack of trust prevents users from doing this. Noted all of these contribute to an overall lack of trust in EGLE. Noted water users do not believe there is not a problem worth addressing – noted that scarcity is key driver in collaborative natural resource management. Noted those who have been successful in this area have been trusted.

Adam Zwickle noted recommendations include better communication with water users. This includes identifying what zone they are in and being clear on how that is determined and understanding the reason behind WUCs. Noted it's important EGLE is available to answer questions, rather than just having a general phone number. Noted for instance that Andy LeBaron attended a meeting and water users seemed to appreciate that. Noted guides are not an end-all solution but would help start conversations. Noted additional recommendations would be to provide resources to support the convening and facilitation of WUCs, such as local water data, maps, and facilitators. Noted another recommendation is to clearly define who is required to be in WUC and who can be part of WUC. Noted limited their meeting to large water users and state. Noted water users did not like this as they wanted their consultants and guides in this conversation. Noted that guides determined limiting to just the stakeholders could lead to larger creativity, but this does not ultimately happen as water users did not trust them. Noted recommendation would be to define the criteria of which WUC agreements will be judged, such as development of acceptable and unacceptable practices. Noted in leadership meeting to determine what role “preventative

measures” can play. Noted final recommendation was to lay out issues of enforcement, such as determine what happens when WUC agreement is accepted, determine who is responsible for monitoring, and determine conditions under which the agreement can/must be revisited.

Adam Zwickle thanked those involved and allowed questions.

Laura Campbell noted a question on trying to work with water user or committee and what the expectation of data collection would be, including what EGLE should bring to the table as well as what the water users should bring. Adam Zwickle noted they agree on what this is: EGLE noted to step in and identify an item such as Zone D qualification. Water users then want data demonstrating an issue and EGLE is willing to present it. Laura Campbell had a follow-up question. Adam Zwickle noted project doesn't have data specific to her question, noted it is not usual for water user to provide their own data (unless rebutting).

Pat Staskiewicz noted he applauds this work on dealing with the science of water and the science of people. Pat Staskiewicz wondered if this could be a solution for legislation/policy. Adam Zwickle noted he believes it is a good solution and believes it is a more sustainable solution at a local level. Adam Zwickle noted great potential but does not believe Michigan is there yet on a larger scale. Adam Zwickle noted he hates that it takes a crisis to have people act. Noted WUC could be a sweet spot to encourage people to act more promptly before a crisis occurs.

Frank Ettawageshik noted appreciation of the report and noted that at the last council meeting he suggested reaching out for mediation to help in bridge the gaps of trust. Noted he liked the idea of decisions being made at a local level and believes guides will be helpful.

Dave Hamilton noted a question regarding how water law goes to a judge and water users try to avoid that. Noted is there an understanding with the legal process and do water users view the judge as a threat. Adam Zwickle noted no clear data, specified that water users were well received about avoiding litigation and individuals were nervous about going to court. Dave Hamilton noted additional question was about scarcity. Adam Zwickle noted context of this work shows legislative scarcity to protect water from becoming scarce – noted it hasn't been looked at in literature. Noted this issue makes it more difficult to communicate for a water user and understand stepping in before it happens. Dave Hamilton noted that it ultimately comes down to how much water is being pumped and don't understand an ARI is an issue. Adam Zwickle noted not all streams have fish. Bryan Burroughs clarified they do have some variation of fish. Bryan Burroughs asked if there is trust issues with EGLE, is there more communication and mediation to identify a solution? Bryan Burroughs noted EGLE is in a rough position to help individuals choose a mediator. Noted is wondering what the right entity for this communication is. Adam Zwickle strongly believes that EGLE needs to communicate and believes there should be others involved as extensions such as industry groups to help avoid issues like litigation issues or any time of policy concerns. Noted it is important EGLE to communicate and in a perfect world would

have a budget to allow individuals to have a Water Use Committee Coordinator who helps individuals and empowers them to connect with water users.

Jim Milne asked when will the three guides become available? Adam Zwickle noted they will and that drafts are currently going through final review and will be made available to WUAC and agencies.

Jim Milne noted a question on the facilitation of the meetings held and noted he has experience with facilitation. Noted that MSU-Extension has facilitators, but not everyone is qualified. Noted that upfront you set guidelines to prevent issues and would pull individuals aside to address any issues that arise. Wondered if this was done? Adam Zwickle noted no, as this was more conversational with no true facilitation or ground rules.

Pat Staskiewicz noted he understands this project is wrapping up and noted that there are individuals who are interested in doing a tabletop review of this work and was wondering if there were any thoughts on creating a workgroup for this. Adam Zwickle noted would leave to WUAC to determine where to go but has similar thoughts of potentially connecting with WUAC members or creating a workgroup.

Todd Feenstra noted about trust and noted that they had clients in watershed areas. Noted they asked them to participate in those based on the data they had and noted question that groups of growers are coming into a theoretical model showing scarcity and was wondering how you build trust in those situations when there is no data. Adam Zwickle noted it does start with the data point and noted maybe it helps in shifting where the conversation starts. Noted water management area depletion status & previous registrations can be identified if a WWAT run is performed, which is good, and that an SSR would at least help in demonstrating an impact on the resource before reduction/withdrawal to provide evidence. Jim Milne noted that if a water management area becomes so depleted that EGLE declares an ARI and convenes a water user meeting (in the absence of an existing water user committee), then a prerequisite would be to have that EGLE presents the water users with data to convince them that there is a problem to be solved.

