DATE: 23 June 2026
TO: Norvel Township Officials
RE: Permit to Mine Sand and Gravel – American Aggregates
FROM: Christopher Graham, ASLA

I join many others in being concerned about the possible effects the proximity of proposed mining, processing and trucking (gravel train) operations could have on very valuable natural resources on Watkins Lake and Hayes State Parks, and on the very valuable natural resources in the area of which they are a part.

It is my hope that once you have a better understanding of how special your place is, how vulnerable mining may be to the natural beauty and rare resources at the heart of your wonderful Township -- that you will act to protect your natural resources from damage as much as you can.

Michigan's 103rd State Park was chosen (in concert with Washtenaw County Parks) to benefit the people of Michigan because of:

> The pond (Watkins Lake) is well known for its fish and wildlife. It is especially exciting for its migrating waterfowl and for its visible and active Eagle's nest. If there ever was a great "Watchable Wildlife" site this one certainly qualifies.
>
> A headwater stream of about 5 miles in length (now the Norvell-Manchester Drain, but perhaps better called Marsh Brook), which runs from wetlands west of Faye Lake through the Park, then north into the River Raisin, there it contributes its cool, very fresh and clean water to the upper reaches of the River. It is a tributary headwater stream.

A rare wetland Plant Community (Prairie Fen) is able to exist only in a slice across southern Michigan. It is a large and fully intact Prairie Fen which embraces Marsh Brook, from a portion south of Faye Lake east to Arnold Road. There are other wetlands along this stream as well, further west and further north.

This place is, after all, in the heart of the "Irish Hills." The area's gently rolling though often rugged terrain of hills, lakes, streams and wetlands are certainly different than other places in Michigan. They are attractive and picturesque to many, many people. They formed because the Saginaw (Bay) Lobe and the Lake Erie Lobe of the last glacier epoch collided there – scooping up all soils and all materials down to bedrock (50' to 450'). As they melted, they dumped those materials very unevenly down onto bedrock -- in a complicated mosaic of morainal landforms, kettle holes and drainage ways.

Thus, the Irish Hills are a landscape of landforms only 10,000 to 12,000 years old, whereas most of Earth's landforms are hundreds of thousands or millions of years old. And they are very interesting. (Please see attachment, a (Norvel GIS) topographic map of hills west of Watkins Lake.)

Kettle holes are where the glaciers left behind huge blocks of ice amid the hills. Now these are the more than 50 beautiful lakes of the region.

Three great Michigan Rivers rise from Irish Hill's ground waters – the Kalamazoo, the Grand, and the River Raisin.

Prairie Fens in southern Michigan are a type of natural community of plants and animals that require very specific conditions to occur:

First is the topography. There are wonderful hills down through which rainwater seeps without runoff and erosion.

Second, is that the hills are composed mostly of sand and gravel and rocks (mineral soils rather than organic soils). The water seeping through such materials runs out of the toes of the hills into lowlands that sit on less permeable soil materials.

Third, the lowlands are relatively flat, with very slow-moving water flows or streams. These are not prone to erosion.

And fourth, because the ground water has come down through mineral materials it is moderately alkaline (rich in Calcium and Magnesium), cold, and very clean.

(Please see attachment: *Michigan Natural Communities – Prairie Fen.* A definitive description, MNFI )

It is in these circumstances where Prairie Fen communities (a variety of different habitats and their related plants and animals) can exist. What has taken several thousands of years to develop can continue to exist – if left undisturbed (including its ground water supplies) and unpolluted. You have the great fortune to have such a pristine place, such an unusual natural system, at the heart of your Township.

(Please see attachment: Pages 25-31 are key maps and the full report is *Natural Features Inventory and Management Recommendations for Watkins Lake State Park.* It was completed by the staff of the Michigan Natural Features Inventory in 2017.)

What are the limits of the ground watershed for Marsh Brook and its wetlands and valuable Prairie Fens, and for Watkins Lake? What happens when a substantial portion of the mineral "soils" in the hills surrounding these natural features are removed? Does the temperature of outflowing groundwater increase, does its alkalinity decrease? Do water volumes and ground water volumes and flows change? If those things happen, won't the habitat be altered? If the habitat is altered, can it continue to exist and thrive? What happens to Rare, Threatened and Endangered Species that depend on the health of that habitat, if it is diminished in function? Can mining really happen in such proximity to these rare natural resources, with no negative impacts?

The Department approved, with this Committee's strong support, the Master Plan for the Park in 2018. The then proposed future-looking boundary for the Park included lands across a larger area than the originally acquired parcels.

(Please see attachment: Page 25 has the Boundary Map of *Watkins Lake State Park and County Preserve, General Management Plan,* approved by the MDNR 2018).

One would expect that at least lands within the possible future Park Boundary are within the Marsh Brook "watershed" – and so are vital to sustaining the Fens (and the Lake).

The critical watershed may extend further than the proposed Park boundaries and current MDNR land holdings. The Fay Lake portion, west of Fay Lake Road, is so far not within proposed Park boundaries. Those private properties (south side of the Lake) could have conservation easements applied if there are willing owners. There already is one very successful Conservation Easement within the Park Boundaries held by Legacy Land Conservancy. They are doing great stewardship for that part of the fen, making the owners very happy.

You may also note that the Park Plan contains much information on stewardship for this Park -- one of the first Park Master Plans done for a State Park to include a Stewardship Plan. The DNR's Stewardship team has been working many hours at the Park – especially combatting the terribly invasive upland shrub, Autumn Olive (*Elaeagnus umbellata*). This is a clear expense of time and manpower and money. It's also a signal of the recognition Park Stewards have for the value of its natural resources.

