

Meeting Agenda

Ottawa County Groundwater Board
Fillmore Complex – Conference Room E
February 15, 2024 - 9:00 AM



1. Call to Order
2. Approval of the Agenda
3. Introductions of Board Members
4. Election of Officers

Motion: To nominate _____ as Chair and _____ as Vice Chair

5. Old Business
 - A. Approval of the November 8, 2023 [Meeting Minutes](#)
6. Pertinent Project Updates
 - A. [Legislative Advocacy](#)
 - B. Landscape Partnership Opportunities
 - C. 2024 Staff Objectives
 - D. Public Engagement Opportunities
 - E. Regional Conservation Partnership Program (RCPP)
7. Public Comment
8. Other Business
 - A. Next Meeting: Thursday, April 18, 2024 at 9:00 AM
9. Adjournment

OTTAWA COUNTY GROUNDWATER BOARD

DATE: November 8, 2023

PLACE: Ottawa County Fillmore Administration Building, Conference Room D

PRESENT: Roger Belknap, Joe Bush, Adam Elenbaas, Jerry Geertman, Steve Hecksel, David Kraker, Henry Werksma, John Yellich, Dale Zahn, Alex Svoboda (representing Megan Boos), Sylvia Rhodea, Patrick Staskiewicz, Alan Steinman, John Truscott, Travis Williams

ABSENT: Angela Brown, Dale Buist

STAFF: Matthew Chappuies, Joseph Pierce, Lexie Kasper, Paul Sachs, Kylie Vosburg, Matthew Allen

PUBLIC: Theresa White, Jim Milne (EGLE)

CALL TO ORDER

Chair Roger Belknap called the meeting to order at 2:35 p.m. The roll call was initiated by Matthew Chappuies, and a quorum was present to do business. The 2/3 attendance needed to amend bylaws was also present.

APPROVAL OF AGENDA

GWB 23 - 11 Bush moved to approve the November 8, 2023 Agenda. The motion passed. UNANIMOUS

OLD BUSINESS

A. Approval of the August 10, 2023 Meeting Minutes

GWB 23 - 12 Staskiewicz moved to approve the minutes from the August 10, 2023 meeting, subject to the minor Michigan Geological Survey revisions made by John Yellich and Paul Sachs to pages 5 & 6. The motion passed. UNANIMOUS

B. Review and Approval Bylaw Revisions

GWB 23 - 13 Yellich moved to approve the Bylaw revisions. A roll call vote was taken. The motion passed as shown by the following votes: Yeas: Belknap, Bush, Elenbaas, Geertman, Hecksel, Kraker, Werksma, Yellich, Zahn, Svoboda, Rhodea, Staskiewicz, Steinman, Truscott, Williams (15) UNANIMOUS

NEW BUSINESS

A. Pertinent Project Updates

Ottawa County Native Landscape Project

Kylie Vosburg gave an update on the status of the landscaping project. She explained that since August, the native plant garden plugs had been installed. The ecoturf, prairie seed and dune grass were to be installed by the end of the year. Paul Sachs added that the project was a pilot for the County to lead by example for how to replace turf grass. He also added that the Board of Commissioners had approved the project through CIP funding in January of 2023. Sachs mentioned that the County would be tracking water and maintenance savings to consider the viability of expanding the project in the future. Vosburg explained that the next phase of the project would be maintenance. Native Edge is responsible for maintenance (besides watering) until 2025. In the meantime, the Department of Strategic Impact (DSI) and the Facilities Department will be learning how to weed the new landscape and care for it. DSI is planning to

develop a guideline for doing so to share on the website. Vosburg then emphasized that education and outreach would be key next steps to ensuring the project is successful. She explained that they had come across some questions and concerns about the project from internal County staff and the public alike and had developed an educational trifold and heavy-duty signs to help inform those about the project and new plants. Eventually, permanent educational signage will replace the temporary ones. DSI staff is working to develop those materials. Vosburg explained the new signs would display a campus map showing the different zones, and that they would aim to simplify the planting process by identifying plants, their care requirements and showcase their cost and water savings benefits as well as environmental benefits. John Yellich asked if soil profiles were conducted. Vosburg explained that the soil profiles were conducted by Native Edge. Yellich then asked if they confirmed it was native soils (by digging deep into the ground) versus topsoil replacement that is common with construction projects. Vosburg stated that she would have to consult with Native Edge to answer that question. Chair Belknap asked if there were any measurables developed to track how much water would be saved. Vosburg explained that some estimates were developed, which are displayed on the trifold, and are in a prepared document as well that could be shared. She also explained that facilities offered to help track the difference in water and money savings through their tracked data. Chair Belknap added that those statistics would be helpful in educating community members about conservation.