Pat Staskiewicz thanked Adam Zwickle for presenting.

8. EGLE Update

Jim Milne noted the outline for today's EGLE updates, including: GRMD hiring updates, 2020 recommendations, USGS NGWMN grant, PART 327 Metrics, and allow for questions.

Jim Milne introduced Sydney Ruhala, the new Geology Specialist 13 in Groundwater Data Unit (GDU). Her duties include management of EGLE's groundwater data management system by using the EQUIS software. She will also be responsible for overseeing the grants from USGS for becoming the new data provider for the national Ground Water Monitoring Network. Noted just wrapped up interviews for the Geologist 9-11 (GIS Support) positions in GDU. Noted interviews were completed for the Groundwater and Geological Services Section (GGSS)

Manager and two Geologist 9-11 (SSR) positions have been posted in WUAU to backfill vacancies in the SSR review staff. Noted interviews will be scheduled after HR/Civil Service completes their credential reviews and provides Jim with the list of candidates.

Jim Milne provided updates on several 2020 recommendations. Noted that the MI Hydrologic Framework (MHF) and MI Integrated Water Management Database (MIWMD) grant agreement has been signed by all parties. Noted work continues to iron out the subcontracting agreement between MSU IWR and USGS. Noted the project workgroup has met to discuss initial design scope for the work. Noted Phase I of the Transition Probability Mapping project is almost complete and additional data from MGS is expected by October 9th. Noted the request for proposals (RFPs) for revising the WWAT's aquifer properties is published and that DTMB and EGLE will be reviewing the bids received.

Jim Milne showed a map shows of the network of active and inactive USGS monitoring wells in Michigan, plus the Allegan County wells installed by MGS. Noted the symbology reflects the status of the wells, including several inactive wells which EGLE staff haven't located yet. This map will be updated as EGLE and MGS personnel locate wells and assess the wells' conditions. The initial site inspections will include collecting GPS coordinates, assessing the wells' conditions, and determining if depth to groundwater and well depth measurements can be collected. Note that any future grant applications can include activities such as installing additional wells, repairing or abandoning damaged wells, and installing equipment (e.g., transducers) in wells.

Jim Milne noted USGS awarded EGLE a \$92,915 National Ground Water Monitoring Network (NGWMN) grant ending July 2025. Noted eligible activities has EGLE becoming a new data provider and noted once EQuIS data is populated, EGLE will data pull from EQuIS and upload it into the NGWMN. Noted Year 1 progress report sent to USGS.

Jim Milne provided an update on LQWs requested in 2024. Noted 179 registrations have been authorized by the WWAT, with 116 SSR registration being authorized by SSRs. Noted EGLE received a total of 132 SSR requests so far in 2024. 116 were authorized. 2 were denied. 7 were retracted by the applicant. 7 are still pending.

Jim Milne noted the average number of business days of a receipt of SSR Request (14.6) and 51% of the SSRs were completed within 10-business days. Noted the top graph is the long-term trend in the average number of business days to complete an SSR. The bottom graph is the long-term trend in the % of SSRs completed within 10-business days.

Jim Milne noted pre-screening review metrics, WUAU conducts pre-screening reviews (equivalent to SSRs) for EGLE Drinking Water & Environmental Health Division. Noted a Geology Pass authorization is an authorization based on the pumped aquifer not being hydraulically connected to surface water. Noted this included 20 Total Pre-Screening Reviews completed: 5 Zone A, 2 Zone A/Geology Pass, 9 Zone B, 2 Zone C, 0 Zone D, and 2 Baseline Capacity Replacements.

Jim Milne noted 327 Permit metrics as of October 1, 2024. Noted has 1 permit issued and 6 applications pending.

Jim Milne noted Compliance Metrics from January 2024 to October 1, 2024. Noted Compliance Communications were 88 total: after the fact registration was 4, missing pump information requests were 1, revised registrations were 58, and installation verification were 25. Noted first violation notices were 15.

Jim Milne thanked the group for listening and asked any questions.

Dave Hamilton wondered what the highlighted water management areas on the slides represent. Hannah Arnett clarified they represent watersheds that had Zone D SSR determinations. Jim Milne noted the Zone D SSR determinations were because there wasn't enough stream flow available to authorize the proposed LQWs. Some of those WMAs have positive stream flow balances, just not enough to authorize the proposed LQWs.

Kelly Turner wondered what the -517 was. Jim Milne noted that was available streamflow balance.

9. Future

a. 2024 Meeting Dates (at Con Hall unless others offer to host) (*Quorum critical meetings)

- November 12, 2024*
- December 10, 2024

b. Formats

c. Quorum

Pat Staskiewicz noted Tom Frazier retired and has stepped away from his position as MTA representative. Currently seeking a replacement.

10. Open Comments (Three Minute Limit)

No noted open comments.

11. Motion to Adjourn

Motion to adjourn at 4:00 p.m.