Norvel Township GIS maps of American Aggregates property holdings and MDNR property holdings around Watkins Lake are also attached. Our highest concern is for lands north of Horning Road and north of Herman Road (in Washtenaw County). Our concern extends north of the east/west portion of Arnold Road, and to the property on the County line owned by the mining company, on Austin Road.

In the Master Plan and in the MNFI report you will find much description of the unusual natural features extant on this Park. Among them are a variety of freshwater mussel species that live in the stream. They are very sensitive to habitat damage, not least of which is pollution by salt. There is a federally endangered butterfly (*Mitchell's Satyr*). Its larva are now known to feed only on two Sedge species that only grow on Prairie Fens. There are deep water pools not often seen in fens, upland sparrows, an active Golden Eagle's nest on the SW corner of the

Lake. There is more of great value, and still very much to learn about the resources of this place.

For example, 42 mussel species are known to exist in Michigan. Populations of these animals across the State are way down from what there were 100 years ago. Button making in the 1920's and 1930's and habitat loss from pollution (particularly road salt), silting and fine particulate contamination have been responsible for these declines.

One species seems to have a population on this fen larger than any other place in Michigan -- *the Slippershell, Pressodonta viridis* (State Threatened). Marsh Brook is (so far) very well protected from pollution and threats of habitat loss. It is a treasure in your Township.

In addition to natural features there is a dedicated trail running through the Park on an old railroad grade (Ypsilanti and Michigan Southern originally, later a New York Central segment). MDNR and Washtenaw County have already been improving the trail across their ownerships – with plans to extend work east and west.

The Watkins family house still stands (now unprotected and starting to be vandalized). It is in danger of being lost. It sits south facing the hill at the north end of Watkins Road. It seems important to protect the house and original homestead, their scenic vista north over Watkins Lake. This along with some of the Trolz family ranching structures could come into public ownership and into a cultural program of some sort. This is an early family in your Township. They apparently helped with the Underground Railroad.

Though not now proposed for mining, all the land south and east around Watkins Lake to County Preserve lands simply shouldn't be mined, nor should it be filled with housing. This land is a lookout over the Lake and is certainly vital to keep in natural, water absorbing conditions.

Watkins Lake itself appears to be in a flat basin among the upland hills, with a minor outlet running north of Arnold to the Marsh Brook Creek. Probably one is seeing ground water elevations at its surface. The Lake's water elevation already varies significantly, depending directly upon weather patterns, year to year. There is no inflow of surface water to the lake, only ground water. What additional and negative

impacts could water withdrawals for mining operations nearby have on those water levels?

Given that Watkins Lake is such a “bird place,” what happens if water levels fall quite low in drought years? What impact would the mining operations have on increasing that problem? What would happen to the fishery?

How likely is it that the Bald Eagles currently on a nest with youngsters on the SW corner of the Lake will move on to someplace else, if mining operations there proceed?

In another matter it is quite true that gravel trains – heavy, tractor pulled double trailers full of heavy materials such as sand and gravel do “disturb the peace” of places they pass. These machines are not very good for roads, and they don’t stop very well either. Some can carry loads well over 100,000 pounds, typically with considerable motor noise as they pass a location.

How many trips in and out of the mining site will happen on a normal day? Won’t at least some of those trips, or many of them go down to M124 and then to US12? Won’t that take them as early as 7AM right through the long-established Hayes State Park that exists on both sides of M124, on Wampler’s Lake?

Hayes SP has an unusual circumstance. The Lake’s outlet and surrounding lowland are the site of the Park’s campground and cabins just to the east of the roadway. Much of the Park’s public access, the Lake and the shoreline activities are west of the roadway.

Traffic noise from vehicles on the road echoes through this lowland and through the adjacent Park. Little vegetative buffer and no topographic buffer are present. Likely passing gravel trains will “disturb the peace” of this place.

I must complement the Township that you established a Mining Ordinance with very good provisions. One provision of your regulations seems very important. That is the provision requiring a special 1600-foot setback from “natural resources.”

If one agrees that there are valuable natural resources on and around Watkins Lake State Park and County Preserve, and if one then applies a 1600-foot setback buffer

from near the shorelines of Watkins Lake and the fens -- then there are constraints for mining opportunity which the proposed plans did not recognize.

Lands south and east of the Lake and east of Watkins Road and north of Herman Road could not be mined (the scenic overlook of the Lake, the Watkins House and the Trolz Ranch). Nearly all lands west of Watkins Lake north of Horning Road now proposed for mining could not be mined. The NE corner of lands owned by the mining company on the parcel south of Horning Road (Trolz Ranch structures are there) would be off limits to mining. The processing facility would be off limits. Only a large portion of the mining parcel south of Horning Road and west of Watkins Road could be mined as proposed. The eastern Arnold Road site could not be mined because Marsh Brook crosses that property and wetlands surrounding the stream intrude onto the property from the west property line.

I join many others in not only hoping this mining in your Township be mostly or completely not permitted – but also I express a great wish that all lands (or as much as possible) which the Mining company owns in your Township become part of Watkins Lake State Park or a part of the Washtenaw County Preserve.

I hope you will stand for the natural resources of your place, for the natural heart of your wonderful Township. Thank you.

Attachments

1. *Watkins Lake State Park and County Preserve General Management Plan*.
2. *Natural Features Inventory and Management Recommendations for Watkins Lake State Park* (Michigan Natural Features Inventory).
3. Norvel Township GIS Map – Levy and American Aggregates holdings.
4. Norvel Township GIS Map – MDNR holdings.
5. Norvel Township GIS Map – Special topographic characteristics Norvel/Irish Hills.
6. *MNFI Prairie Fen Description and Distribution Map*.