Jerry Geertman mentioned that he drove by the Fillmore Campus not too long ago and noticed a sprinkler head was misaligned. Staff said they would check with facilities to ensure it wasn't still occurring.

Sachs mentioned that Dale Zahn at the West Michigan Lakeshore Association of Realtors (WMLAR) might be looking to implement a similar project. Zahn elaborated that he had met with Vosburg and Native Edge to consider a native landscaping pilot project. Zahn explained that at this point it was too late in the year to begin a project now, and the materials received from Native Edge weren't quite what they were looking for. They would need information more tailored to segments of the WMLAR property before they could move forward. Travis Williams explained that Outdoor Discovery has conducted similar projects for businesses in the area as well and they could be of help if needed.

State Grant Status

Chappuies gave a brief recap of the community outreach, education and messaging project, as part of the grant project. He explained that staff had hired Gorilla to film interviews and areas of the County to develop an overview video as well as answer various FAQs that are often received about the groundwater issue. Chappuies shared pictures of the interview filming and stated that Gorilla is currently working on the animation aspect of the overview video. Chappuies stated that staff is expecting a draft of the video in the next couple months and would share that draft with the Board.

Chappuies then gave an update concerning the status of the monitoring network. Ten (10) stations are currently reporting static water level data on an hourly basis. Chappuies added that staff is continuing to look for additional sites and reminded the Board to let staff know if they become aware of properties where a monitoring well could be installed. Henry Werksma asked if part of the purpose of monitoring was to find where there is connectivity between the glacial and Marshall aquifer. Yellich confirmed, and Chappuies added that in Jamestown there are monitoring wells next to each other in each aquifer currently reporting the same water level, so that is one example where data suggests it is connected. Werksma asked if the data would be made available for viewing. Chappuies stated that staff would like to make it available eventually, but there are currently privacy and security concerns with sharing the data publicly. Chappuies stated that the data could be sent to the Board upon request as of now. A long-term goal is to make the data available to the public or to those wishing to use it to conduct scientific studies. Joe Bush asked if the goal was to install majority of wells on County owned property to avoid concerns among property owner data privacy. Yellich confirmed. Chair Belknap asked if the GIS team could take the data and display it on a map for the public to view. Chappuies confirmed that staff was

working with the GIS department to try and come up with a way to display the data, but there have been some issues such as the fact that the monitoring sensors are different brands. Chair Belknap asked if something similar had been done before. Yellich answered that the monitoring wells could become part of the USGS National Groundwater Monitoring Network. Yellich added that the DSI staff is doing a great thing in testing the different sensor brands to see how well they each work because they are finding some that don't work well, which then helps Yellich in identifying which ones his team should use as well at the Geologic Survey. Chappuies elaborated that the National Groundwater Monitoring Network isn't updated frequently and isn't the most reliable. The team is trying to come up with an in-house solution that would be more cost effective than most of the quotes that the DSI team has received for streamlined data collection. Chair Belknap asked if there were any best-case scenarios for monitoring based on elevation of the property. Yellich and Chappuies explained that the approach had been based on availability of sites rather than factors like elevation due to the lack of abundance of properties. Geertman asked if staff was having difficulty finding properties to drill. Chappuies confirmed that it had been a challenge. Geertman stated that for private property owners, there is likely hesitation because the data collected could be used against them. Geertman explained that farmers have experienced a "guilty until proven innocent" approach with EGLE, and that EGLE had been difficult when working with farmers. Chappuies agreed that staff have heard similar sentiment concerning the data collection on farmland. Chappuies added that staff has zero intention of using that data against farmers and didn't think EGLE would either, although he couldn't confirm that. He stated that he didn't think EGLE would have access to the data at this point either. Pat Staskiewicz said the data collection could be an investment for property owners when a site-specific review is needed, of which the studies are very expensive. Geertman added again that farmers have previously released data to EGLE, and it has been used against them after they had been approved for use, and therefore there isn't a lot of trust between the state and private property owners. Sachs said he hopes that adding more data could help landowners utilize the resources that are available since there is such a lack from EGLE and the state. Chappuies added that perhaps the data might only be shared with the Groundwater Board to help alleviate private landowner concerns about the State getting ahold of it. Sachs reiterated that the goal is to put all the data into a hydrologic model to show what is really happening. Sachs asked if it was necessary to share the data publicly until it's in a dynamic form such as a model. Yellich stated that more data points needed to be collected before a model can be created. Bush added that there hasn't been enough time in which data has been collected to create this model yet either.

