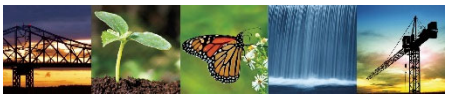

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September 30, 2024
File No 20.0158848.00

Town of Verona
Town Board Chairman: Mr. Mark Geller
Supervisors: Ms. Deb Paul, Mr. Tom Mathies, Mr. Dave Lonsdorf, Mr. Mike Duerst
Plan Commission: Ms. Haley Saalsaa Miller, Ms. Sarah Slack, and Ms. Lori Lukens
7669 County Highway PD
Verona, Wisconsin 53593

Dane County Planning & Development
Assistant Zoning Administrator: Mr. Dan Everson
Room 116, City-County Building
Madson, Wisconsin 53703

Re: Response to Town Concerns Regarding CUP #2629 - Mineral Extraction
Proposed Wildcat Pit
Southwest Investments LLC Property, Valley Road
Town of Verona, Dane County, Wisconsin

Dear Chairman, Supervisors, and Plan Commission,

GZA reviewed the July 1, 2024, Town of Verona Planning Report for 7228 Pine Row, Verona, WI 53593, included with the Meeting of Town of Verona Plan Commission packet and offers the following responses with the expectation that we are bringing this CUP process to closure. The Town of Verona's comments are provided in **Attachment 1** and are quoted below, followed by GZA's responses.

**Conditional Use Permit Criteria Review**

*"**Criteria 1** The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare.*

*Application guideline: Explain how the proposed land use will fit into the neighborhood. If there is going to be lighting, noise, outdoor storage, traffic, or other outside activities, explain how the activities will be limited to a reasonable level."*

*From the application: The site will be fenced and gated and screened from view by berms that will be constructed and landscaped. Haul traffic will be restricted to a right turn only exit out of the property. Dust will be addressed via a Fugitive Dust Control Plan consistent with industry best practices.*

*There will be no blasting on site. Any lighting will be for security reasons and adhere to the Town of Verona Dark Sky Ordinance. Proposed hours of operation are as follows:*

*Daily Operation: Monday through Friday*

*Hours of Operation: 6:00 am to 6:00 pm (including equipment maintenance)*

*Saturday: 8:00 pm to 2:00 pm*

*Considerations:"*

- *"Fugitive Dust Control Plan should be provided for review and include all trucks being tarped prior to leaving the site and specify that no visual dust generated by on-site operations will be permitted to cross property lines"*

  The proposed mining operation will implement a Fugitive Dust Control Plan, as provided in **Attachment 2**, and operate in accordance with applicable state air permitting regulations. Trucks leaving the property with construction aggregate will be tarped. Concerns associated with dust were addressed in detail in GZA's May 29, 2024, Evaluation of Public Concerns, submitted to the County included as **Attachment 3**.

- *"Traffic Impact Analysis should be performed"*

  The Town Public Works Director's provided review comments on July 19, 2024, pertaining to Valley Road, are included in **Attachment 4**. The Wisconsin Department of Transportation (WisDOT) will be consulted again to confirm the Town's recommendations are appropriate for WisDOT.

- *"Operational Hours should be amended to comply with existing Non-metallic mining operations in the Town for consistency (8:00 am to 6:00 pm M-F with ½ hour warm up and cool down extension)"*

  The requested operational hours are not unreasonable and should not be tied to the Wildcat Pit competition. Operating hours of other businesses are not regulated to be consistent with competition and similar businesses.

- *"Fence height to conform with height of previously approved Non-metallic mining operations in the Town for consistency – 5' with single strand of barbed wire at top"*

  Like hours, fence height should not be based on what the competition does. The competition's fence was not a condition of the Town, but a condition of the County. It is unclear why the Town is requiring that for JMM. A 4-foot-high fence with a single strand of barbed wire was proposed in the Application, which would be as effective as a 5-foot-high wire.

- *"Lighting plan submitted as part of any future building permits applications"*

  Building permit applications will include a lighting plan.

***"Criteria 2** The uses, values and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use.*

*Application guideline: Explain how the proposed land use will fit into the neighborhood and what will be done to minimize and mitigate potential nuisances, such as limiting the hours of operation, noise control measures, paving the parking area, or the screening of outdoor storage.*

*From the application: Decibel limits will be in place and the site will be screened on all sides via a constructed, landscaped berm. Dust will be handled via a Fugitive Mitigation Plan and any stormwater run-off will be regulated by Dane County. It is proposed that any runoff will be directed to the mine pit. Operator trucks and excavation equipment will have muffler systems that meet or exceed the current industry standards for noise abatement."*

*"Considerations:"*

- *"Stormwater management plan should be submitted for review prior to approval"*

  A Conceptual Stormwater Management Plan is included as **Attachment 5**. As stated in the Application on page 7, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared in general accordance with the Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit for Mineral (Nonmetallic) Mining

and/or Processing. It is unreasonable to expect the Applicant to prepare operational plans such as a SWPPP when the project's viability is still in doubt, when such plans are required to be prepared under state regulations, and the Town does not have the staff to provide the applicable level of technical review or approval to confirm compliance with the state regulations and industry best management practices.

- *"Remedies for noise level violations above the allowable 75 decibels as measured from the property line should be provided"*

  Remedies for noise level violations above the allowable 75 decibels as measured from the property line will be developed should they occur.

- *"Neighbors' wells located within 1000' of the site should be tested semi-annually for bacteria and nitrates"*

  A scientific basis for this request should be provided by the Town before requiring the testing of bacteria and nitrates. Again, because the county made it a condition for the competition is not a logical justification to require the sampling and testing near the Wildcat Pit. If lakes "pose a risk to groundwater quality" Wisconsin has a serious problem with an estimated 15,000 lakes according to the WDNR.

- *"Groundwater management plan submitted for review prior to approval"*

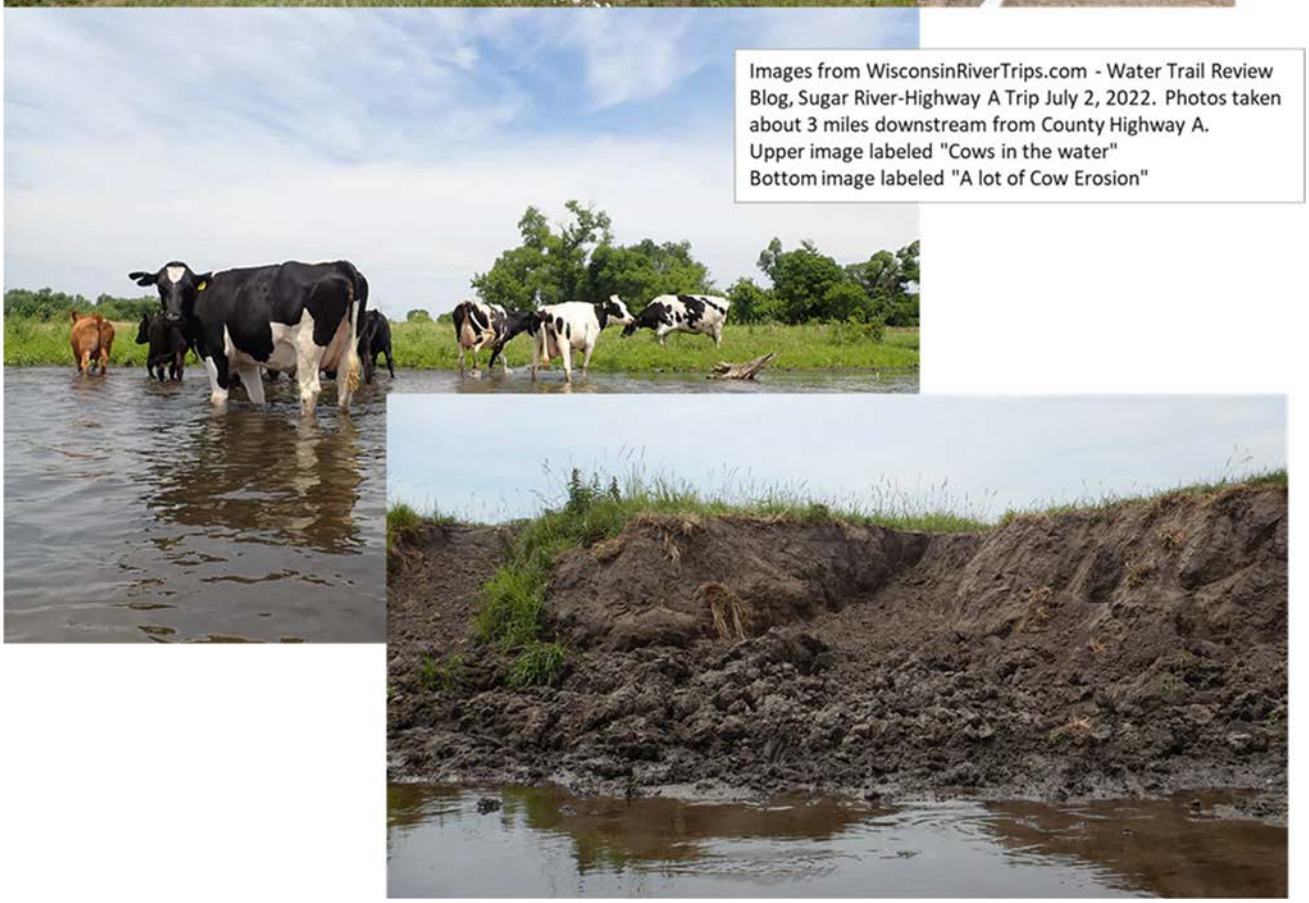
  A Groundwater Management Plan is included as **Attachment 6**. Groundwater flow near the Wildcat Pit is described in the Application on page 6. It is unclear what the Town considers a threat to the groundwater from the proposed mining. Groundwater was addressed on page 6 of the Application and concerns associated with groundwater quality and groundwater quantity were addressed in detail in GZA's May 29, 2024, Evaluation of Public Concerns, submitted to the County included as **Attachment 3**.

  It is a unique challenge for the Applicant to provide evidence that the groundwater will not be impacted. The strongest evidence is the presence of an estimated 2,500 mines (WDNR estimate) and more importantly 15,000 lakes in Wisconsin that do not cause groundwater contamination. The 2007 Dane County Comprehensive Plan reported more than 160 active and at least 70 former mineral extraction sites in Dane County as shown in the Mineral Resources Map included as **Attachment 7**. If these 230 plus nonmetallic mines in Dane County caused groundwater contamination it would be public knowledge – which is clearly not the case.

  A much greater risk to the rivers in the area are the livestock that are free to enter the river affecting the stream banks and bottoms and add waste directly into the water or as stormwater runoff. Risk to groundwater at the proposed mine will be addressed by implementation of a groundwater management plan included as **Attachment 6.**

Horse pasture along Sugar River north of Valley Road

Image from Google Earth Street View August 2011



Images from WisconsinRiverTrips.com - Water Trail Review Blog, Sugar River-Highway A Trip July 2, 2022. Photos taken about 3 miles downstream from County Highway A.
Upper image labeled "Cows in the water"
Bottom image labeled "A lot of Cow Erosion"

- *"Landscape Plan should be provided for the constructed berms along with vegetative management plan"*

  A landscape plan was included in the Application on pages 7 and 8. Berms will be placed along the property boundaries, as shown on the Conceptual Mine Plan in Attachment 4 of the Application. Landscaping of the berms will be consistent with Town of Verona berms at the Town Hall on County Highway PB, and berms near

Epic along Northern Lights Road. The berm slopes will be consistent with Town of Verona Land Division and Development Ordinance 2022-01 and Dane County Ordinance.

The landscape plan for the berms will include deciduous and coniferous trees and grass. Grass will be consistent with WisDOT Standard Specifications; Natural Resources Conservation Service (NRCS) Critical Area Planting Code 342; and Wisconsin Agronomy Technical Note 5, Section 630 Seeding, Seed Mixture No. 10 included in Attachment 4 of the Reclamation Plan.

***"Criteria 3*** *That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.*

*"Application guideline: Explain how the proposed land use will not interfere with the development of the surrounding property.*

*From the application: Currently land uses to the north, west and south of the site include AT-35 parcels that are all under agricultural production. The two RR-4 parcels located to the east on Pine Row contain residences. All of the AT-35 parcels are currently in the Transitional Agricultural category of the TOV Map 9.6: Future Land Use. The reclamation plan for the pit will create a large, regional recreational amenity for the area that will abut 850 acres of Dane County owned land."*

*"Considerations:"*

- *Reclamation Plan should include an initial landscape plan and timeline for completion and proposed access to the site"*

The Reclamation Plan includes the required elements of Dane County Chapter 74 Nonmetallic Mining; and Wisconsin Administrative Code (Wis. Adm. Code) NR 135.19 (NR135). The Reclamation Plan describes berms and landscaping on pages 4 and 5.

***"Criteria 4*** *That adequate utilities, access roads, drainage and other necessary site improvements have been or are being made.*

*Application guideline: Explain what impact the proposed use has on such things as water, septic, stormwater, utilities, and traffic. Provide information on improvements that may be needed or if additional buildings are needed.*

*From the application: The applicant has indicated they will make any required improvements to Valley Road as needed to accommodate traffic generated by the operation. Stormwater and any septic requirements will be met and regulated as required by Dane County."*

*"Considerations:"*

- *"Stormwater Management Plan should be submitted for review"*

A Conceptual Stormwater Management Plan is included as **Attachment 5**. As stated in the Application on page 7, a SWPPP will be prepared in general accordance with the WPDES General Permit for Mineral (Nonmetallic) Mining and/or Processing. It is unreasonable to expect the Applicant to prepare operational plans such as a SWPPP when the project's viability is still in doubt, when such plans are required to be prepared under state regulations, and the Town does not have the staff to provide the applicable level of technical review or approval to confirm compliance with the state regulations and industry best management practices.

