



Pangea Environmental, LLC

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Cambridge Twp Planning Commission
Onstead, Michigan

Pangea Environmental, LLC has been asked to provide a technical review of the application for a proposed aggregate mine in Cambridge Township. We have also been asked to follow the permitting process. We will be assessing whether “very serious consequences” (VSC) will occur from the mining and whether denial of the application is appropriate under the Michigan Zoning Enabling Act (MZEA) (MCL 125.3205). We will also be providing comments regarding “Need” and “Value” as reasons for denial under the MZEA.

I have included a link to a short two part article about permitting aggregate mines in Michigan under the MZEA. Pangea Environmental, LLC specializes in the review of aggregate mine applications and have reviewed over a dozen permit applications in the last several years.

We are available to answer questions the PC Members may have and are willing to give a presentation about permitting and “very serious consequences” to the PC. We already gave one to the residents.

The “very serious consequences” taken directly from the MZEA are as follows:

5) In determining under this section whether very serious consequences would result from the extraction, by mining, of natural resources, the standards set forth in *Silva v Ada Township*, 416 Mich 153 (1982), shall be applied and all of the following factors may be considered, if applicable:

- (a) The relationship of extraction and associated activities with existing land uses.
- (b) The impact on existing land uses in the vicinity of the property.
- (c) The impact on property values in the vicinity of the property and along the proposed hauling route serving the property, based on credible evidence.



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- (d) The impact on pedestrian and traffic safety in the vicinity of the property and along the proposed hauling route serving the property.
- (e) The impact on other identifiable health, safety, and welfare interests in the local unit of government.
- (f) The overall public interest in the extraction of the specific natural resources on the property.

The proposed mine is an industrial operation that does clearly not belong in a residential area. There are human health concerns related to aggregate mining due to the significant dust that can develop during mining.

Silica makes up a large portion of the dust and is a known human carcinogen and can cause silicosis. The Michigan Department of Health and Human Services (MDHHS) is currently conducting an environmental health study around a mine in Grass lake Township due to the apparent cluster of illnesses noted nearby.

The Part 55 General Permit granted by the Michigan Department of Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD) does not require the monitoring for airborne silica leaving the mine site. The amount of silica dust in the workplace air is heavily regulated. However, across the property line, there is no protection for residents living there 24/7 vs a worker there for 40 hours/week. The General Permit is out of date and needs revisions. We can provide statistics regarding the number of silicosis cases in Michigan, if asked.

The mine clearly does not fit the character of the area and is another "very serious consequence" and a reason for a denial.

Property devaluation is a documented problem near aggregate mines and the depreciation is not just next to the mine. The haul routes also can experience a decline in value. We have studies that show up to a 30% decline in property value. The tax revenue can also be decreased along with the property values.

Traffic control appears to be a major concern for slow moving gravel trains pulling out onto US 12. I was having trouble pulling onto US 12 is a passenger vehicle. How will gravel trains do



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this safely? BTW, it takes about a 1/4 mile for a gravel train moving 60 mph to stop, if everything is working and the driver is alert.

Is US 12 a school bus route?

What about other slow moving vehicles that may be present along a blind curve or hill?

The creation of a lake requires a Part 301 Permit from EGLE Water Resources Division (WRD). This requires a hydrogeological study. This study should be completed prior to mine approval because other "very serious consequences" may become evident from the hydrogeological study.

Creating a lake is much more involved than digging a hole. Lakes have boundaries for a reason. This could be the result of the change in the geological and hydrogeological conditions. The geology of the proposed excavation must be known in order to determine if creating a lake is possible due to the hydrogeological conditions that exist. None of this has been presented to the PC.

What impact will the mine have on the drinking water? Everyone depends on groundwater and the mine is proposed to be in the aquifer. Water is needed for the processing of the material and dust control. How will this withdrawal from one or more high capacity water wells impact the residential wells?

After processing the mined material, the process waste water needs to be discharged. That will either be through settling ponds, which can impact groundwater, or direct discharge to surface water. How will groundwater and/or surface water be impacted?

There are many issues that must be resolved before this mine masquerading as a subdivision can be approved. Real data must be presented, not just unsupported statements. Claiming the data is proprietary is ridiculous for a sand and gravel mine. The MZEA clearly states "value" must be demonstrated. That requires releasing the soil boring and associated groundwater information. This information is also needed to assess the potential "very serious consequences" that may occur as a result of the mining. I've seen this tried and it failed every time in my experience. The judge needs to see the data supporting "value" if the township has to defend its position in a court of law.

I have close to 45 years of professional geological work that includes experience in the oil and mining industries, as well as regulatory experience with the MI Dept of Environmental Quality (DEQ), now EGLE. I have also taught geology for many years at several colleges including Wayne State University, U of M-Dearborn and I retired as an adjunct professor from Macomb



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Community College. I have BS and MS degrees in geology and have taken post graduate courses in hydrogeology and business. I have worked throughout the US, western Canada and Colombia, South America.

We specialize in providing expert witness testimony. Recently, we testified at an Administrative Law Hearing against EGLE and Waste management of Michigan and a class action lawsuit against the City of Detroit. We have also been retained for a lawsuit under the Michigan Environmental Protection Act (MEPA) against Waste Management of Michigan.

<https://www.fractracker.org/2022/03/permitting-aggregate-mines-in-michigan-poses-very-serious-consequences/>

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