Chappuies moved on to elaborate on the modeling aspect of the project. Ultimately, the goal of the data is to be put into a model. The main priority now is data collection. Staff is beginning to consider goals and possible outcomes for how the data is to be used and how to get the best use with current available technology. Chappuies stated that there are current case studies in other communities for similar projects that could be emulated. As this part of the project advances, more targeted data collection may be appropriate. Werksma asked what data was being captured. Chappuies answered static water level. Werksma asked if there is a higher percentage of wells in the glacial vs the Marshall. Yellich clarified that it is a higher percentage of monitoring wells in the Marshall. Yellich added that the Geologic Survey is looking to install wells on the east side of the County to get as close to Kent County as possible until they get permission to drill in Kent. He stated it would be helpful in monitoring how the Marshall changes closer to Kent. Alan Steinman asked if staff is testing for water quality. Chappuies added that they are only looking to test in areas of high chloride contamination. Steinman asked if we would consider testing for coliforms and nitrates. Chappuies stated that staff is open to testing for those types of contaminants and more, and that they would like to at least do baseline testing at each site followed by periodic testing at some point. Steinman added that they could help with quality testing if needed. Water quality sensors were briefly discussed but were deemed too expensive and high maintenance. Alex Svoboda asked if there has been any drilling on private property yet. Chappuies answered that there had been an existing well that staff had put a monitoring device in, but no new wells were drilled. Svoboda added that the conservation district may be able to help find private property owners that would be willing to allow for monitoring wells on their property. Chappuies explained that there is a contract that staff developed for those instances which makes the process as easy as possible for landowners. He also added that staff could install additional equipment that may be

helpful for farmers if they agreed to have a monitoring well. Sachs added that surface water monitoring is also an aspect of the project that needs to be developed and would be very helpful to supply needed data and that it could be integrated into the overall water model. Chappuies stated that a small portion of the grant has been dedicated for surface monitoring equipment, but staff would need to connect with the Water Resources Commissioner's office to help find locations for those devices. Zahn asked what will be done with the data and models once developed. Steinman explained that the data is used to educate future problem solvers (students, researchers) on how to solve these problems in the future. Bush added that finding areas for recharge might be another way the data and models could be used. Sachs added that the data could also be used for future land use planning related to water availability and quality (improved decision making).

MSU Water Users Committee- Pilot

Staskiewicz discussed the water use advisory council which studied the water user groups as a way to resolve conflict. They recommended there would be a guidance document put together. Sachs and Staskiewicz are a part of the stakeholder group for this conflict resolution tool. Staskiewicz wanted to provide the report for the group's reference. The project is still ongoing and will result in a final report.

Legislative Advocacy

Chair Belknap acknowledged the work that staff had invested into identifying legislative opportunities for advocacy in this space. A document was presented to legislative representatives in a workshop recently which discussed those opportunities. Staff is continuing to work through the draft with stakeholders, including the State and County Farm Bureau, for support to refine the language and to eventually fully activate the document. Some examples of legislative barriers included in the document include grey water reuse and dam creation. Chair Belknap added that the County Board would do what they could to support the advocacy effort.

OTHER BUSINESS/DISCUSSION ITEMS

A. Non-Ag Large Quantity Marshall Withdrawals

Sachs discussed a map which displayed large quantity water withdrawals in the County to show what currently exists and perhaps identify partnership opportunities. Chappuies says the data was pulled from EGLE's website and is from 2021. He stated that most of the data is private, and this was the only available data he could find. Chappuies added that it is for analysis purposes and relationship building only. There was further discussion about the types of wells on the map and the reporting requirements for them.

B. Next Meeting: Early Spring, 2024

The group discussed scheduling the next meeting for 3 hours to allow for more discussion. Staskiewicz added that the legislative advocacy should be added to the next agenda since it was cut short due to time constraints. Sachs stated that staff would organize the next meeting date.