- *"Groundwater Management Plan should be submitted for review"*

As stated above, groundwater flow near the Wildcat Pit is described in the Application on page 6. It is unclear what the Town considers a threat to the groundwater from the proposed mining. Concerns associated with groundwater quality, and groundwater quantity were addressed in detail in GZA's May 29, 2024, Evaluation of Public Concerns, submitted to the County included as **Attachment 3**. As noted above a much greater risk

to the rivers in the area are the livestock that are free to enter the river affecting the stream banks and bottoms and add waste directly into the water or as stormwater runoff. Risk to groundwater at the proposed mine will be addressed by implementation of a groundwater management plan included as **Attachment 6.**

- *"Wetland Determination should be completed prior to approval"*

  The Town of Verona Comprehensive Plan states that "Operation of the site shall meet and satisfy all State and County criteria regarding wetlands and water quality impacts of the proposed extraction operation." The WDNR website [Wetland Permitting Process Wisconsin DNR] top of page is clear:

  > *"All wetlands in Wisconsin are protected by state statute and regulated by the DNR. Landowners and developers are required to avoid wetlands with their projects whenever possible. For projects that cannot avoid wetlands and involve the placement of material or excavation in wetlands, authorizations through exemptions or permits may be required."*

  Although wetland delineations may be necessary, the timing of that work is not justified before issuance of a Conditional Use Permit (CUP). The Applicant will delineate wetland areas prior to excavation in potential wetlands.

- *"Floodplain Determination should be completed prior to approval"*

  Approximately 2 acres within 200 feet of the west property boundary is mapped within the 100-year floodplain of the Sugar River. The mapped floodplain area will be confirmed by survey and berms will not be constructed within the floodplain.

- *"Mineral extraction shall not take place within the 100-foot setbacks or within a floodplain or mapped wetland"*

  Mineral extraction will not take place within the 100-foot setbacks. Mineral extraction within a floodplain is not inconsistent with county, state or federal regulations. As stated above, mineral extraction within a mapped wetland is regulated by the WDNR."

- *"Explanation provided on how agricultural practices for non-mined portion of the site will be accommodated – i.e. access to site"*

  A tenant will have access to the property for farming.

***"Criteria 5** Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.*

*Application guideline: Provide information on vehicle traffic that the proposed use will generate. Include frequency and types of vehicles. Propose a plan for ingress and egress for the property.*

*From the application: Site generated traffic will be restricted to Valley Road east of the proposed driveway. Most traffic will access the site from HWY 69. Please see the comments from TOV Public Works Director Chris Barnes."*

*"Considerations:"*

- *"Traffic Impact Analysis may be required as part of the application process"*

  The Town Public Works Director's provided review comments on July 19, 2024, pertaining to Valley Road, are included in **Attachment 4**. WisDOT will be consulted again to confirm the Town's recommendations are appropriate for WisDOT.

- *"Site related traffic should be restricted to Valley Road west of the access driveway"*

  Traffic from the mine will be directed east onto Valley Road.

***"Criteria 6** That the conditional use shall conform to all applicable regulations of the district in which it is located."*

*"Application guideline: Review the TOV Comprehensive Land Use Plan to ensure your project is in alignment with Land Use Guidelines.*

*The CUP/site use is consistent with TOV land use guidelines and current zoning conditions."*

Agreed.

***"Criteria 7** That the conditional use is consistent with the adopted town and county comprehensive plans.*

*Application guideline: Review the TOV Comprehensive Land Use Plan to ensure your project is in compliance.*

*The site use is in compliance with the TOV Comprehensive Plan policies related to Mineral Extraction (Chapter 9, page 75)."*

Agreed.

***"Criteria 8** If the conditional use is located in a Farmland Preservation Zoning district, the town and zoning committee must also address the findings described in Dane County zoning ordinance 10.220(1)."*

*"N/A"*

Agreed.

*"Other considerations:"*

- *"Application currently allows for excavated bedrock from other sites within 2 miles to be accepted by this site; this is specifically not allowed at other Non-metallic mineral extraction sites in the town and should be prohibited at this site for consistency"*

  The request to allow the processing of bedrock that must be excavated for other reasons at other sites within 2 miles is not unreasonable and is quite logical and practical. The Town decision on this matter should not be tied to the Wildcat Pit competition in the Town.

  Shallow limestone bedrock is mapped in the northeastern area of the property, extending along and north of Valley Road beyond Highway 151, and east along Highway 151 beyond County Highway PB, as shown on the geologic maps provided in **Attachment 8**. Development in those areas may encounter and need to excavate and manage the shallow limestone. The proposed Wildcat Pit will be well situated logistically to accept, process, and distribute that material as a valuable construction aggregate. Two miles was selected arbitrarily to be consistent with the geologic mapping and the potential to support the need.

  Not allowing the processing of the local rock on principle or a personal opinion would be arbitrary and capricious and a waste of a valuable commodity, which is technically unsound. The sustainable practice would be to utilize that material locally.

- *"Timeline for berm construction will occur as the pit is excavated; should this be accelerated for screening purposes?"*

  Berm construction will occur as the property is initially developed. A landscape plan was included in the Application on pages 7 and 8. Berms will be placed along the property boundaries, as shown on the Conceptual Mine Plan in Attachment 4 of the Application. Landscaping of the berms will be consistent with Town of Verona berms at the Town Hall on County Highway PB and berms near Epic along Northern Lights

Road. The berm slopes will be consistent with Town of Verona Land Division and Development Ordinance 2022-01 and Dane County Ordinance.

The landscape plan for the berms will include deciduous and coniferous trees and grass. Grass will be consistent with WisDOT Standard Specifications; NRCS Critical Area Planting Code 342; and Wisconsin Agronomy Technical Note 5, Section 630 Seeding, Seed Mixture No. 10 included in Attachment 4 of the Reclamation Plan.

- *"Application requests CUP length of 35 years"*

  Correct. There is a finite amount of sand and gravel on the property. The market demand and annual production and sales cannot be predicted with certainty, but 35 years is a reasonable estimate. It is important to recognize and acknowledge that very few if any business ventures plan their obsolescence to a fixed number of years, and such planning should not be expected of JMM with the Wildcat Pit.

- *"Types, quantities, and frequency of use of equipment to extract, process and haul answer is vague – 2 or more"*

  The Application, page 6 states: "Mining equipment to be used includes two or more scrapers, front-end loaders, excavators, and haul trucks; and a floating dredge." The response was not intended to be vague, but the means and methods of the mine operation are variable.

  Scrapers may be used for stripping overburden and creating berms. Alternatively, excavators and haul trucks may be used for stripping overburden. Applicant will decide if one or two will be used in that process. Front-end loaders will be used for dry bank mining, processing material and loading customer trucks. Depending on the level of activities, one or two front-end loaders may be used. Excavators may also be used for overburden stripping, dry bank and wet bank mining.

- *"Applicant has not sufficiently provided evidence that the mining process and creation of a lake do not pose a risk to groundwater quality"*

  The Town assumes that creation of a lake poses a risk to groundwater quality, which is technically not true. Although there may be personal opinions which are the impetus for this comment that believe this to be true, because it is not factually based, it is difficult or impossible to provide evidence to counter an opinion. If lakes "pose a risk to groundwater quality" Wisconsin has a serious problem with an estimated 15,000 lakes according to the WDNR.

  It is a unique challenge for the Applicant to provide evidence that the groundwater will not be impacted. The strongest evidence is the presence of an estimated 2,500 mines (WDNR estimate) and more importantly 15,000 lakes in Wisconsin that do not cause groundwater contamination. The 2007 Dane County Comprehensive Plan reported more than 160 active and at least 70 former mineral extraction sites in Dane County as shown in the Mineral Resources Map included as **Attachment 7**. If these 230 plus nonmetallic mines in Dane County caused groundwater contamination it would be public knowledge – which is clearly not the case.

- *"Location of oil/gas storage tank should be depicted on site plan"*

  As stated in the Application on page 11, bulk fuel oil storage will be near the scale and scale house shown on the Site Plan, Figure 1 in Attachment 5 of the Application, at approximate ground elevation 950 to 960 feet. A double-wall fuel storage tank will be used and fuel storage will comply with ATCP 93.

- *"Spill Prevention, Control and Countermeasures Plan to be provided if oil storage exceeds 1320 gallons; what is the anticipated oil storage capacity?"*

  As stated in the Application on page 6, a Spill Prevention, Control, and Countermeasures (SPCC) Plan will be prepared if oil storage exceeds 1,320 gallons. The oil storage capacity is not known at this time.

- *"Residence at 7228 Pine Row will be demolished. What is the timeline for that and the process for notification of the tenants? How much notice will they be given to relocate, and will assistance be provided?"*

  The residence is owned by the Applicant and will be demolished at the appropriate time with appropriate notice. There is no need to provide assistance.

- *"Will muffler system requirements apply to all trucks on site or just operator trucks?"*

  As stated in the Application on page 10, operator (JMM/Applicant) trucks and excavation equipment will have muffler systems that meet or exceed the current industry standards for noise abatement. JMM has no authority to regulate customer trucks.

- *"Personnel listed as employed will be between 2 and 5. What is the anticipated number of people on site per day including customers?"*

  There is no way to know or predict the number of customers that may visit the property.

- *"Runoff will be controlled by diverting stormwater into the mine. How will current stormwater runoff issues be corrected or addressed?"*

  The Applicant is unaware of a need to "correct" "stormwater runoff issues." If the Town was aware of "issues," it is unclear why the Town has not required them to be corrected by the previous property owner. The neighbor at 7226 Pine Row made comments about stormwater runoff affecting their driveway and the Applicant expressed a willingness to help rectify that situation, but the Applicant is unaware that the Town was aware of that personal conversation. If that is the issue referenced above, then that will be resolved with the construction of berms in that area. If there are other issues, the Town should share them with the Applicant.

- *"Daily traffic is anticipated to vary by season and may range from 100- 200 trucks per day. Is 200 trucks the maximum number of trucks per day?"*

  The Applicant is not predicting a maximum number of trucks per day.

- *"What is the plan for the current Pine Row access point? Not specified in the plan."*

  The current Pine Row access will remain available for operations access, not customers.

- *"The site plan is missing the natural drainage pattern as depicted on the Water Resources layer in DCI map for Surface Drainage; the drainage pattern is located on parcel 062/0608-282-8000-6, drains into the parcel located at 7226 Pine Row and is a known issue for those property owners"*

  Drainage on the east side of the property near 7226 Pine Row will diverted by the proposed berms into the mine.

- *"The site plan is missing a culvert located across Valley Road approximately 1400 feet from the intersection of Valley Road and STH 69"*

  Understood. The culvert will be replaced when Valley Road is improved consistent with the Town Public Works Director's recommendations in **Attachment 4**.

- *"In response to the County's question regarding Ground Water Quality (page 2 of attachment 6 of the application) There is no technical justification to monitor groundwater quality – The applicant has not provided evidence to support this statement."*

  As noted in response to a previous comment above, the Town assumes that creation of a lake poses a risk to groundwater quality, which is technically not true. Although there may be personal opinions which are the impetus for this comment that believe this to be true, because it is not factually based it is difficult or impossible to provide evidence to counter an opinion. The Town has not provided evidence to support the belief that groundwater quality is at risk.

  It is a unique challenge for the Applicant to provide evidence that the groundwater will not be impacted. The strongest evidence is the presence of an estimated 2,500 mines (WDNR estimate) and more importantly 15,000 lakes in Wisconsin that do not cause groundwater contamination. The 2007 Dane County Comprehensive Plan reported more than 160 active and at least 70 former mineral extraction sites in Dane County as shown in the Mineral Resources Map included as **Attachment 7**. If these 230 plus nonmetallic mines in Dane County caused groundwater contamination it would be public knowledge – which is clearly not the case. If lakes "pose a risk to groundwater quality," Wisconsin has a serious problem with an estimated 15,000 lakes according to the WDNR.

- *"The additional application material regarding Evaluation of Public Concerns utilizes several fact sheets to provide evidence to support the application. These fact sheets were generated from the book Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society, written by Mark Krumenacher. Mr. Krumenacher prepared this CUP application."*

  That is correct. Mr. Krumenacher prepared this CUP application and has 40 years of experience studying geology, groundwater, wetlands, floodplains, and understanding the nonmetallic mining processes.

- *"Dust/Air Quality Concerns Page 1: Proposed dust control procedures are described in the Special Exemption Permit Application on page 8 and Attachment 5. This appears to be missing from the application."*

  A Fugitive Dust Control Plan is provided in **Attachment 2**. Concerns associated with dust were addressed in detail in GZA's May 29, 2024, Evaluation of Public Concerns, submitted to the County in **Attachment 3**.

- *"Surface Water Concerns Page 1: There are no wetlands on the proposed mine property. This has yet to be determined as DCI Map shows that there may be a wetland "too small to delineate" located in the northwest portion of the property."*

  Correct, there may be wetlands on the property, which, if present, will be addressed as necessary in accordance with state and county criteria. Although wetland delineations may be necessary, the timing of that work is not justified before issuance of a CUP. The Applicant will delineate wetland areas prior to excavation in potential wetlands.

Please feel free to contact Mr. Krumenacher at (262) 424-2046 or via email at mark.krumenacher@gza.com with questions.

Sincerely,

**GZA GeoEnvironmental, Inc.**

Mark J. Krumenacher, P.G.
Senior Principal

J:\158800to158899\158848 JMM LLC Verona S&G Property\CUP Application\Public Hearing Docs\
Sept 2024 Response to Town Comments\FINAL 20.0158848.00 Response to Town Comments_Verona WI 9-30-24.docx

cc: Mike Marquette, JMM LLC
William F. Springer, Turke & Steil LLP

Attachments

**ATTACHMENT 1**

**July 1, 2024, Town of Verona Comments**

# Planning Report

**Town of Verona**

**July 1st, 2024**

## *7228 Pine Row, Verona WI 53593*

**Summary:** The applicant seeks a Conditional Use Permit for parcels 062/0608-282-8000-6, 062/0608-282-8500-1, 062/0608-282-9000-4 and 062/0608-282-9500-9. Currently the site is 159 acres in size, zoned AT-35 and contains a farm residence and related outbuildings. The CSM would allow the applicant to perform non-metallic mineral extraction and processing on site.

**Property Owner:** **Southwest Investments LLC**

**Property Addresses:** **7228 Pine Row**

**Applicant:** **Southwest Investments**
**930 10th Avenue**
**New Glarus, WI 53574**

**Agent:** **JMM LLC, Michael J. Marquette**

---

**Location Map**

The applicant has submitted a CUP application for the proposed Wildcat sand and gravel operation at the 159-acre Southwest Investments LLC property located at 7228 Pine Row. A "conditional use" is a specified use of a property that may be allowed in a particular zoning district if certain standards are met. The applicant's property is currently zoned in the AT-35 (Agriculture Transition) Zoning District, and non-metallic mining is an allowable conditional use for this district. Per the Town's 2018-2038 Comprehensive Plan Chapter 9: Land Use, Mineral Extraction is also identified as a permissible land use in the Town within specific zoning districts.

