

Carol Culbertson
5825 Garrison Road
Enon, Ohio 45323

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Southwest District

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William.fischbein@epa.ohio.gov

Mr. William Fischbein,
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Dear Mr. William Fischbein,

I am writing on behalf of myself, the owner of the Culbertson Fen, a Category 3 wetland sustained by groundwater. I purchased the property along Garrison Road in Mad River Township in Clark County nearly 15 years ago and have put countless hours removing invasive species and coaxing the flora and fauna of this unique and rare ecosystem to flourish. The protection of this fen is a grave responsibility I owe to myself and to the community at large. The Ohio Environmental Protection Agency (OEPA) likewise has been given a directive to provide Category 3 wetlands, including this fen and the Vanderglas Fen just down the road, the highest protections possible.

You received a letter dated August 30, 2019 from Mr. Brian Barger, the lawyer representing Enon Sand & Gravel's (ES&G) interested in siting a limestone mine situated between Garrison Road and South Tecumseh Road in Mad River Township. The company is seeking a NPDES permit to discharge water into the unnamed tributary of Mud Run during its Phase I mining operations.

The Jurgensen Companies tout their expertise in this letter stating they "have extensive experience in addressing potential impacts from mining operations." However according to notes from OEPA participants in a meeting held on February 27, 2019 it was revealed that the Jurgensen Companies have "never dealt with a fen before." They have no expertise in these types of wetlands.

And yes, the Ohio Department of Natural Resources (ODNR) Division of Minerals approved the company's request to dewater and blast in an area of 400 acres in the county in 2017. This decision was appealed by Citizens Against Mining (CAM) at the Ohio Reclamation Commission with multiple hearing dates in the spring of 2018. The Commission ruled in favor of Jurgensen but the final word has not been heard. At this time, the Commission's decision has been appealed by CAM and is currently on Judge O'Neil's docket in the Clark County Common Pleas Court.

I would agree that as part of the application process to amend the permit (permit IM375 was added to permit IM340) a hydrologic study was required. I disagree that the hydrologic study of the area's ground water was thorough. Throughout the testimony of Brent Huntsman, the hydrogeologist hired by CAM, concerns were voiced of the inadequacies of the model prepared for ES&G by Eagon and Associates, Inc. (EAI). It was pointed out numerous times the model was not site specific, did not follow the guidelines of the American Society for Testing and Materials, used incorrect data points and disregarded data not suited to their model's construction. Huntsman states in his testimony, "I was

trying to say that the cone of depression that their model has produced is nonsensical. It doesn't make sense."

(Transcript Volume II at 330)

It is true that ODNR's hydrology expert Kelly Barrett, Enon's hydrology expert Steven Champa and CAM's hydrology expert Brent Huntsman all agreed that to the extent that the Vanderglas Fen was being fed by an aquifer, that aquifer was likely "perched" above the lower aquifer to be impacted by the dewatering activity. However, the conclusions drawn from the information of a perched aquifer cannot be anymore different among the experts. CAM's expert's professional opinion was that communication *would* occur between the perched aquifer and the lower aquifer; the presence of an aquitard is not a total bar to communication. On the same day, Brent Huntsman expounds on the subject referring to the Culbertson Fen stating, "As you pump, you lower the groundwater levels, the water that's feeding the fens in the wetlands is right up on top. So you're going to be taking that water away. It's going to be recharging the lower portion of the aquifer, and the fen is going to dry. You are not going to have it. There's not going to be the recharge to keep it alive."

(Transcript Vol. II at 236-237)

Huntsman's observations of the Vanderglas Fen and Creek is found a few lines further down in his testimony. When asked about how the mining will impact this fen he states that it will, "Dry it up. I mean, it's going to take away its water supply, its groundwater recharge" He further explains regarding the impacts on the Vanderglas stream saying, "Because the stream is coming from farther up north and it's issuing from spring zones. There is no permanent stream that is providing water to that area so it's groundwater fed and if you take away the groundwater, the fen can't be fed."

(Transcript Vol. II at 237-238)

A geologist with whom I consult on a regular basis weighed in on the perched aquifer as well. He states, "No it is not a true statement that there probably would not be any damage. You have recognized something very important here. The perched water table that supposedly feeds the fen may indeed be shallow groundwater flowing through the upper bedrock or occurring at the bedrock/overburden boundary or entirely within some very permeable zones of the overburden material. The water feeding the fens may indeed sit above the regional groundwater table, but its source could be coming from relatively shallow materials that would be impacted by the excavation work that is done to reach the good limestone/dolomite that they want to quarry. Thus, that was the reason to evaluate the overall hydrology of the area and see how much contribution there is from each of those three potential sources. Once that upper material is destroyed you won't get it back through reclamation. Are they assuming that all the water is fed to the fens from the west? That is not true. The mining occurs to the east of the fens and the topographic gradients and the top-of-bedrock gradients and the groundwater gradients all appear to be coming towards the fens from the east. Enon's consultant with their study and maps show this very clearly and the May 21, 2018, OH EPA anti-degradation evaluation has photos and statements that show this "from-the-east" situation. The lawyer letter ineptly tries to bypass a discussion of source direction and just focuses on the fact that the water is probably a perched water. They really missed the boat here."