PUBLIC COMMENT

None

ADJOURNMENT

GWB 23 - 14 Chair Belknap moved to adjourn the meeting at 4:13 p.m. The motion passed. UNANIMOUS

Legislative Barriers and Opportunities

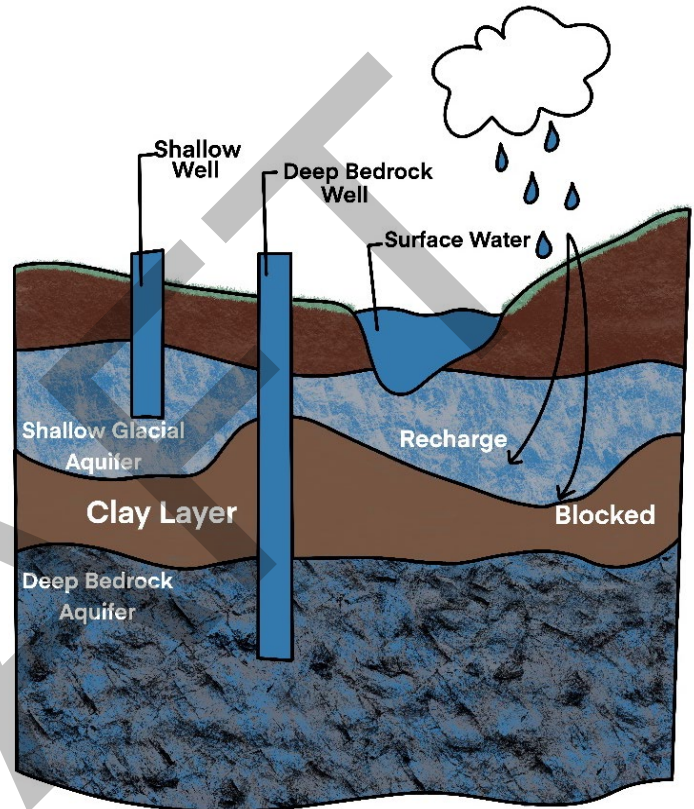
Overview: Approximately 25% of Ottawa County's ~108,000 households use private wells for their potable water supply. Residents in the central and southeast areas of the county rely primarily on the deep bedrock aquifer for their drinking water because, typically, the upper glacial system is not productive enough for sustained domestic water use.

First identified in 2005, well-dependent households utilizing the deep bedrock aquifer system have experienced alarming issues related to diminishing groundwater supply and highly elevated levels of sodium chloride; a naturally occurring mineral.

Issue: The underlying issue is the result of both natural geologic and human-induced factors. A thick layer of impermeable clay sits atop the deep bedrock aquifer, also called the Marshall Sandstone aquifer, that prevents water levels from being recharged by natural processes, such as when rain or melting snow seeps into the ground. As a rapidly growing county, more and more residents are utilizing the Marshall Sandstone for their potable water supply, which is exacerbating the instability of the aquifer. Declining water levels in the deep bedrock aquifer are also leading to increased sodium chloride concentrations that can damage crops, corrode plumbing, and cause health effects with sustained ingestion. The combined concerns of decreasing water levels and increased sodium chloride affect new and long-time residents as well as Ottawa County's numerous agricultural producers.

Proactive Planning: Ottawa County, through its Department of Strategic Impact, is diligently working to ensure current and future residents have permanent sustainable access to clean, potable water for reasonable use. A few examples of this ongoing work include:

- Improved understanding of locally unique geologic conditions
- Installation of active well monitoring systems
- Extensive outreach and education with the public on water conservation
- Collaboration with local units of government on effective land use planning strategies



The following focus areas have been identified as barriers that currently impede the ability of Ottawa County leaders to effectively address this critical groundwater issue.



Water Withdrawal Assessment Tool

The Water Withdrawal Assessment Tool is used by EGLE when issuing Part 327 Large Quantity Withdrawal (LQW) permits. A LQW is generally any withdrawal of 75 gallons per minute or more per well. These users typically include agriculture and industry. For comparison, individual household wells withdraw between 10-20 gallons of groundwater per minute at peak usage.

The WWAT is designed to help the State assess new LQWs by evaluating the impact of new withdrawals on surface waters. If the WWAT determines that surface water levels will not be negatively impacted by a new LQW, a permit is generally issued.

- **Barrier 1:** The deep bedrock aquifer system in Ottawa County is not hydrologically connected to surface waters in many areas, and the WWAT, unfortunately, is not designed to consider multiple aquifer systems. Consequently, LQWs from the deep bedrock continue to be permitted thereby exacerbating the issues Ottawa County is experiencing with respect to diminishing groundwater availability from that system.
- **Opportunity:** Improve the LQW permitting process (and WWAT) to incorporate the potential impacts of new withdrawals on water levels from within the deep rock aquifer system rather than limiting the assessment to only impacts to surface waters.

- **Barrier 2:** The WWAT does not consider the cumulative impacts of new LQWs on nearby, existing domestic (residential) wells as its focus is solely on surface water impacts. Part 327 does authorize a formal aquifer dispute resolution process for when homeowners experience well issues after new nearby LQWs are operational; however, that process is wholly reactionary.
- **Opportunity:** Develop a more proactive, data-driven assessment of the cumulative impacts of new LQWs on nearby domestic wells to preemptively address consequential groundwater availability issues that may be experienced by homeowners.



