

Comments August 27, 2024

Petition CUP 2629—Allow for the operation of a non-metallic mineral extraction operation (quarry)

I have 3 main concerns about the proposed 159 acre proposed quarry on Valley Road, Verona.

1. The substantial threat the quarry may have on the Town of Verona aquifers and residents of Pine Row.
2. The potentially fatal mix of substantial numbers of bicycles using Valley Road with up to 200 dump trucks exiting/entering the pit.
3. The ability of the current residents of Pine Row who earn their living by working from home to continue their businesses amid substantial noise and dust from 6 days/week operation of the quarry.

I believe my educational background (Ph.D. Soil Science, minor water chemistry) and work experience (Director of the UW Soil and Plant Analysis Laboratory) allows me to give a scientific perspective on the potential groundwater problems associated with this quarry.

1.The Town of Verona has quite complex soils and bedrock geology because of being at the junction of the drift less area where glaciers did not come (westside) and where glaciers did (eastside). This resulted in complex ground water flows, hidden springs gravel/sand deposits, porous soils and fractured bedrock. The spring at the top of the hill on the east end of Valley Road is an example of how complex and unexpected the underground water flow can be.

The Town of Verona Land Use Plan recognizes the importance of protecting groundwater quality and generally finds that there is a medium to low risk of ground water contamination either by point or non-point containment sources attachment 1). But there are 5 exceptions noted in the Town of Verona Comprehensive Plan to this

generality and an open gravel pit is one of the exceptions—a quarry can be a substantial threat to ground water quality.

As noted in the document Getting Up to Speed for section C, Ground Water Contamination, EPA/625/R-93/002 soils that are porous and permeable tend to transmit water and certain contaminants with relative ease to the aquifer below (attachment 2). If there is a water supply well near a source of contamination, that well has a risk of becoming contaminated. And if there is a near-by river or stream, that water may also become polluted by ground water because of how groundwater recharges streams and rivers. The Sugar River, classed as Exceptional Waters under the State of WI anti-degradation rules NR302 and NR 207, is less than ¼ mile away. Altering and/or contaminating the ground water that recharges the Sugar River will no doubt degrade it as a recreation and fishing venue.

Because ground water moves slowly, contamination may not be detected for long times making clean-up very difficult or impossible as noted in the Getting up to Speed document. Contamination of ground water can result in poor drinking quality, actual loss of the supply, degraded river/streams, high clean-up costs, high alternate water supply costs and/or health problems.

The Town also has 2 other gravel pits very nearby. This one is proposed to be significantly larger than either of the other pits. The impact the other 2 pits may have on the aquifer and the Sugar River remains unknown. However, a study done in Minnesota, Hydraulic Impacts of Quarries and Gravel Pits, JA Green, JA Pavlish, RG Merritt and JL Leete, Minnesota Dept of Natural Resources, Division of Waters, for the Legislative Commission on Minnesota Resources, 2005, showed that there can be substantial lowering of groundwater supplies due to non-metallic mining (attachment 3). That is a substantial concern for all residents of the Town of Verona and those who use the Sugar River.

The Minnesota study found that in the complex geology of glacial beach ridge settings, removal of sand and gravel can alter ground water flow paths and affect the supply of water available to wetlands. The study also found that open water ponds created by sand and gravel mining can change ground water temperatures. The magnitude and extent of the changes is not yet known, but this change could adversely affect the trout population in the Sugar River. The study also found that when limestone quarries are dewatered to allow for mining below the water table, they altered ground water levels and flow direction. The quarry became a huge well. Ground water levels were found to have dropped up to 70ft—affecting wells on nearby properties and surface waters.

There are examples within the Town of Verona of how detrimental lowering the ground water table can be on water quality and stream recharge. Home owners near a large privately-owned business that relies on geothermal heating/cooling recently found that their well water was unsafe to use. Geothermal energy systems rely on extracting large quantities of ground water, temporarily leaving a void as was shown to happen in the previously cited Minnesota study. This void fills in quickly but pollutant plumes can also be drawn in as apparently happened to these homeowners.

The recent decision by the Madison Metropolitan Sewerage District to no longer return treated wastewater to the Badger Mill Creek is a substantial threat to having adequate recharge and damage the Sugar River as an Exceptional Resource Water.

Besides being a substantial risk to ground water contamination on a large scale within the town, the quarry has a high potential to degrade well water of the Pine Row residents. These residents have an open gravel pit less than 1 mile south of their residence and the proposed quarry would be adjacent to their properties. The soils are porous and

will act as a direct conduit. Seepage from incorrectly stored/spilled fuels, solvents and/or from contaminated fill, will get drawn into the ground water and be a public health hazard.

2. The number of bicycles on Valley Road has substantially increased since the Ironman Triathlon uses Valley Road as part of the 100-mile bicycle route. On any given day from early spring through late fall anywhere from 50 to several hundreds of bikers travel Valley Road (I live on Valley Road and observe these bikers every day). Valley Road is narrow, without shoulders and hilly with poor visibility. Cars and trucks already dangerously pass bikers in no passing zones putting both bikers and motorists in danger. Coming over the hill on a bike at a training speeds or a car passing a biker and coming up on a slow dump truck pulling onto the road or turning into the quarry is a fatality in the making.

3. WI has a right to farm law established under chapter 823 of the WI Statutes 9 (attachment 4). The legislature states its intent is to provide protections for ag use of land and encourage easing conflicts through zoning. Nuisance law suits were putting farmers out of business before this law was enacted. In my opinion there is a direct correlation between the right to farm law and the ability of residents on Pine Row to continue to operate their home businesses.

The proposed quarry operating 6 days/week with 100-200 trucks per day will be next door to these residents who already have 2 quarries just south of them. The noise will seriously impair their ability to continue to work from home. This quarry may mean these long-term Town of Verona residents will be unable to continue their jobs. This is not acceptable. Just as farmers received the right to continue routine farm operations to protect their livelihood, so should the residents of Pine Row be entitled protection from losing their livelihood because of

quarry operations. The Town of Verona needs to protect existing residents from this unfair situation.

In summary, I believe that allowing this quarry to operate as proposed has a high potential to contaminate/alter the Town of Verona ground water supply, change the recharge of the Sugar River and be a hazard to biker and motorist safety. In addition, Town of Verona residents should be protected from losing their ability to continue to operate their business and earn a living from their home.