Mr. Barger and ES&G certainly did miss the boat. This suggests there is a good probability the Vanderglas Fen and the Culbertson Fen will be impacted by Enon's dewatering activity. Further study

must be completed in accordance with the OEPA's requested information to ensure the protection of two Category 3 fens and the Mud Run Creek. The geologist with whom I consulted did state, "I have been in a lot of situations where only one reading was taken/allowed and decisions had to be made based on that one reading, but I always pointed out that for a proper understanding of the natural hydrogeologic fluctuations it would be best to have a minimum of two years worth of data with at least one reading being taken in the throes of each of the four seasons." A consult with a different geologist yielded his opinion that the hydraulic testing in the monitoring wells should continue for a year with measurements taken every fifteen minutes in the karstic environment of this area of Clark County.

The regulations governing the issuance of permits by the ODNr are woefully inadequate leaving communities vulnerable when a company, complicit with a state agency is not willing to bring adequate monetary resources to the task at hand.

When questioned about the difference in porosity between the upper carbonate aquifer and the lower carbonate aquifer, Kelly Barrett, ODNr's expert witness alludes to the inadequacies of the current model prepared by EAI. During the hearing she stated, "I mean, you could say that some of it might have more fracturing. You could say some of it might have the karst, but you don't specifically know point by point." She continues her thought stating, "Well, it would take an extreme amount of geologic investigation to figure out all of the fractures, all of the karst. This information is not already readily available, the scale of -- you would need it to do a model." Yes, to have an accurate model, it may take some substantial time and resources to be spent by the company. And yet this company refuses to further study this issue "at significant cost..." to ensure the protection of adjacent homeowners' properties.

(Transcript Vol. II at 628-629)

This company proposes to monitor the situation rather than satisfy the requests for information from the OEPA. It is a curious proposal for a company positioned to gain millions from their mining operations. Perhaps, this company fears the results of an accurate hydrogeology study. Perhaps such a study will prove the connection between the fens and the mining properties? Perhaps gathering the requested information for OEPA could lead to restrictions in their future mining plans? As one geologist states, "ES&G tries to make it sound as though there is no issue here because they will monitor things all along the way and modify the mining plan and cease mining or dewatering if the indicators show there might be a detrimental impact to the fens or water wells. It boils down to the question of whether it is better to be proactive and actually know what you are dealing with out there before any earth disturbance, or wait until something happens and try to be effective in the reaction. I feel this is a situation that warrants being proactive and knowing the detailed hydrogeology of the area. The consultant's original study did not have the necessary details to determine real impacts to water wells or fens." If indeed the hydrology of the fens are connected to ES&G's properties and the company starts mining operations, removing overburden and blasting and disrupting the underground conduits which recharge the fens, there can be no remediation which will restore the water to the fens. Once the underground conduits are destroyed, the water stops flowing and there is nothing the company can do to reverse the tragedy. No amount of money or action can compensate adjacent landowners for such a catastrophic event.

Mitigate? Did I read that correctly? Mitigate the fens which are not on the mining site itself. Mitigate? How would that work? A private company would take the water under my property, destroy the Category 3 fen on my property and then try to mitigate it someplace other than my property? On the

practical side, there is no site in the state of Ohio which will have the required hydrology to recreate the pristine and diverse Category 3 fens found on the Culbertson and Vanderglas properties.

In conclusion, for the reasons stated above, I refuse to trust this company with its technically deficient plans to "take care of its neighbors" when it won't even spend the money to supply the information requested by the OEPA. With the woeful lack of information provided by ES&G since OEPA's first request on May 29, 2018, this company must not be allowed to evade the authority of the OEPA and set their own terms for future mining plans.

The issuance of the NPDES permit, in any form, must be refused until, and not until, all actions set forth in the OEPA letter sent to ES&G by Mr. Robert Ostendorf on July 29, 2019 are met.

Sincerely,



Carol Culbertson
carol@cculbertson.com

cc

Robert Ostendorf, Environmental Specialist, Division of Surface Water,
Southwest District Office, Ohio Environmental Protection Agency
Bonnie Buthker, District Chief, Southwest District Office, Ohio Environmental Protection
Agency
Laurie Stevenson, Director, Ohio Environmental Protection Agency
Mike DeWine, Governor, State of Ohio