Stormwater Retention and Reuse

The County's current drain system manages stormwater runoff to maximize drainage and minimize flooding; that excess water is ultimately channeled into Lake Michigan. A viable alternative to these traditional practices is the strategic retention and reuse of stormwater runoff, particularly for agricultural operators located in areas with known and diminishing groundwater availability.

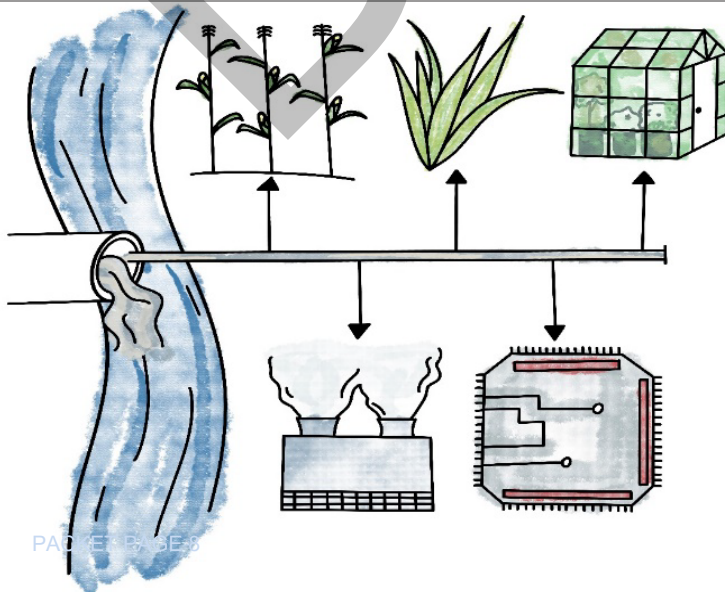
- **Barrier:** The Ottawa County Water Resources (Drain) Commissioner has limited statutory authority to create regional retention reservoirs that would allow for the strategic capture and reuse of stormwater.
- **Opportunity:** Assess drain regulations and permitting of new strategically placed dams, especially in areas with known groundwater challenges, to help facilitate opportunities for stormwater retention and appropriate irrigation reuse.



Industrial/Municipal Water Discharge Reuse

Graywater and treated water from industrial users and wastewater treatment facilities are permitted by statute to be discharged into local waterways (e.g., rivers, streams, drains). Maximizing the strategic reuse of such discharge water could be an effective opportunity for agricultural producers and industry.

- **Barrier:** Although authorized for discharge into the environment, treated water is not currently permitted for acceptable reuse opportunities.
- **Opportunity:** Modify appropriate statutes to allow for reuse of safe, treated graywater in acceptable applications. A change in the acceptable reuse of graywater would directly benefit local farmers and businesses by giving them a sustainable water source for pre-determined, limited uses.



Potential Gray Water Uses

Feed Crops, Pasture,
Nursery Crops,
Cooling Towers,
and Manufacturing



Open Space Preservation Zoning

Pursuant to State Statute (PA 179 of 2001), a local unit of government shall provide in their zoning ordinance a provision to allow for open space preservation (i.e., cluster development zoning). The statute dictates that local governments allow for developers to “cluster” new homes on a parcel if, in return, that developer protects at least 20% of the parcel as “open space”. The intent is to mandate the protection of open space/agricultural lands.

- Barrier:** Development standards (notably minimum lot size requirements) found within zoning ordinances are one of the only tools local governments can use to manage groundwater sustainability. Authorizing “clusters” can negatively impact homeowners access to a reliable groundwater supply due to concentrated drawdown, especially in areas with groundwater availability issues. PA 179 authorizes the extension of public water (or sewer) to new “cluster” developments if there are concerns with groundwater; however, relying on public water extensions to circumvent groundwater availability issues while simultaneously encouraging agricultural preservation is wholly contradictory as waterlines promote development.
- Opportunity:** Enhance PA 179 by adding a provision that requires “Geological information such as well logs, published studies, and aquifer pumping tests” with an emphasis on verifying sustained water quantity for new developments proposing to utilize “clustering”, particularly from the deep bedrock aquifer. If demonstrated that there is not an adequate supply of potable groundwater, statute should allow for an alternative to public water extensions such as requiring larger lot sizes or utilization of a shared well system (i.e. installation of a small Type 1 well field) to help provide a more sustainable water supply for individual, well-dependent homes.

Clustered Drawdown Impacts