The issuance of a CUP in the Town is governed by both State Statute and Dane County Ordinance. The Town of Verona Planning Commission and the Town of Verona Board of Supervisors evaluate a CUP application using the specific criteria required by the Dane County Zoning Code in their application. This application will also require approval from the Joint City/Town Planning Committee created by intergovernmental agreement between the Town and City of Verona. There will be two public hearings held regarding this application, one at the Town level and one at the county level. The determinations of the Planning Commission and Town Board are provided to Dane County and any resultant CUPs are administered by Dane County Zoning Department once approved by the Zoning and Land Regulation Committee.

The timeline for this CUP consideration is as follows:

1. Discussion and action by the Plan Commission (likely more than one meeting)
2. Public Hearing at a Town Board meeting
3. Discussion and Action at a Town Board meeting (typically the next TB meeting after the Public Hearing)
4. Discussion and Action at a Joint City/Town Planning Committee Meeting
5. Town Board Action report submitted to Dane County
6. Dane County ZLR Public Hearing
7. Possible ZLR Work Meeting
8. Dane County Approval or Denial

The applicant's CUP would allow for non-metallic mining and processing of sand and gravel. Mined material will be crushed, screened and washed for temporary stockpiling. No blasting would occur on site.

**Comprehensive Plan Guidance:**

The parcels are currently zoned AT-35 and shown as Transitional Agriculture on the Future Land Use Map. Non-metallic mineral extraction is an allowable Conditional Use of AT-35 zoning. The Town of Verona Comprehensive Plan Ch. 9 Land Use addresses Mineral Extraction as well as there are appropriate geological features located in the Town suitable for mineral extraction.

**Current and Proposed Zoning:** The AT-35 zoning will remain unchanged.

**Extra-territorial Review/Boundary Agreement Authority:** Two of the parcels are in Area A and two are in area B of the Boundary Agreement with the City of Verona. This will require a meeting of the Joint City/Town Planning Committee to review/approve the proposal.

**Surrounding Land Use and Zoning:** The parcels to the north, west and south surrounding the site are currently in agricultural production. The property directly to the south is owned by Dane County Parks and is known as the Sugar River Wildlife Area (Rhiner). There are two residences to the east on Pine Row. The town parcel directly north of the site on Valley Road has been proposed for a future SSM medical clinic site and that application is currently under review by the City of Verona.

**Site Features:** The majority of the site is in agricultural production. There is a small woodlot that houses an old farmhouse, barn and related outbuildings, located at the terminus of Pine Row. These structures would be demolished. Topography is varied and elevations range from 1000' near Valley Road to 925' at the southern edge of the site.

**Driveway Access**: Access to the processing yard will be provided via a new driveway from Valley Road. The application does not address the existing driveway from Pine Row.

**Other:** The City of Verona has provided comment on the application via an email dated 8/23/2024, provided in the packet.

## Conditional Use Permit Criteria Review

**Criteria 1** The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare.

> *Application guideline: Explain how the proposed land use will fit into the neighborhood. If there is going to be lighting, noise, outdoor storage, traffic, or other outside activities, explain how the activities will be limited to a reasonable level.*

From the application: The site will be fenced and gated and screened from view by berms that will be constructed and landscaped. Haul traffic will be restricted to a right turn only exit out of the property. Dust will be addressed via a Fugitive Dust Control Plan consistent with industry best practices. There will be no blasting on site. Any lighting will be for security reasons and adhere to the Town of Verona Dark Sky Ordinance. Proposed hours of operation are as follows:

Daily Operation: Monday through Friday
Hours of Operation: 6:00am to 6:00pm (including equipment maintenance)

Saturday: 8:00pm to 2:00pm
Considerations:

- Fugitive Dust Control Plan should be provided for review and include all trucks being tarped prior to leaving the site and specify that no visual dust generated by on-site operations will be permitted to cross property lines
- Traffic Impact Analysis should be performed
- Operational Hours should be amended to comply with existing Non-metallic mining operations in the Town for consistency (8:00am to 6:00pm M-F with ½ hour warm up and cool down extension)
- Fence height to conform with height of previously approved Non-metallic mining operations in the Town for consistency – 5' with single strand of barbed wire at top
- Lighting plan submitted as part of any future building permits applications

**Criteria 2** The uses, values and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use.

*Application guideline: Explain how the proposed land use will fit into the neighborhood and what will be done to minimize and mitigate potential nuisances, such as limiting the hours of operation, noise control measures,paving the parking area, or the screening of outdoor storage.*

From the application: Decibel limits will be in place and the site will be screened on all sides via a constructed, landscaped berm. Dust will be handled via a Fugitive Mitigation Plan and any stormwater run-off will be regulated by Dane County. It is proposed that any runoff will be directed to the mine pit. Operator trucks and excavation equipment will have muffler systems that meet or exceed the current industry standards for noise abatement.

Considerations:

- Stormwater management plan should be submitted for review prior to approval
- Remedies for noise level violations above the allowable 75 decibels as measured from the property line should be provided
- Neighbors' wells located within 1000' of the site should be tested semi-annually for bacteria and nitrates
- Groundwater management plan submitted for review prior to approval
- Landscape Plan should be provided for the constructed berms along with vegetative management plan

**Criteria 3** That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

*Application guideline: Explain how the proposed land use will not*

*interfere with the development of the surrounding property.*

From the application: Currently land uses to the north, west and south of the site include AT-35 parcels that are all under agricultural production. The two RR-4 parcels located to the east on Pine Row contain residences. All of the AT-35 parcels are currently in the Transitional Agricultural category of the TOV Map 9.6: Future Land Use. The reclamation plan for the pit will create a large, regional recreational amenity for the area that will abut 850 acres of Dane County owned land.

Considerations:

- Reclamation Plan should include an initial landscape plan and timeline for completion and proposed access to the site

**Criteria 4** That adequate utilities, access roads, drainage and other necessary site improvements have been or are being made.

*Application guideline: Explain what impact the proposed use has on such things as water, septic, stormwater, utilities, and traffic. Provide information on improvements that may be needed or if additional buildings are needed.*

From the application: The applicant has indicated they will make any required improvements to Valley Road as needed to accommodate traffic generated by the operation. Stormwater and any septic requirements will be met and regulated as required by Dane County. (

Considerations:

- Stormwater Management Plan should be submitted for review
- Groundwater Management Plan should be submitted for review
- Wetland Determination should be completed prior to approval
- Floodplain Determination should be completed prior to approval
- Mineral extraction shall not take place within the 100-foot setbacks or within a floodplain or mapped wetland
- Explanation provided on how agricultural practices for non-mined portion of the site will be accommodated – i.e. access to site

**Criteria 5** Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.

*Application guideline: Provide information on vehicle traffic that the proposed use will generate.Include frequency and types of vehicles. Propose a plan for ingress and egress for the property.*

From the application: Site generated traffic will be restricted to Valley Road east of the proposed driveway. Most traffic will access the site from HWY 69. Please see the comments from TOV Public Works Director Chris Barnes.

Considerations:

- Traffic Impact Analysis may be required as part of the application process
- Site related traffic should be restricted to Valley Road west of the access driveway

**Criteria 6** That the conditional use shall conform to all applicable regulations of the district in which it is located.

*Application guideline: Review the TOV Comprehensive Land Use Plan to ensure your project is in alignment with Land Use Guidelines.*

The CUP/site use is consistent with TOV land use guidelines and current zoning conditions.

**Criteria 7** That the conditional use is consistent with the adopted town and county comprehensive plans.

*Application guideline: Review the TOV Comprehensive Land Use Plan to ensure your project is in compliance.*

The site use is in compliance with the TOV Comprehensive Plan policies related to Mineral Extraction (Chapter 9, page 75).

**Criteria 8** If the conditional use is located in a Farmland Preservation Zoning district, the town and zoning committee must also address the findings described in Dane County zoning ordinance 10.220(1).

N/A

Other considerations:

- Application currently allows for *excavated bedrock from other sites within 2 miles to be accepted by this site*; this is specifically not allowed at other Non-metallic mineral extraction sites in the town and should be prohibited at this site for consistency
- Timeline for berm construction will occur as the pit is excavated; should this be accelerated for screening purposes?
- Application requests CUP length of *35 years*
- *Types, quantities, and frequency of use of equipment to extract, process and haul* answer is vague – 2 or more
- Applicant has not sufficiently provided evidence that the mining process and creation of a lake do not pose a risk to groundwater quality
- Location of oil/gas storage tank should be depicted on site plan
- *Spill Prevention, Control and Countermeasures Plan to be provided if oil storage exceeds 1320 gallons*; what is the anticipated oil storage capacity?

- *Residence at 7228 Pine Row will be demolished*. What is the timeline for that and the process for notification of the tenants? How much notice will they be given to relocate, and will assistance be provided?
- Will muffler system requirements apply to all trucks on site or just operator trucks?
- Personnel listed as employed will be between 2 and 5. What is the anticipated number of people on site per day including customers?
- *Runoff will be controlled by diverting stormwater into the mine*. How will current stormwater runoff issues be corrected or addressed?
- *Daily traffic is anticipated to vary by season and may range from 100-200 trucks per day*. Is 200 trucks the maximum number of trucks per day?
- What is the plan for the current Pine Row access point? Not specified in the plan.
- The site plan is missing the natural drainage pattern as depicted on the Water Resources layer in DCI map for Surface Drainage; the drainage pattern is located on parcel 062/0608-282-8000-6, drains into the parcel located at 7226 Pine Row and is a known issue for those property owners
- The site plan is missing a culvert located across Valley Road approximately 1400 feet from the intersection of Valley Road and STH 69
- In response to the County's question regarding Ground Water Quality (page 2 of attachment 6 of the application) *There is no technical justification to monitor groundwater quality* – The applicant has not provided evidence to support this statement.
- The additional application material regarding Evaluation of Public Concerns utilizes several fact sheets to provide evidence to support the application. These fact sheets were generated from the book Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society, written by Mark Krumenancher. Mr. Krumenacher prepared this CUP application.
- Dust/Air Quality Concerns Page 1: *Proposed dust control procedures are described in the Special Exemption Permit Application on page 8 and Attachment 5*. This appears to be missing from the application.
- Surface Water Concerns Page 1: *There are no wetlands on the proposed mine property*. This has yet to be determined as DCI Map shows that there may be a wetland "too small to delineate" located in the northwest portion of the property.

**ATTACHMENT 2**

**Fugitive Dust Control Plan**

**Dust Control Plan**
**Wildcat Pit**
**Valley Road**
**Town of Verona, Wisconsin**

The Dust Control Plan was prepared in general accordance with:

1. Wisconsin Department of Natural Resources (WDNR) Conservation Practice Code #1068.
2. Natural Resource Conservation Service, Conservation Practice Standard, Dust Control on Unpaved Roads and Surfaces, Code 373.
3. Other industry best management practices.

The WDNR regulates sources of dust as particulate matter (PM) emissions under Chapter NR 415, Wisconsin Administrative Code (Wis. Adm. Code). The WDNR's Air Program developed recommended practices for reducing fugitive dust and PM from nonmetallic mining operations that will be applied to reduce PM at the mine.

The Plan applies to non-vegetated, unpaved surface where mine vehicle movement or wind action would normally occur, such as unpaved roads, mining, processing, and stockpile areas. Observations will be done daily when personnel are present at the mine.

<u>Hauling Dust Control</u>

- On-Site vehicle speeds will be posted at 15 miles per hour (mph) or slower.
- The driveway will be paved from Valley Road to the scale and parking area.
- Paved traveled areas will be swept and/or watered as needed.
- Fugitive dust emissions from traveled areas will be controlled on an as-needed basis by applying water.

<u>Material Handling Equipment (e.g., conveyors, loaders, etc.) Dust Control</u>

- Use of spray bars.
- Use of shrouds or other enclosures.

<u>Stockpiles Dust Control</u>

- Aggregate stockpiles will be located within the mine.
- Apply water on as-needed basis.

**ATTACHMENT 3**

**May 29, 2024, Evaluation of Public Concerns**

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May 29, 2024
File No. 20.0158848.00

Town Board Chairman: Mr. Mark Geller
Supervisors: Ms. Deb Paul, Tom Mathies, Mr. Dave Lonsdorf, Mr. Mike Duerst
Plan Commission: Ms. Haley Saalsaa Miller, Ms. Sarah Slack and Ms. Lori Lukens

Town of Verona
7669 County Highway PD
Verona, Wisconsin 53593

Re: Evaluation of Public Concerns
Proposed Wildcat Pit
Southwest Investments LLC Property, Valley Road
Town of Verona, Dane County, Wisconsin

Dear Town Board Chairman, Supervisors, and Plan Commission:

To help address the anticipated public comments regarding the JMM LLC (the "Applicant") proposed Wildcat Pit sand and gravel operation ("Site"), GZA is providing an evaluation of certain public concerns identified during the recent (2022) public hearings associated with nearby Land Use Applications for a sand and gravel operation and 54 unit residential development, both within 1 mile of the Site. The Applicant is sensitive to the concerns of the community and strives to be a good neighbor and looks forward to developing a positive lasting relationship in Verona for years to come.

**BACKGROUND**

For about two decades, GZA (and this author in particular) has continually focused on reviewing public concerns to nonmetallic mining in Wisconsin. The concerns raised by the public in meetings, in the press, on social media, and elsewhere are important and are taken seriously by the mining industry and GZA. The nature of concerns over mining are limited in number, and concerns have been raised in multiple forms, forums, and media. Issues surrounding concerns are often addressed privately and publicly by GZA; by mining companies at permitting hearings; by environmental and health professionals at public meetings and forums; during professional and governmental association meetings organized by pro- and anti-mining groups; Universities, Public Radio, County, and Township groups; and by the Wisconsin Department of Natural Resources (WDNR).

With such a large number of nonmetallic mines in and near local communities, the WDNR estimates 2,500 in Wisconsin alone, negative public opinion concerning mining is believed to be based on a misunderstanding of the industry due to a lack of public education on the mining process and importance of mining, and a lack of awareness of the widespread presence of mining until a new mine or expansion is proposed. Substantial public education is clearly needed in every community for every age. Opposition to mining based solely on principle makes no sense, since everything in our lives must either come from a mine if not from a farm.

GZA focuses substantial effort to identify and address the public's concerns with nonmetallic mineral mining and during the past 12 years this author presented more than 50 times to a wide variety of stakeholder groups on the importance of properly and thoroughly addressing those

concerns. In addition to the technical presentations, I have provided technical comments and support to State environmental departments, including the WDNR, Illinois Environmental Protection Agency (IEPA), Minnesota DNR (MDNR), Minnesota Environmental Quality Board (EQB), and Minnesota Pollution Control Agency (MPCA) on environmental rulemaking. These efforts also included serving on the Minnesota Silica Sand Rulemaking Advisory Panel and providing testimony before the Illinois Pollution Control Board and the Wisconsin Senate. In addition, I have:

- Provided subject matter expertise during preparation of the Health Impact of Industrial Sand Mining in Western Wisconsin, prepared by the Institute for Wisconsin's Health, Inc.;
- Developed technical white papers addressing nonmetallic mining matters;
- Planned and led training seminars addressing compliance with State environmental regulations in Wisconsin and Illinois;
- Co-authored six Policy Studies comprising 250 pages of text with 400 citations addressing Environmental, Economic, Traffic, Social, Air Quality, Regulatory Control, and Oversight and other issues associated with Industrial Sand Mining applicable to nonmetallic mining; and
- Published a book in 2021, entitled, Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society.

**SUMMARY OF IDENTIFIED PUBLIC CONCERNS**

This report is based on our understanding of the proposed mine plan and processing plant, previous experience, and comments at a recent public hearing concerning Land Use Applications.

**CONCLUSION**

GZA concludes the following based on our experience, the details contained in the Application, and the information presented above and in the attached documents:

- There is no evidence that the proposed Wildcat Pit will necessarily or certainly create a nuisance.
- There is no evidence that the proposed Wildcat Pit will create a nuisance and harm that is inevitable and undoubted.

We appreciate the opportunity to submit this supplemental information. Should you have any questions or comments, please contact the undersigned at (262) 754-2565 or via email at mark.krumenacher@gza.com.

Very truly yours,

**GZA GeoEnvironmental, Inc.**

Mark J. Krumenacher, P.G.
Senior Principal

J:\158800to158899\158848 JMM LLC Verona S&G Property\Addressing Concerns\Submittal\2024 05 29_Evaluation of Public Concerns_Verona FINAL.docx

Attachments: Summary Sheets and Fact Sheets

cc: Mike Marquette, JMM, LLC

**Summary Sheets and Fact Sheets**

**Social Concerns**

# SOCIAL CONCERNS

Social concerns are, understandably, very important issues and in many instances, can be challenging to address as they represent seemingly less tangible issues and reflect personal preferences and lifestyle. Public concerns relating to social issues were grouped into **Quality of Life** and **Impact on Tourism** summarized in the following subsections.

## Quality of Life

Concern:

- A mine will have a negative impact on quality of life in the Town.
- A mine will forever change the character of the Town.
- A mine will be disruptive and create disturbances.
- A mine will destroy the open fields, the beautiful vistas, the wooded areas - "these were the qualities that drew us there many years ago and these are the same qualities that keep us there year after year,"

Basis of Concern:

- Based on the comments, it appears that mining is considered an unacceptable and inappropriate activity in the Town and area and is an activity that has not previously occurred in the Town or area.
- Presumably, disruption and disturbances may be referring to the presence of earthwork equipment, trucks, and physical changes in the landscape. Noise is addressed in a separate Fact Sheet.

Discussion of Concern:

- It is important to recognize that aggregate mining is as important to the area as farming. The area history is that of an agricultural community with sparse residential development that was able to develop because of the presence of aggregate.
- History has proven that the balance between local mining and quality of life, rural tranquility, the beauty and character of the state is not negatively affected by the past and present operation of 2,500 mines.
- Despite the history of mining in the Town and surrounding area, the local population continues to rise. With increased population comes the construction of new homes on former farmland built using, on average, 200 to 500 tons of locally sourced aggregate from a mine such as the one proposed.
- Experience has shown that for the long-term residents of a rural community, residential and commercial development has the largest impact on changing the character of a community.
- Coincidentally, in the majority of cases, it is not the local farming community that creates and organizes opposition to a local mine, but it is the non-farming residents.
- With any land use, it cannot be invisible and there will be some degree of noise, traffic, and activity that will occur as a result. This is equally true for residential, commercial, tourist and agricultural uses. Compared to other land uses, the proposed mine will have minimal physically visible exposure to the public.
- It is reasonable to expect that based on the general lack of awareness of mines in Wisconsin that the proposed mine will not be noticed by the vast majority of residents.

Characterizing the Effects

- **Likelihood**: Based on the magnitude of the proposed mine and the history of mining in the Township and area, there is Insufficient Evidence to demonstrate negative effects on the quality of life in the Township and area of the proposed mine.
- **Intensity**: Available data does not indicate that the proposed changes in temporary land use is substantially different from past and existing use in the Township and area to contribute to negative effects on quality of life at the local or community level. Though there may be some individuals who are exceptionally sensitive, the intensity of effects for the Township are anticipated to be Low. There is Insufficient Evidence to judge the negative effects on the County.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact the quality of life in the Township or County.

Conclusion:

- The proposed use will not be disruptive or create disturbances.
- There is no evidence that the proposed mine will necessarily or certainly impact quality of life and create a nuisance.
- There is no evidence that the proposed mine will impact quality of life and cause harm that is inevitable and undoubted.

## Impact on Tourism

Concern:

- A mine will negatively impact tourism.

Basis of Concern:

- Belief that all mines are visually unattractive.
- Belief that truck use of local roads will deter tourism.
- Belief that the presence of a mine will deter patronization of local commercial and tourist businesses.

Discussion of Concern:

- The mine may be noticed by tourists travelling on Valley Road.
- Local tourist attractions that might be impacted were not identified.
- Local commercial businesses that might be negatively impacted were not identified.
- An increase in tourism and commercial businesses would have a significant impact on and change the character of the Township and County and also impact local road use.

Characterizing the Effects

- **Likelihood**: Based on the magnitude of the proposed mine there is Insufficient Evidence to demonstrate negative effects on tourism and commercial businesses in the Township and area of the proposed mine.
- **Intensity**: Available data do not indicate that the proposed use is substantially different from past and existing use in the Township and area to contribute to negative effects on tourism and commercial businesses at the local or community level. There is Insufficient Evidence to judge the intensity of effects on the Township or County.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact tourism or commercial businesses in the Township or area.

Conclusion:

- The proposed mine will not negatively impact local tourism or commercial businesses.
- There is no evidence that the proposed mine will necessarily or certainly impact tourism and commercial businesses and create a nuisance.
- There is no evidence that the proposed mine will impact tourism and commercial businesses and cause harm that is inevitable and undoubted.

**Summary Sheets and Fact Sheets**

**Economic Impact Concerns**

# ECONOMIC IMPACT CONCERNS

Comments relating to economic issues may potentially revolve around sentiment suggesting it is wrong, or for some reason unfair, for a property owner to realize economic or related benefit from use of their land such as the creation of ponds or lakes. The Applicant, property owner, or any other existing or proposed business should not need to defend their desire to prosper. This issue is another of the several unique challenges companies face in the process of obtaining a license to operate. Although there should be no obligation to defend this position, we address the issue because of its prevalence as a concern commonly raised.

Whether an area of a proposed mine has a general land use primarily focused on industry, commercial, agriculture, or tourism, the overarching objective of the particular business or land use sector is economic. Each land use has an impact one way or another on the nearby, perhaps different, land use. Individuals that promote tourism are driving to bring in people so they can spend their money on the local tourist businesses who can then realize economic benefit. Industrial, commercial, and agricultural businesses similarly work for the same reasons, to realize an economic benefit and a profit. Realizing an economic benefit is generally allowed if the proposed land use and activity will not cause adverse effects on other properties in the neighborhood and on the general health, safety, and welfare of the public. The Application for the proposed mine considered each of those potential impacts and were developed to avoid negative impacts and becoming a nuisance.

## Need

Concern:

- There is no need for a mine.
- Would set major precedent for other petitions in this gravel-hungry economy.
- Available aggregate will create a demand for additional growth and increase the energy and carbon footprint.

Basis of Concern:

- There are existing nearby sand and gravel pits, there is no need for another one.
- The existing sources of aggregate should be sufficient for the Town's use.

Discussion of Concern:

- Concern does not recognize the fact that the need is driven in part by continued development of residential properties on agricultural land – similarly forcing more road improvements and commercial development to expand.
- Asphalt is comprised of 95% aggregate = sand, gravel, crushed stone, and 5% bitumen (asphalt).
- 100% of the base course beneath asphalt layers is aggregate.
- Aggregate comprises 100% of the roads, driveways, and parking lots in the Township and County – with or without asphalt or concrete.
- Every new home will require, on average, 200 to 500 tons of aggregate.
- The majority of housing units in the Town are single-family homes.
    - 100% have aggregate or paved driveways (>100 miles), garages, and basements.

- 100% will need additional aggregate at some point in the future.
- All future homes will require about 200 to 500 tons of aggregate.

- There is substantial need for aggregate in the community and a local mine will provide benefit to the Town and County.
- There are about 25 to 30 miles of roads in Verona Township.
  - 100% will require additional aggregate and pavement in the future.
    - ~5 miles of US and State Highways;
    - ~8 to 9 miles of County roads; and
    - ~25 to 30 miles of Township roads.
  - Each mile of road will require >6,000 cubic yards of aggregate, more for US and State highways.
- It is increasingly challenging for paving contractors to obtain the locally sourced high quality aggregate for use in asphalt and concrete.
- Aggregate properties vary amongst deposits and the ideal aggregate for use in asphalt is not available in every aggregate mine.
- The ideal aggregate properties summarized below are obtained from crushed gravel and will be achieved from the aggregate produced at the proposed Wildcat Pit.
  - **Toughness.** Toughness or hardness is the ability of the aggregate to resist crushing or disintegration during mixing, placing, and compacting; or under traffic loading.
  - **Soundness.** Although similar to toughness, soundness is the aggregate's ability to resist deterioration caused by natural elements such as the weather.
  - **Particle shape.** The shapes of aggregate particles influence the asphalt mixture's overall strength and workability, as well as the density achieved during compaction. When compacted, irregular particles such as crushed stone and gravel tend to lock together and resist displacement.
  - **Surface texture.** Workability and pavement strength are influenced by surface texture. A rough, sandpapery texture results in a higher strength than a smooth texture. Although smooth-faced aggregates are easy to coat with an asphalt film, they are generally not as good as rough surfaces; it is harder for the asphalt to grip the smooth surface.
  - **Absorption.** The porosity of an aggregate permits the aggregate to absorb asphalt and form a bond between the particle and the asphalt. A degree of porosity is desired, but aggregates that are highly absorbent are generally not used.

Conclusion:

- The Applicant and road owners need the ideal quality of aggregate to produce quality asphalt and concrete.
- The ideal aggregate quality is present at the proposed Wildcat Pit and is not found everywhere.
- The closer the aggregate, the lower the cost of aggregate and pavement to the local community.

**Summary Sheets and Fact Sheets**

**Environmental Concerns**

## ENVIRONMENTAL CONCERNS

Environmental concerns raised pertaining to **noise, dust/air quality, surface water,** and **groundwater** are addressed below.

Mining is the most highly regulated industrial business in the United States. Mining is regulated at the federal, State and local level on environmental, health and safety performance. Environmental performance is tightly controlled through permit-required regulations, self-implementing regulations, and industry-standard Best Management Practices (BMPs). Permits are required as a result of various federal and State programs, including:

- Federal Clean Water Act, administered by the Wisconsin Department of Natural Resources (WDNR), the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit, and other related laws and programs;
- Federal Clean Air Act; administered by the WDNR Air Permit;
- Wisconsin Department of Agriculture Trade and Consumer Protection Vehicle Scale Operator License;
- WDNR High-Capacity Well Permit; and
- Wisconsin Mining Reclamation Permit, administered by the local unit of government that issues the Conditional Use Permit to mine.

In addition to the permits, mines must adhere to several self-implementing regulations such as storm water, spill prevention, Toxic Substances Control Act (TSCA), waste management, etc. Additionally, the Applicant, like all companies that operate in Wisconsin, are obligated to comply with the Wisconsin Spill Law.

Through implementation and oversight of federal and State environmental programs, United States Environmental Protection Agency (USEPA), WDNR, and operators address the environmental concerns. Wisconsin law does not have a requirement for nonmetallic mines to prepare an Environmental Impact Study (EIS) in addition to the established federal and State environmental regulations that address air, surface water, groundwater, and reclamation. In addition, local units of government, such as municipalities, townships, and counties do not have an established regulatory framework, review process, or budget to initiate such a complex process for permit applications.

## Noise

Concern:

- Neighbors are worried about noise.

Basis of Concern:

- Belief that mining operations produce a significant amount of noise.

Discussion of Concern:

- It is reasonable to expect that like any land use there will be some degree of noise.
- Proposed noise control procedures are described in the Conditional Use Permit Application.

Characterizing the Effects

- **Likelihood**: Based on the magnitude of the proposed mine, the location of sound sources below surrounding grade, the distances to nearby receptors, and the presence of nearby residences on roads and highways with speed limits of 45 to 55 miles per hour (mph), negative effects on noise in the area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that the proposed mine will contribute to negative effects of noise at the local or community level. Though there may be some individuals who are exceptionally sensitive, the intensity of noise effects for the Township are anticipated to be Low.
- **Quality of Evidence**: There is Weak Evidence for the concern that the proposed mine will impact noise in the Township or area and Moderate to Strong Evidence that the proposed mine Will Not Have a Negative Effect on noise in the Township.

Conclusion:

- Valley Road is parallel to the northern boundary of the proposed mine property, which has a speed limit of 45 mph. Latest Wisconsin Department of Transportation (WisDOT) traffic counts on State Highway 69, within ¼ mile east and State Highway 18/US Highway 151 is less than ¼ mile north were 6,200 Annual Average Daily Traffic (AADT) and about 27,000 AADT respectively; 4 to 19 vehicles per minute.
- Noise levels collected proximal to other roadways determined that typical road traffic traveling at 45 mph can range from 68 to 84 dB when measured 50 feet from the roadway. The existing noise generated from highway 69 and highway 18/151 traffic will be significantly louder and continuous (24/7) at residential properties than the proposed mining operation.
- The proposed mine will generate minimal noise that will be detected by nearby residents, particularly while mining and crushing operations are proposed for a short period of time during the winter when most people are located indoors.
- There is no evidence that the proposed mine will necessarily or certainly impact noise and create a nuisance.
- There is no evidence that the proposed mine will impact noise and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing noise is attached.

# NOISE

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix H - Noise Fact Sheet

**Regulatory Summary**

**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.1.2.1, 2.1.2.3, 2.1.2.4, and 2.2.8**

- Under the Clean Air Act, the USEPA established the Office of Noise Abatement and Control (ONAC) to carry out investigations and studies on noise and its effect on public health and welfare. In 1981 the USEPA concluded that noise issues were best handled at the State and local level. As a result, ONAC was closed and the primary responsibility of addressing noise issues was transferred to State and local governments.
- Primary responsibility for the control of noise rests with state and local governments.
- Twelve states and the District of Columbia have noise statutes and regulations, most of which are applicable to quarry operations.
- Noise standards are regulated at the local level through ordinances, but there are no universal standards applied.

**Technical Summary**

**For more detailed information refer to Chapter 5 Addressing Environmental Concerns – Section 5.5**

- Like any land use from industrial to agricultural and residential, quarrying is not silent. Some amount of noise is inevitable.
- Noise is regulated in all industries for worker safety and health. In the quarry industry, the U.S. Mine Safety and Health Administration (MSHA) imposes limits on noise based on established guidelines considered protective of workers. Noise reduction beyond that is subject to local noise ordinances or is a voluntary good business practice.
- Noise complaints associated with new quarry development often reference quality of life and moving to the country for quiet and tranquility. Such comments do not recognize the fact that living without noise is impossible or recognize the magnitude of noise created by daily life.
- Quarry operations control noise through the selection of equipment that has a lower noise rating where feasible and available.
- On stationary equipment, barriers can be installed to shield, reflect, or absorb noise to limit its propagation beyond property boundaries.
- Heavy equipment manufacturers have improved engine design to the point where the backup alarms commonly produce the highest noise level and have become the subject of more noise complaints than the equipment itself due in part to its unpredictability when heard.
- Backup alarms are not only required, but they are necessary, and they are intentionally designed to be heard and capture attention.
- Backup alarms are evolving and can vary the decibels based on sensors that measure ambient noise and object detection.
- Directional white noise multi-frequency alarms focus in the area of risk rather than in all directions away from the equipment in an audible “ssh-ssh” locatable sound.
- Most local governments do not have the scientific background and expertise necessary to regulate noise levels.

***From the book: Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society***
***by Mark Krumenacher (mark.krumenacher@gza.com)***

## Dust/Air Quality

Concern:

- Industrial dust
- The mine will produce dust.

Basis of Concern:

- Exposed soil and sand have the potential to form dust.

Discussion of Concern:

- The proposed mining operation will implement a fugitive dust plan and operate in accordance with applicable State air permitting regulations.
- The proposed mining operation will be a wet operation.
- The Wisconsin Department of Natural Resources (WDNR) regulates sources of dust as particulate matter (PM) emissions under Chapter NR 415, Wisconsin Administrative Code (Wis. Adm. Code). The WDNR's Air Program developed recommended practices for reducing fugitive dust and PM from nonmetallic mining operations that will be applied to reduce PM at the mine.
- Proposed dust control procedures are described in the Special Exemption Permit Application on page 8 and Attachment 5.

Characterizing the Effects

- **Likelihood**: Based on the expected compliance with State regulations and the implementation of the proposed dust control procedures, negative effects caused by dust in the area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that the proposed mine will contribute to negative effects caused by dust at the local or community level. Though there may be some individuals who are exceptionally sensitive, the intensity of effects for the Township are anticipated to be Low.
- **Quality of Evidence**: There is Weak Evidence for the concern that the proposed mine will impact dust and air quality in the Township or area and Moderate to Strong Evidence that the proposed mine Will Not Have a Negative Effect on dust or air quality in the Township.

Conclusion:

- Dust will be controlled and will not create a nuisance.
- The health effects of dust are discussed in the Safety and Health Risk Concerns Fact Sheet that follows.
- There is no evidence that the proposed mine will necessarily or certainly impact dust and air quality and create a nuisance.
- There is no evidence that the proposed mine will impact dust and air quality and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing air quality is attached.

# AIR QUALITY

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix D - Air Quality Fact Sheet

**Regulatory Summary**

**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.2.1**

- Air quality is protected by several federal and state regulations designed to manage and minimize the potential impacts on air quality from quarry operations. The federal regulator is the USEPA and the state regulator is the state environmental protection agency.
- The Clean Air Act (CAA) is the federal law regulating air emissions and is one of the most comprehensive air quality laws in the world. In addition to federal CAA regulations, each state established a series of regulations to comply with the CAA requirements.
- The primary pollutant regulated and controlled at quarry operations is dust, also referred to as particulate matter (PM). The USEPA regulates PM emissions, including particles 10, 4, and 2.5 micrometers in diameter or smaller, referred to as $PM_{10}$, $PM_4$, and $PM_{2.5}$. As a point of reference, a typical human hair is about 50-70 microns thick.
- Fugitive dust is regulated by specific requirements for fugitive dust control plans applicable to quarry operations.
- State regulations include requirements for plans to include when specific dust suppression activities will be implemented and require companies to keep records of those dust suppression activities.
- Quarry operations often need to obtain an air permit approval before constructing a new source of emissions or modifying an existing source of emissions.
- Ultimately, the quarry operation is subject to a comprehensive air permit that addresses emission sources through applicable requirements, including testing, monitoring, recordkeeping, and reporting.

**Technical Summary**

**For more detailed information refer to Chapter 5 Addressing Environmental Concerns – Section 5.1**

- Air quality concerns raised in association with quarrying pertain to dust and particles of crystalline silica small enough to be inhaled, particles measuring below 10 micrometers in diameter.
- Particles sized $PM_{10}$ are inhalable but are generally too large to deposit in the distal (deep) airways of the lungs; whereas $PM_4$ and $PM_{2.5}$ are of concern because these particle sizes are small enough to be inhaled and travel to the distal airways where alveolar respiration occurs.
- Silicosis is an inflammation of the lung and other respiratory tissues that eventually causes fibrosis, a hardening of the lungs, reducing the ability to breathe efficiently.
- The concentrations of dust during quarry operation are controlled to be lower than occupational exposure limits. Much of the material handling is done when the material is wet or moist.
- Concerns over crystalline silica dust and silicosis in the quarry industry are legitimate, but the issue is not a new or lightly considered issue by the quarry industry and has been studied for almost 100 years.
- Fears of a public outbreak of silicosis as a result of quarry operations are not supported by air monitoring data.
- Quarry operations are required to take actions to prevent and minimize fugitive particulate matter emissions, perform an annual survey to identify uncontrolled sources of particulate matter emissions and prepare a written fugitive dust control plan.
- Most local governments lack the expertise of the federal and state environmental agencies to regulate air quality.

*From the book: Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society*
*by Mark Krumenacher (mark.krumenacher@gza.com)*

## Safety and Health Risk

Concern:

- The mine will have negative health effects and cause or worsen asthma.
- The dust from gravel pits can have harmful effects on human health.

Basis of Concern:

- Dust will cause negative health effects.
- The dust may contain silica.

Discussion of Concern:

- Like any industrial operation, mining is not without risks. Those risks are managed to the extent practicable under strict regulatory oversight by the WDNR and the Mine Safety and Health Administration (MSHA). It should be made clear that properly managed sand and gravel operations are safe and do not pose unnecessary risk to the public or mine workers and the proposed operations will also be safe.
- The proposed mining operation will implement a fugitive dust plan and operate in accordance with applicable State air permitting regulations.
- The WDNR regulates sources of dust as particulate matter (PM) emissions under Chapter NR 415 of the Wisconsin Administrative Code (Wis. Adm. Code). The WDNR's Air Program developed recommended practices for reducing fugitive dust and PM from nonmetallic mining operations that will be applied to reduce PM at the mine.
- Proposed Dust Control Procedures are described in the CUP Application.
- The sand is the same that is present on area beaches, unpaved driveways, and farm fields in the Township and County.
- Sources of crystalline silica dust in ambient air include agricultural fields, unpaved roads, silica-containing soil that naturally washes onto paved roads or is spread onto paved roads in the winter, mining, construction, foundries, glass manufacturing, abrasive blasting, or any industrial use of sand and quartz.
- Silica may comprise 50% of the sand present in the glacial outwash sand and gravel deposits in Dane County.
- Concern over silica dust is not a new issue but is one that has been under consideration and study for almost 100 years.
- It is logical to assume that the potential for exposure to crystalline silica would be highest at industrial sand mine and processing operations where the material mined is 99+% pure silica. Most industrial sand operations in western Wisconsin mine and process one-half to more than one million tons of sand per year at each facility.
- Studies have demonstrated that industrial sand mine workers and the public are not exposed to PM (dust) or silica. The same regulatory controls and Best Management Practices (BMPs) are used to control exposure at sand and gravel mining operations.

Characterizing the Effects

The Institute for Wisconsin's Health, Inc. (2016), Health Impact Assessment of Industrial Sand Mining in Western Wisconsin, evaluated PM10 and silica.

- In regard to PM10:
  - **Likelihood:** Based on the available data collected at industrial sand facilities and on published epidemiologic literature, health effects from the impact of industrial sand mining on community-level air quality related to PM10 are Unlikely.
  - **Intensity**: Available data do not indicate that the levels of PM10 are high enough to contribute to health effects at the community level. Though there may be some individuals who are exceptionally sensitive, the intensity of health effects for vulnerable populations (children, elderly, those with existing respiratory conditions) and the community are anticipated to be Low.
  - **Quality of Evidence**: Evidence is Very Strong for the conclusion that industrial sand facilities are Unlikely to Substantially Impact PM10 to the extent of exceeding air quality standards. The evidence is based on site-specific PM10 data collected using methods that meet federal standards. These data have been reviewed by air quality experts at the WDNR and made publicly available.
- In regard to silica exposure:
  - **Likelihood**: Based on the available data collected at industrial sand facilities and on published epidemiologic literature, it is unlikely that community members will be exposed to respirable crystalline silica from industrial sand mining as currently regulated; therefore, health effects from exposure are Unlikely.
  - **Intensity**: Available data do not indicate that levels of respirable crystalline silica near industrial sand facilities or nearby communities exceed the long-term reference exposure level and, as a result, the intensity of health effects at the community level are anticipated to be Low.
  - **Quality of Evidence**: Evidence is Very Strong for the conclusion that industrial sand facilities, as currently regulated in Wisconsin, Are Unlikely to Substantially Impact levels of respirable crystalline silica on a community level. The evidence is based on site-specific respirable crystalline silica data collected in Wisconsin and Minnesota. This data was collected according to federal air monitoring standards, reviewed by air quality experts, and made publicly available.

Conclusion:

- Dust will be controlled and will not result in negative health effects for the mine workers or neighbors.
- There is no evidence that the proposed mine will necessarily or certainly cause dust and create safety and health risks to the Township and create a nuisance.
- There is no evidence that the proposed mine will cause dust and create safety and health risks to the Township and cause harm that is inevitable and undoubted.

## Surface Water

Concern:

- This project is too close to rivers and wetlands in the area.
- Groundwater pumping in the mines will negatively impact the nearby wetlands.

Basis of Concern:

- Mine dewatering can lower the water table at the mine and in nearby wetlands.
- Excavations expose soil and sand that may become entrained in surface water runoff from precipitation.

Discussion of Concern:

- There are no wetlands on the proposed mine property.
- The potential for surface water impact exists today due to tilling of the land.
- The mine will be internally drained, so there is no potential for runoff from the mine and the potential for runoff from the property will continually decrease with mine development.
- The mine will remain wet and become a lake with limited exposed soil.
- Surface water concerns are considered at every existing and proposed mining and processing operation, groundwater and surface water experts, and the WDNR. Appropriate permits will be obtained, and safeguards developed for the proposed operations.
- Several environmental regulations are in place to restrict mining activities and protect waters of the State, including the Wisconsin Pollutant Discharge Elimination System (WPDES), Storm Water, Construction and Operation Discharge Permits. Storm water and process water are regulated and closely monitored through the WPDES Permits. From WDNR's perspective, the WPDES permitting system ensures that water samples are collected and analyzed to demonstrate that water is not discharged that could impact surface water. Through adherence to this process, the WDNR is confident that the quality of water discharged to surface water is adequately regulated.
- The WDNR issues the operator and other nonmetallic mining operations a General Permit to Discharge under the WPDES and routinely inspects compliance with the permit at the existing operations.
- The operator recognizes surface water as a critical natural resource that they are obligated to protect to ensure the mining and processing operations do not impact surface water.
- Water will not be pumped and discharged from the proposed mining operation. The only water that will leave the property and potentially flow into a nearby ditch or drainage system is storm water that never enters the mine but either falls directly on the property or flows across the agricultural portion of the mine property during precipitation events as presently occurs.
- The proposed mining and processing operations will not discharge process water or waste of any kind into area streams. The process water used to wash the sand will be in a closed-loop system and recycled. The fine material washed out of the sand will be allowed to settle in ponds and returned to the mine as part of the reclamation process or beneficially used elsewhere.

Characterizing the Effects

- **Likelihood**: Based on the expected compliance with State regulations, the lack of mine dewatering, and the design of the mine to be internally drained, negative effects on surface water in the area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that the proposed mine will contribute to negative effects on surface water at the local level and the intensity of effects for the Township are anticipated to be Low.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact surface water in and Moderate to Strong Evidence that the proposed mine Will Not Have a Negative Effect on surface water in the Township.

Conclusion:

- Based on the mine design and plans, there is no conceivable mechanism by which the proposed mining operation will have a detrimental effect on nearby streams or wetlands.
- There is no evidence that the proposed mine will necessarily or certainly impact surface water and create a nuisance.
- There is no evidence that the proposed mine will impact surface water and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing stormwater is attached.

# SURFACE WATER

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix G - Surface Water Fact Sheet

**Regulatory Summary**
**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.2.3**

- Federal regulations developed to ensure surface water quality are administered by the USEPA through the Clean Water Act (CWA); Safe Drinking Water Act (SDWA); Spill Prevention, Control, and Countermeasure (SPCC) Rule; and Facility Response Plan (FRP) Rule. The regulations are enforced by authorized state environmental agencies.
- The CWA is the primary federal law in the United States governing water pollution, regulating discharges of pollutants into the waters of the United States, and regulating quality standards for surface waters.
- Congress amended the CWA to control stormwater pollution caused by rain or melting snow that flows from rooftops and over paved areas, bare soil, and sloped lawns that may collect and transport waste, litter, salt, pesticides, fertilizers, oil and grease, soil, and other materials to waters of the U.S.
- Federal regulations require owners of stormwater pollution sources to have a National Pollutant Discharge Elimination System (NPDES) Stormwater Permit and create plans and implement management practices that eliminate or reduce stormwater pollution.
- Many states regulate wastewater discharges at quarry operations. The most common discharges are quarry dewatering and wash water generated from the rinsing of crushed stone, sand, and gravel with water to remove clay and silt-sized particles.
- Discharges to surface water are considered waters of the state and groundwater via seepage and are regulated. Many states issue general permits for wastewater discharges from quarry operations.
- Permitted facilities must develop a site-specific Stormwater Pollution Prevention Plan (SWPPP). The goal of the SWPPP is to outline how a facility will minimize stormwater pollution and implement site-specific Best Management Practices (BMPs) with implementation schedules to prevent contaminated stormwater runoff from a facility.
- Some states also regulate the construction of ponds, lakes, or artificial waterways developed by quarrying.
- Many states also regulate the management of accumulated sediment from stormwater management structures.

**Technical Summary**
**For more detailed information refer to Chapter 5 Addressing Environmental Concerns – Section 5.4**

- Quarries have potential interactions with surface water present at or near operations in the form of wetlands, ditches, streams, ponds, or lakes.
- Potential surface water quality impacts may arise from stormwater or process water used to wash sand, gravel, and crushed stone of fine clay and silt particles.
- Accidental discharges can occur during extreme precipitation events if components of a stormwater or process water management system fail.
- Although the discharge of sediment into surface waters is a form of pollution regulated at multiple levels, such pollution differs from other forms of pollution and in many ways mimics natural processes. It is important to recognize that stream valleys would not exist if it were not for erosion.
- Most Local governments lack the expertise of the federal and state environmental agencies to regulate surface water.

***From the book: Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society***
***by Mark Krumenacher (mark.krumenacher@gza.com)***

## Groundwater Quantity

Concern:

- Mining will negatively impact groundwater.
- Mining will negatively impact water supply wells.

Basis of Concern:

- Mine dewatering can lower the groundwater table.

Discussion of Concern:

- The impact of mine dewatering on groundwater quantity is a common concern.
- The mine plan does not include mine dewatering, so the mining operation is not designed to lower the groundwater table to facilitate mining in the dry.
- The majority of water supply wells in the area obtain water from the sand and gravel aquifer.
- The aquifer will have the capacity to provide the required water needs of the proposed mine with minimal impact on the groundwater table surface.
- With very little drawdown expected near the mine pit where water will be pumped and returned to the mine, there is no possible means to lower the water table near Sugar River or Badger Mill Creek.

Characterizing the Effects

- **Likelihood**: Based on the expected compliance with State regulations and the lack of mine dewatering, negative effects on groundwater quantity in the area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that groundwater use at the proposed mine will contribute to negative effects on groundwater quantity at the local or community level. Though groundwater use may result in some changes to groundwater levels, the intensity of effects for neighbors and the Township are anticipated to be Low.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact groundwater quantity in the Township or area and Moderate to Strong Evidence that the proposed mine Will Not Have a Negative Effect on groundwater quantity in the Township.

Conclusion:

- There is no evidence that the proposed mine will necessarily or certainly impact groundwater quantity and create a nuisance.
- There is no evidence that the proposed mine will impact groundwater quantity and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing groundwater quantity is attached.

# GROUNDWATER QUANTITY

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix E - Groundwater Quantity Fact Sheet

**Regulatory Summary**
**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.2.2**

- Water supply wells may be used by quarry operations to obtain water for washing aggregate to remove fine particles and produce a clean or "clear" stone.
- Use of high-capacity wells may prompt concern that quarries will affect the quantity of water available for neighboring properties.
- Water rights laws vary in each state. Wisconsin and other states define a high-capacity well system as one or more wells on a property that have a combined pump capacity of 70 or more gallons per minute.
- Where required, high-capacity well permit applications are evaluated by environmental and/or natural resources regulatory agencies to assess the potential impacts to waters of the state.

**Technical Summary**
**For more detailed information refer to Chapter 5 Addressing Environmental Concerns – Section 5.2**

- Private wells are the primary source of drinking water in many rural areas.
- Most quarries are groundwater sinks, meaning that groundwater flows toward most quarries.
- Quarries that do not pump groundwater may have a slight inward hydraulic gradient but would not have an overall negative impact on the groundwater table and impact potable water supply wells or most ecological resources.
- Quarries that dewater will lower the groundwater table surface and need to understand the extent of that decline through predictive modeling and monitoring. Such monitoring is best accomplished through cooperation with nearby residents that have potable water supply wells.
- The amount of water used at a quarry varies greatly and the extent to which water is recycled. Closed-loop systems that recycle 90 percent of the water can consume as little as a few thousand gallons per day.
- Open-loop quarry wash systems are rarely used as it is more economical and logical to recycle water within the quarry and processing area through reuse.
- Although the term water consumption is often used, water used in the wash process is not actually consumed. Water pumped from a well or a quarry sump is ultimately returned to the same regional surface water/groundwater system.
- As unpleasant as it may seem, consider each well and septic system at a farm or dense subdivision where all the water pumped, used, consumed by people and livestock, and flushed may be reused many times over.
- Groundwater experts (hydrogeologists) study the groundwater for federal, state, and local governments as well as the quarry industry, and state hydrogeologists and engineers evaluate permits where required for wells.
- The impact of groundwater pumping at a quarry is site-specific and is based on the ground surface and groundwater elevation, geology, hydrogeologic characteristics of the groundwater aquifer, proximity to surface water, and presence of other nearby groundwater users.
- Quarry operators rarely go to war with neighbors over groundwater.
- Most local governments lack the expertise of the federal and state environmental agencies to regulate groundwater quality.

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***by Mark Krumenacher (mark.krumenacher@gza.com)***

## Groundwater Quality

Concern:

- Mining will negatively impact groundwater quality because diesel powered equipment will be used.

Basis of Concern:

- Concern over the potential for groundwater pollution from chemical and petroleum use in the mine.

Discussion of Concern:

- The chemical use at the mine will be less than that used in agricultural applications.
- The petroleum use at the mine will be similar to that used in agricultural applications. Underground petroleum storage tanks will not be installed. Aboveground petroleum storage tanks are not anticipated at this time and, if used, would need to comply with State and federal regulations.
- Nonmetallic mining operations are not known to be common sources of groundwater contamination.

Characterizing the Effects

- **Likelihood**: Based on the expected compliance with State regulations and the minimal chemical and petroleum use consistent with current use, negative effects on groundwater quality in the area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that the proposed mine will contribute to negative effects on groundwater quality at the local or Township level and the intensity of effects for the area are anticipated to be Low.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact groundwater quality in the Township or area and Moderate to Strong Evidence that the proposed mine Will Not Have a Negative Effect on groundwater quality in the Township.

Conclusion:

- The potential for negative impacts to groundwater quality are not present at the proposed mine.
- There is no evidence that the proposed mine will necessarily or certainly impact groundwater quality and create a nuisance.
- There is no evidence that the proposed mine will impact groundwater quality and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing groundwater quality is attached.

# GROUNDWATER QUALITY

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix F - Groundwater Quality Fact Sheet

**Regulatory Summary**
**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.2.3**

- Federal regulations developed to ensure water quality are administered by the USEPA through the Clean Water Act (CWA) and Safe Drinking Water Act (SDWA). The regulations are enforced by authorized state environmental agencies.
- Under the law, the USEPA sets national standards for drinking water. The states must meet or exceed those standards.
- The SDWA regulates all drinking water from aboveground and underground sources.
- Drinking water is also regulated at the state level.

**Technical Summary**
**For more detailed information refer to Chapter 5.3 Addressing Environmental Concerns**

- Groundwater quality is a genuine concern but is a very low risk. Documented cases of contamination of groundwater aquifers or potable water supply wells from nonmetallic quarry operations are rare.
- Potential groundwater contaminant sources at most quarry operations consist of oil and fuel used in equipment and blasting agents used in bedrock mining operations.
- Concerns have been raised over the use of water-soluble polymers used to treat wash water, but those chemicals have little to no potential for contaminating groundwater or drinking water supply wells.
- Fuels and oil use and storage are closely regulated and monitored at all commercial and industrial operations with a primary focus on the prevention of surface water contamination.
- Stormwater Pollution Prevention Plans (SWPPP) and/or Spill Prevention, Control, and Countermeasure (SPCC) Plans are required of most quarries and provide the best management practices to identify and address spills to avoid impact to groundwater.
- To recycle the water used in some quarry processing, operators use water-soluble polymers to remove small clay particles from the water. One of those polymers is polyacrylamide, the same safe chemical used by most municipal drinking water and wastewater treatment facilities.
- Although acrylamide is a neurotoxin and is highly mobile in water, it does not present a threat to public health because naturally occurring microbes in soil and water can degrade acrylamide to nontoxic products in days to months.
- The water-soluble polymers used at quarry operations are approved by the National Sanitation Foundation (NSF) and American National Standards Institute (ANSI) Standard 60 for the treatment of drinking water.
- For comparative purposes, municipal drinking water treatment facilities add polyacrylamide directly to drinking water; quarry operations add polyacrylamide to the wash water, which is muddy water from washing sand or rock and is not a source of drinking water.
- Most local governments lack the expertise of the federal and state environmental agencies to regulate groundwater quality.

***From the book: Quarry Regulatory Control and Permitting – Defending the Foundation of a Sustainable Society***
***by Mark Krumenacher (mark.krumenacher@gza.com)***

## Traffic and Road Concerns

Concern:

- The mine will result in excessive traffic.
- The mine will damage Valley Road.
- A large number of trucks will enter and leave the mine.
- Truck traffic/road wear and tear.

Basis of Concern:

- Dump trucks are used to haul sand and gravel.
- Trucks cause wear and tear on roads.

Discussion of Concern:

- Trucking is inherent to the mining business.
- The proposed mine is located ¼-mile from state and US highways designed, built, and maintained for truck traffic.
- The WisDOT Traffic Counts TCMap[1] reports that Highway 69 had an AADT count of 6,200 vehicles per day; measured near Valley Road in 2018. Vehicle use by the proposed mine will represent a small fraction of the total volume.
- Besides ¼-mile of Valley Road other Township or County roads will not be used by the Applicant as a primary transportation route.
- The Town of Verona Comprehensive Plan recognizes that "The Town is focused on preservation and maintenance of roads rather than new construction."
- The Comprehensive Plan does not state that development and truck traffic should be discouraged to preserve roads.

Characterizing the Effects

- **Likelihood**: Based on the magnitude of the proposed mine and the use of State highways, negative effects on the roads and traffic in the Township and area of the proposed mine are Unlikely.
- **Intensity**: Available data do not indicate that the proposed use of State highways will contribute to negative effects on traffic or roads in the area of the proposed mine and the intensity of effects for the Township and area are anticipated to be Low.
- **Quality of Evidence**: There is No Evidence for the concern that the proposed mine will impact traffic or roads in the Township or area.

Conclusion:

- Traffic volume added by the proposed mine will be immaterial and unnoticed.

[1] Wisconsin Department of Transportation WisDOT Traffic Counts TCMaps found at: https://wisdot.maps.arcgis.com/apps/webappviewer/index.html?id=2e12a4f051de4ea9bc865ec6393731f8

- The proposed use will not negatively impact the County highways or local roads.
- There is no evidence that the proposed mine will necessarily or certainly impact traffic and roads and create a nuisance.
- There is no evidence that the proposed mine will impact traffic and roads and cause harm that is inevitable and undoubted.
- A Fact Sheet from the book*: Quarry Regulatory Control and Permitting - Defending the Foundation of a Sustainable Society* addressing roadways is attached.

# ROADWAYS

## Quarry Regulatory Control and Permitting

### Defending the Foundation of a Sustainable Society

### Appendix J - Roadways Fact Sheet

**Regulatory Summary**

**For more detailed information refer to Chapter 2 Regulatory Control and Oversight of Quarry Operations – Section 2.1.2.5**

- The U.S. Department of Transportation (USDOT) is a federal cabinet department of the United States government that regulates transportation and roadways.
- All mineral and construction aggregate transportation must comply with USDOT regulations.
- Each state has established an agency responsible for planning, building, and maintaining a safe network of state highways and the federal Interstate highway system.
- All users of the transportation system are required to adhere to the rules established by the state transportation agencies.
- In addition to the common rules that address road safety, quarry operators must understand and comply with rules developed to maintain road integrity.
- State departments of transportation have the authority for licensing truck drivers transporting aggregate and other minerals, as well as truck safety, load limits, and size restrictions. State DOT's also review designs and provide permits for developing access onto state highways.
- The transport of all commodities, including quarried material, is subject to rules regulating weights and measures. These can apply to weight restrictions on local and state roads.

**Technical Summary**

**For more detailed information refer to Chapter 6 Addressing Infrastructure Concerns – Section 6.2**

- Roads, like all other structures, deteriorate over time.
- Deterioration of roads is primarily the result of two factors: the traffic load, which is greatly affected by the volume of traffic, especially heavy vehicle traffic; and environmental factors.
- Over the lifetime of a road, a combination of these factors will cause the materials used to build the road to fail, resulting in cracking, rutting, and potholes in addition to other structural failures.
- Environmental factors affect pavement mainly through precipitation and temperature. Rainfall can penetrate the structure of the road and alter the properties of the different layers, including the underlying soil/bedrock, making the roadway more vulnerable to traffic loads.
- Temperature affects pavement properties by generating stresses and causing the road materials to expand and contract.
- Several factors influence the degree to which roads are affected by traffic, including vehicle weight, average daily traffic.
- The relationship between vehicle weight and a vehicle's potential impact on a road is exponential, not linear, meaning heavier vehicles have a significantly greater impact than lighter vehicles.
- The most common truck types for transporting quarry materials are five-axle semi-trailers (Gross Vehicle Weight, or GVW, of 80,000 lb.) and quad-axle dump trucks (GVW 73,000).
- The distribution of weight over axles has a greater influence on how the vehicle may impact a road. For example, doubling the axle weight from 18,000 lb. to 36,000 lb. on a single axle has 15 to 24 times the impact on a road not designed for that weight.
- Increasing the number of axles, while maintaining even load distribution, can reduce the impact of heavy vehicles on rural roads.
- On the state and county highway systems, the bridges and roads are structurally capable of handling traffic at the expected volumes and weight without damage or unusual wear.

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*by Mark Krumenacher (mark.krumenacher@gza.com)*

**ATTACHMENT 4**

**July 19, 2024, Town of Public Works Director's Comments**

Wildcat Pit Sand and Gravel Operation

Public Works Director Comments WCB 7/19/24

1. The existing Valley Road pavement consists of a chip seal surface (2019) over a cold mix asphalt base (1996) of undefined thickness. The road in the vicinity of the proposed pit operation is currently rated as a PASER rating 4 representing a fair condition. Inspection of the existing pavement reveal a substantial area of base deformation and block cracking indicating a soft and shifting subbase. The road is seasonally weight restricted to a 10,000 lb. single axle loading. This restriction is typically in effect from March 1st to April 30th each year. The statutory weight limit outside of this time is 20,000 lbs per axle.

   Based upon the 2 to 25 million tons of material deposits and an estimated life for 35 years, the road will experience over 2,200,000 truck trips, half full and half empty. If the pit is to be in operation for an estimated 200 days per year, this would average over 325 trucks per day. Current traffic counts on Valley Road indicate an average daily traffic of 35 vehicles per day, therefore the anticipated traffic will increase daily traffic tenfold.

   To provide safe and reliable transportation, it will be necessary to reconstruct Valley Road for approximately 1575 feet west of State Route 69. This length will put the reconstruction approximately 100 feet west of the proposed entrance. It is anticipated that all pit traffic will enter and exit the site via State Route 69, since the town roads to the west of the site are also weight restricted. Based on similar roads constructed to withstand heavy truck traffic the cost to reconstruct Valley Road is $640,000. This reconstruction would consist of a 11-foot driving lane and a 5-foot paved shoulder.

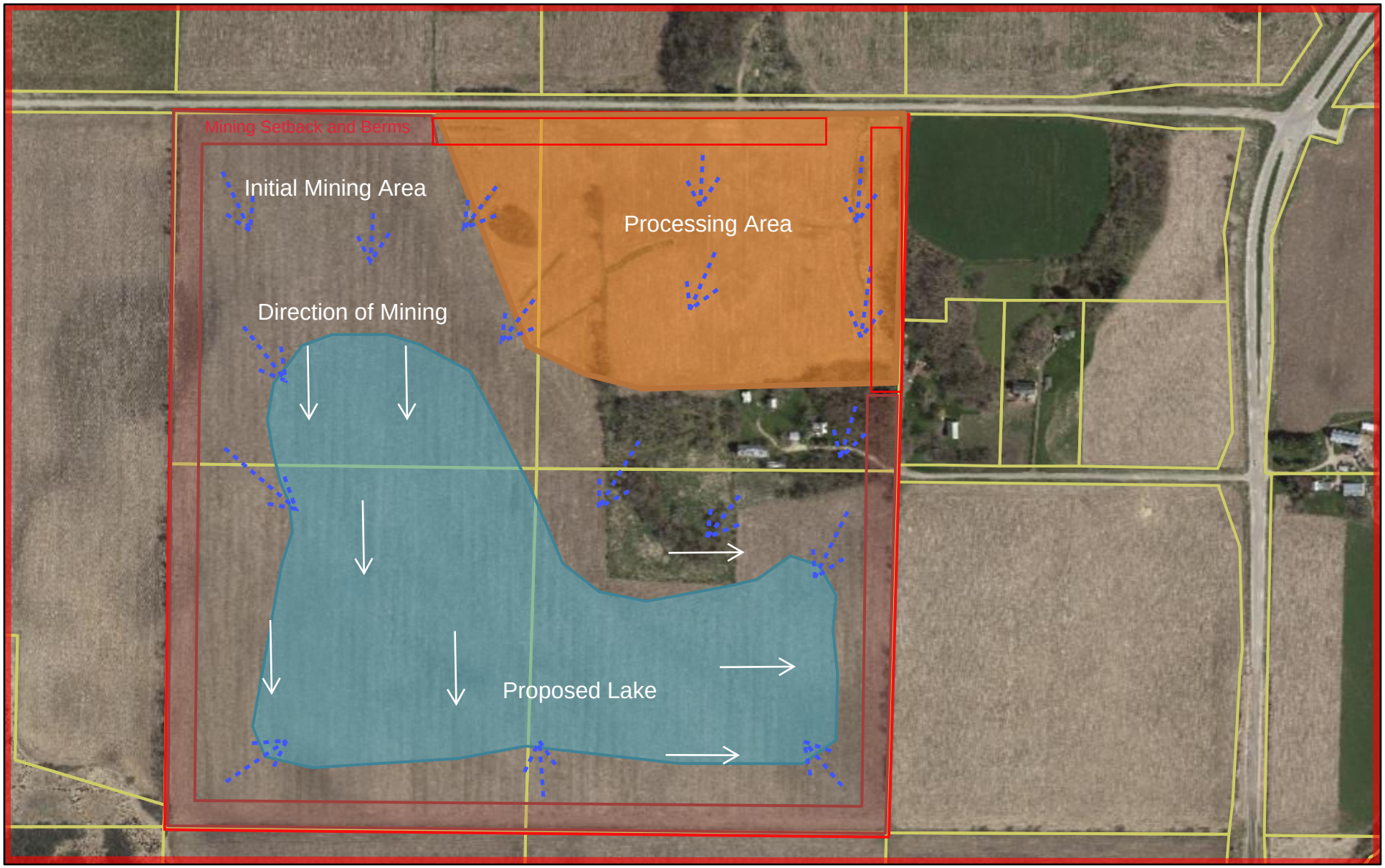
2. The access point should include a paved driveway approach from the road to the right of way line to promote ease of pavement cleaning and sweeping. The width of the constructed driveway would typically be 30 feet wide for this type of operation. The access point needs to be signed such that no truck traffic is allowed west on Valley Road.

3. The front screening berm has a proposed height of10 feet which will be insufficient to screen much of the gravel processing/crushing operation and equipment. It is recommended that the applicant prepare a typical sight line profile from the road into and through the site to show the berm elevation in relationship to the processing equipment.

**ATTACHMENT 5**

**Stormwater Management Plan**

# JMM LLC Conceptual Stormwater Management Plan




May 10, 2024

Parcels

Mining Setback and Berms

Stormwater Flow Direction

Stormwater will be diverted around disturbed areas to flow as it does prior to mining and as the mine is developed stormwater will be diverted into the mine.

Silt fence will be installed along the outside of berms prior to construction in accordance with WDNR Technical Standard 1056 Perimeter Sediment Control and Slope Interruption.

1:6,000

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

**ATTACHMENT 6**

**Groundwater Management Plan**

**Groundwater Management Plan**
**Wildcat Pit**
**Valley Road**
**Town of Verona, Wisconsin**

The groundwater will be protected by following industry standard of care and best management practices for storage and handling of hazardous materials that may be used on the property. The only hazardous material anticipated to be used are gasoline and diesel fuel in vehicles and mobile equipment and possibly in a double-wall fuel storage which will comply with Wisconsin Department of Agriculture, Trade and Consumer Protection (ATCP) ATCP 93.

**Spill Prevention**

The following are general requirements for any hazardous substances stored or used at this facility.

**General Requirements**

- Ensure all hazardous substances are properly labeled.
- Store, dispense, and/or use hazardous substances in a way that prevents releases.
- Provide secondary containment when storing hazardous substances in bulk quantities.
- Maintain good housekeeping practices for all chemical materials at the facility.
- Routine/Daily checks in the hazardous substance storage area.

**Spill Containment**

The general spill response procedure at this facility is to stop the source of the spill, contain any spilled material and clean up the spill in a timely manner to prevent accidental injury or other damage. Small spills will be contained by site personnel if they are able to do so without risking injury.

The Wildcat Pit operation will maintain a spill kit in the processing plant area equipped with spill response materials to handle spills of approximately 30 gallons or less. Spill kit materials will be inspected on a quarterly basis and any depleted materials will be replaced on an as-needed basis. Spill kit materials available will include the following items:

- Absorbent pads/materials;
- Oil-only spill response booms;
- Personal protective equipment (PPE);
- Plastic sheeting;
- Plastic bags; and
- Raw clay (absorbents).

In the event of a large spill, a properly trained employee should:

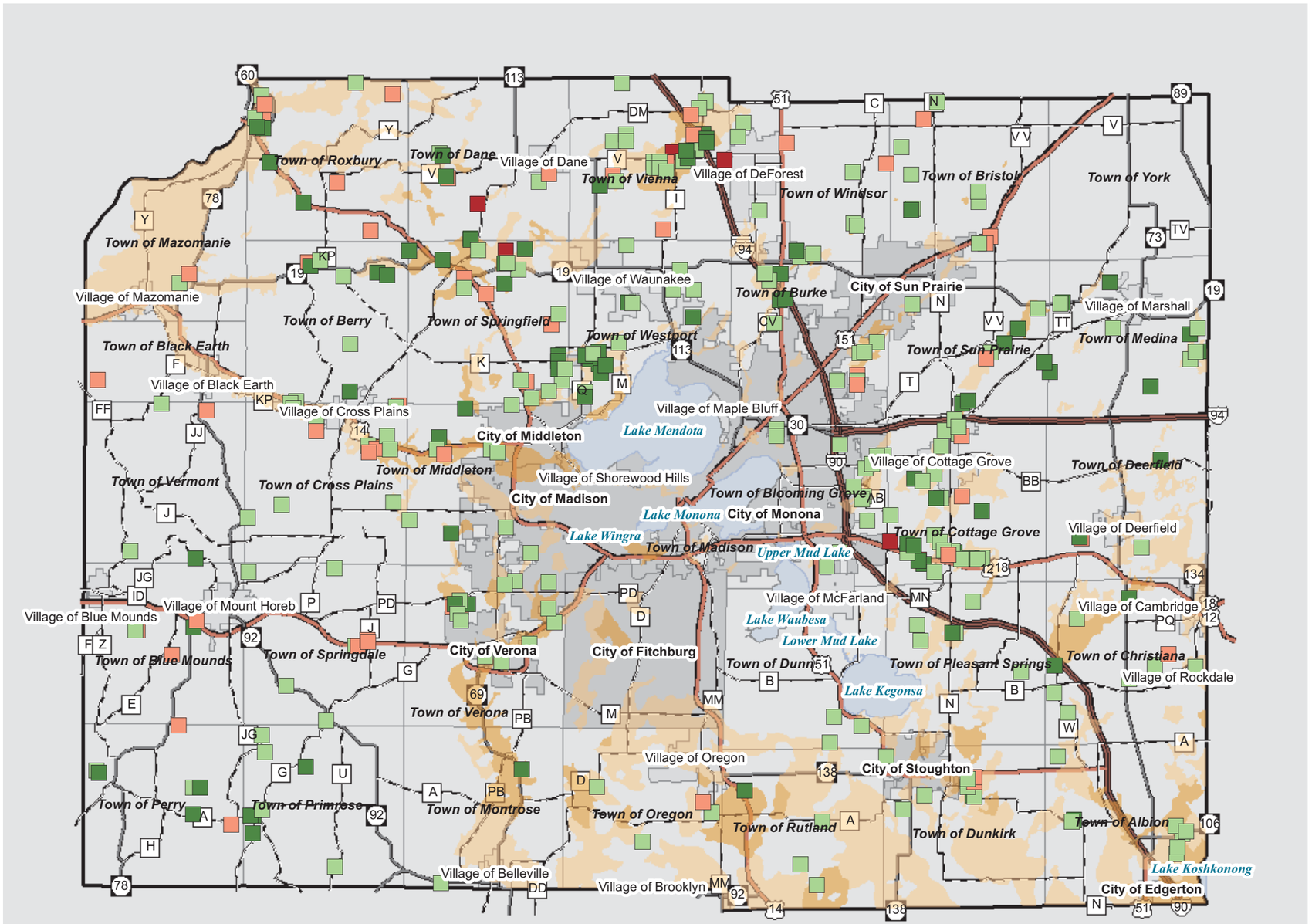
Assess the area for any immediate dangers to health or safety. If any dangers are present, move away from the area, call 911.

- Retrieve the spill kit.
- Assess the size of the leak and any immediate threat of the spill reaching the surface water.
- If there is an immediate threat and there are no safety concerns, then block the spill from flowing to the surface water
- Use absorbent and/or absorbent pads to stop the spill from reaching the surface water
- After the spill has been controlled and contained and any immediate threat to surface water surfaces has been minimized, the affected soil will be excavated and staged on plastic sheeting pending off-site disposal approvals.

**ATTACHMENT 7**

**Dane County Mineral Resources Map**

# Mineral Resources




Dane County Comprehensive Plan
Dept. of Planning & Development
210 Martin Luther King Jr. Blvd.
Room 116
Madison, WI 53703
www.daneplan.org

**Potential Sources of High Quality Sand & Gravel**

- High Potential
- Low Potential

**Mineral Extraction Sites**

- CUP Active
- CUP Expired
- Active
- Expired

**Standard Legend**

- Interstate
- US Highway
- State Highway
- County Highway
- City
- Village
- Town
- Major Lake

## What you're looking at:

High Potential: This is land that has deposits of material that has the best potential for containing high quality aggregate that may be used in asphalt and concrete ready mix.
Low Potential: This is land that has deposits of material much less likely to contain high quality aggreagate.

For more information:
contact the Dane County Zoning Department
at 608.266.4266, 608.266.9083
http://www.countyofdane.com/plandev/

N W E S

0 6 Miles

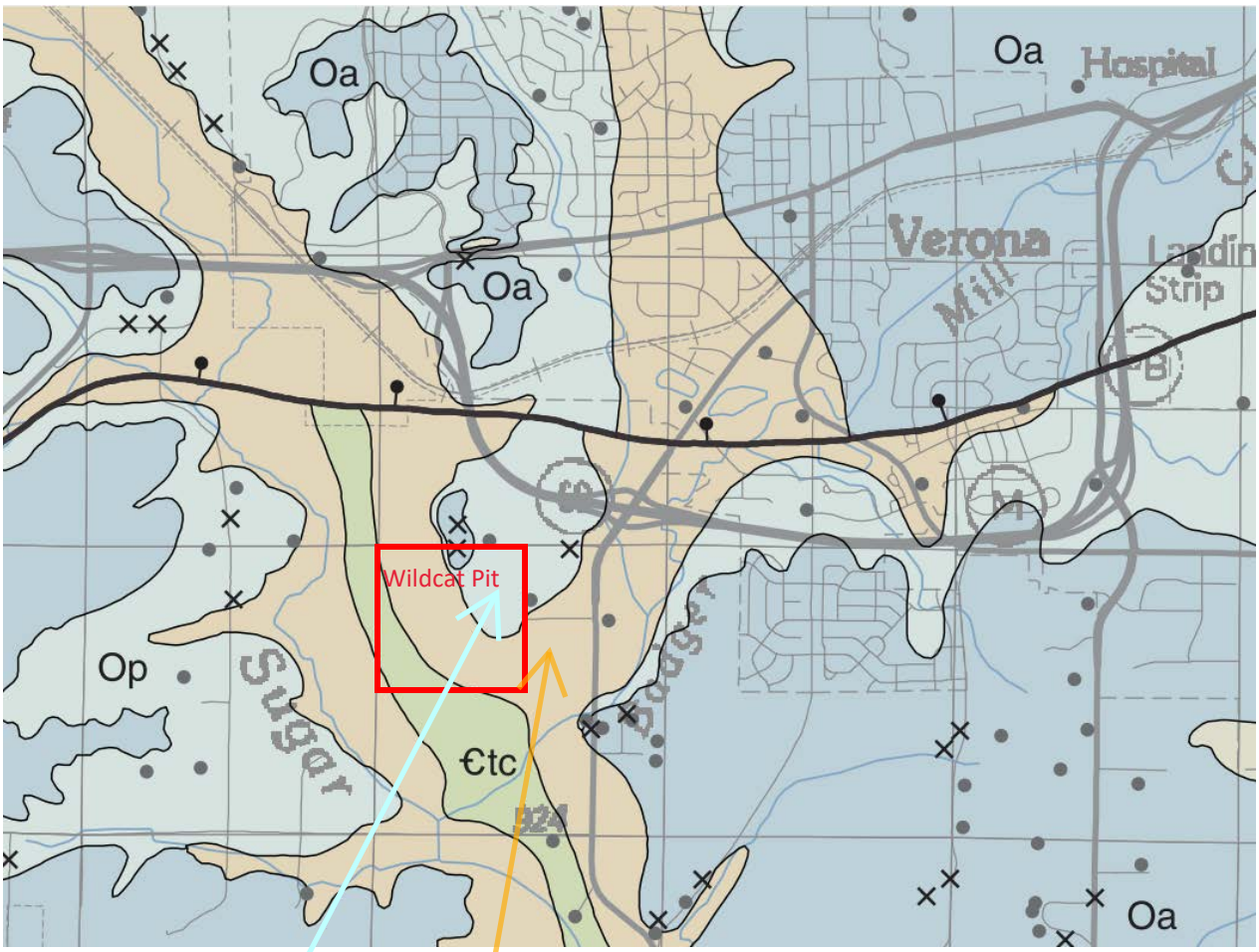
*June, 2007*

Source Info: Mineral Extraction Sites: 2005 (DCPD). Road Network: 2006, Parcel Derived (DCLIO). Municipal Boundaries & Water: 2006, Parcel Derived (DCLIO).

This map was prepared through the Department of Planning and Development in conjunction with the Land and Water Resources Department, Land Information Office and the Dane County Regional Planning Commission.

**ATTACHMENT 8**

**Geologic Maps**




## Ancell Group

Oa — The Ancell Group is not divided on the map, but the following formations and members can be recognized in outcrops and in the subsurface.

### Glenwood Formation

Sandstone, siltstone, and shale; yellow-brown to green; discontinuous and variable in lithology, texture, and thickness. Commonly 1 to 2 feet (0.3 to 0.6 m) thick in outcrops, but reported as thicker in the subsurface.

### St. Peter Formation

Subdivided into a lower mature quartz sandstone (Tonti Member) and a basal shale (Readstown Member). Occupies channels eroded in the underlying rocks; varies widely in thickness across Dane County, from absent to greater than 200 feet (61 m). Members are not mapped separately. **Tonti Member:** Consists of poorly cemented, clean, medium-grained quartz sandstone with typical well-rounded and frosted grains; commonly cross-bedded. Light buff to white on fresh surfaces except where cemented by iron oxide; often case hardens to brownish gray. Forms steep cliffs and ledges. **Readstown Member:** Red brown to purple to green shale and shaly sandstone. May contain clasts of chert and blocks of dolomite derived from weathering of the underlying Prairie du Chien Group. Easily eroded and generally not exposed at the surface.

## Prairie du Chien Group

Op — Consists of the Shakopee Formation and Oneota Formation which are not separated at this map scale. The Prairie du Chien is composed of massive- to medium-bedded dolomite that is light brown to gray in color. The New Richmond Member, a sandstone forming the bottom part of the Shakopee, is thin to absent in Dane County. The Prairie du Chien is vuggy, sandy, and oolitic; orange to pink to gray nodular chert is common. It forms bluffs and caps ridges in northwestern Dane County. It varies in thickness from 145 feet (44 m) in eastern Dane County to 220 feet (67 m) in western Dane County. In central Dane County, Prairie du Chien rocks have been entirely removed by erosion.

## Cambrian

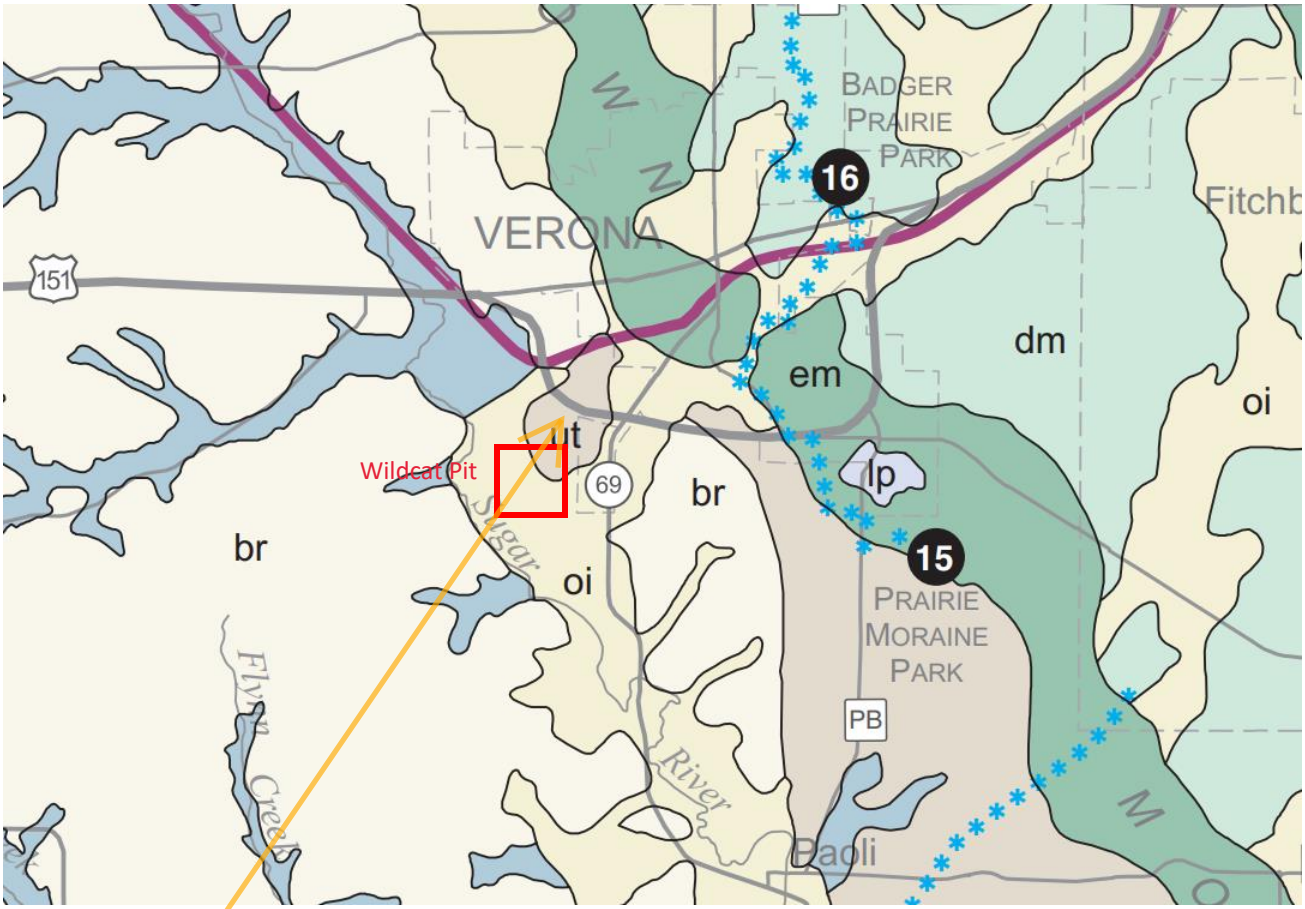
### Trempealeau Group

Ct — Quartz sandstone, dolomitic siltstone, silty dolomite, and sandy dolomite. Consists of two formations which were combined as one mapping unit. The Jordan Formation, a white to yellow-brown quartz sandstone, overlies the St. Lawrence Formation, a silty dolomite to dolomitic siltstone. The **Jordan Formation** can be divided into an upper, coarse-grained **Van Oser Member**, and the lower, fine-grained **Norwalk Member**. The **St. Lawrence Formation** can be divided into the **Lodi Member**, a dolomitic siltstone, and the **Black Earth Member**, a silty dolomite with a trace of silt-sized glauconite. The Trempealeau Group is about 75 feet (23 m) thick where not eroded.

### Tunnel City Group

€tc — Medium to very fine-grained quartz sandstone, locally very glauconitic. Two formations have been defined in outcrop and subsurface based on distinct textural differences, but are not mapped separately. The **Lone Rock Formation** consists of very fine shaly and glauconitic, feldspathic sandstone, thin bedded and commonly green where highly glauconitic. The **Mazomanie Formation** is more massive, fine to medium grained, and not glauconitic. The Tunnel City Group commonly forms vegetated slopes. Maximum thickness in Dane County is about 150 feet (46 m).

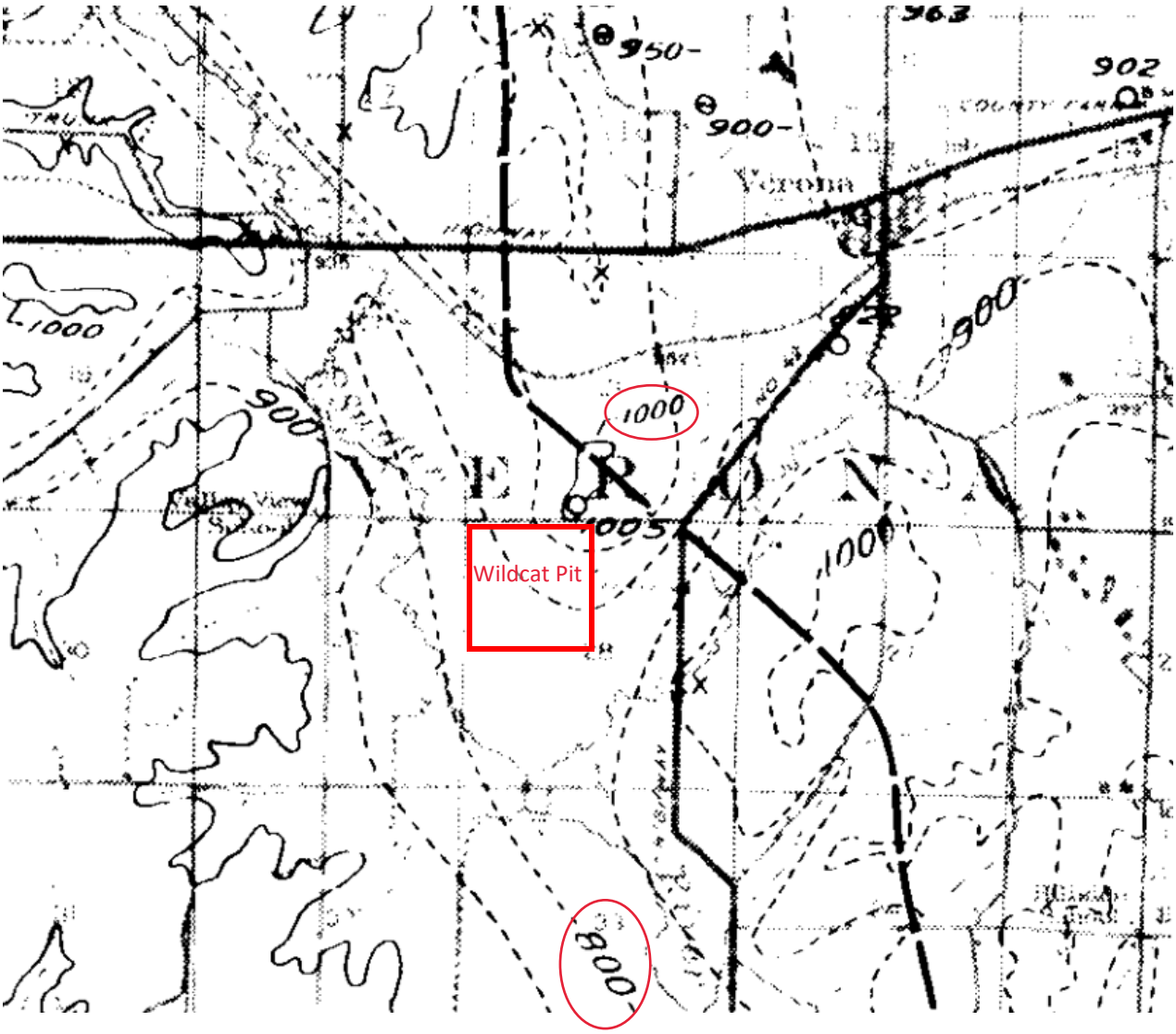
dn_bg_map_pl108072013.indd (wisc.edu)




oi — Glacial stream deposits. Nearly flat outwash to hummocky sand and gravel deposited by streams flowing under, in, and away from ice.

ut — Uplands capped by till. Till was deposited by glaciations prior to the Late Wisconsin ice advance. Hilly terrain with thin, discontinuous cover of glacial deposits and loess.

Generalized glacial geologic map of Dane County, Wisconsin (ES43, plate 1)




Bedrock elevation. 800 in low-lying areas. 900 in NE corner.

report.pdf (usgs.gov)