



## MINNESOTA ENVIRONMENTAL QUALITY BOARD

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Wednesday, September 18, 2013

### **Meeting Location: MPCA Board Room**

**St. Paul, Minnesota**

**1:00 p.m. – 4:00 p.m.**

### **ANNOTATED AGENDA**

#### **General**

This month's meeting will take place in the MPCA Board Room at 520 Lafayette Road in St. Paul. The meeting will begin at 1:00 p.m. Staff will be available for briefing and questions at 12:30 p.m.

#### **I. \*Adoption of Consent Agenda**

Proposed Agenda for, September 18, 2013 Board Meeting  
July 17, 2013 Meeting Minutes

#### **II. Introductions**

#### **III. Chair's Report**

#### **IV. Executive Director's Report**

#### **V. \*\* Decision Item: Approving Distribution Draft Model Standards and Criteria for Public Review**

**Presenter:** Jeff Smyser  
EQB Staff, 651-757-2279

**Materials enclosed:**

- Draft Model Standards and Criteria Table
- Resolution Approving Distribution of Draft Model Standards and Criteria for Public Review

#### **Issue before the Board:**

Approving distribution of draft model standards and criteria for public review.

#### **Background:**

The Minnesota Legislature directed the EQB develop model standards and criteria for mining, processing, and transporting silica sand. The legislation directs the EQB to develop the standards and criteria by October 1, 2013.

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\* Items requiring discussion may be removed from the Consent Agenda

\*\*Denotes a Decision Item

**Discussion:**

The standards and criteria are intended to assist local governments in developing local ordinances. The standards and criteria are to recognize the differences in varying regions of the state: the unique karst conditions and landforms of southeastern Minnesota compared with the flat scoured river terraces and uniform hydrology of the Minnesota Valley.

The meeting packet includes the draft model standards and criteria table. We emphasize that this is a draft set of recommendations. The October 1 date established in the legislation is a very short deadline. Nonetheless, the draft provides a good basis for discussion by local governments, state agencies, and the public. The standards and criteria will be revised based on input received through opportunities for review by the public, local governments, and state agencies.

The draft standards and criteria were assembled from a variety of sources. There are existing state rules and guidelines for a variety of activities—mining of other resources, monitoring wells, stormwater management, drinking water wells, and others—that could be applied to silica sand activities. Some local governments currently have requirements in their official controls that may be useful for others. State agency staff provided information and suggestions on various issues based on experience. These sources were utilized as much as possible in the short time frame to develop the draft standards and criteria.

There is some confusion about two points. First, it is important to note that there is no mandate for a local government to adopt any of the model standards and criteria. Adopting some, all, or none of the models is entirely at the discretion of each local government. Second, these are not new state agency standards or criteria or rules. While input on numerous silica sand issues may be informative in future rulemaking, the model standards and criteria here are being developed for use by local governments at their discretion.

Even so, the intent is that the models will be useful. That is one of the reasons that public review is needed to refine the draft.

The legislation requires that the standards and criteria are to be developed in consultation with local units of government. There was not time to do this to the extent needed. In addition, there is the need for state agencies to review the draft and provide additional information and corrections. Finally, it is important that the general public have the opportunity to provide input on the draft as well.

In addition to the specific standards and criteria included in the table, the review should include how they address the differences between the two geographic areas as well as coverage of different issues arising from mining, processing, and transporting silica sand.

Staff recommends that the draft standards and criteria table be posted on the EQB website, distributed to state agencies and local governments, and made available to the public for review and discussion. Staff will send out notices to subscribers on the EQB GovDelivery topics.

The process should allow some time for interested parties to review the draft. Next would be setting up some forums for substantive discussion. Staff suggests the following, some of which could occur concurrently:

- State agency staff would conduct internal reviews and provide recommended amendments.
- EQB and agency staff will meet with local governments to get their ideas.
- EQB and agency staff will meet with industry representatives to get their ideas.
- Public meetings similar to the ones on August 2<sup>nd</sup> would be good venues for public participation.
- EQB and state agency staff review the input and revise the draft standards and criteria. This could include Technical Assistance Team members.

Staff is seeking guidance regarding the Board's preferences on the public review process.

**Staff recommendation:**

The attached resolution approves distribution of the draft standards and criteria for public review. Staff recommends approval of the resolution.

**VI. Silica Sand Projects Update**

- A. Library
- B. Technical Assistance Team
  - i. Practice Run
- C. Rulemaking
  - i. Citizen Advisory Group Discussion
- D. Central Website
- E. Multi-facility EIS

**Presenter:** Jeff Smyser  
EQB Staff, 651-757-2279

**Materials enclosed:** none

**Background:**

- A. Library: The Minnesota Legislature directed the EQB to create and maintain a library on local government ordinances and local government permits that have been approved for regulation of silica sand projects. The legislation directs the EQB to create the library by October 1, 2013.

- B. Technical Assistance Team: The Minnesota Legislature also directed the EQB to assemble a silica sand technical assistance team to provide local units of government, at their request, assistance with ordinance development, zoning, environmental review and permitting, monitoring, or other silica sand issues. The legislation directs the EQB to create the team by October 1, 2013. State agencies are determining staff to serve on the team.
- i. Staff requests Board direction on a question that arose at the August 2<sup>nd</sup> public meetings. We heard a suggestion from Goodhue County for conducting a practice exercise for the Technical Assistance Team on a project selected by a host community. Staff notes that the City of Winona submitted a request for technical assistance prior to the August 2<sup>nd</sup> meeting. If an exercise is conducted, staff suggests the City of Winona should be invited to participate.
- C. Rulemaking: The Minnesota Legislature also directed the EQB to amend the environmental review rules (Minn. Rules 4410) for silica sand mining and processing to take into account the increased activity in the state and concerns over the size of specific operations. The request for comments regarding the potential rulemaking ended on August 23, 2013. EQB staff received 23 comments. These comments have been documented and routed to agency staff for review.
- i. Staff requests Board direction on a question that arose at the August 2<sup>nd</sup> public meetings. Members of the public expressed interest in a citizen committee to participate in the rulemaking. It is not clear how a citizen committee would affect the rulemaking process laid out in Minn. Statutes Ch. 14. A multi-step public review and comment process is already required in that statute and we just completed the preliminary step. Rulemaking is essentially creating law: Minnesota Rules have the force and effect of law. Rulemaking is a lengthy process, averaging about two years.
- D. Central Website: A group of state agencies have put together a new website for members of the public who want to track agency activities regarding silica sand. The website, [silicasand.mn.gov](http://silicasand.mn.gov), provides links to each of the state agencies charged with making new rules or managing activities involved with the mining, transportation and processing of silica sand. They include the Environmental Quality Board (EQB), the Minnesota Department of Natural Resources (DNR), Pollution Control Agency (PCA), Department of Health, Department of Transportation, and Department of Agriculture.
- E. Multi-facility EIS: Staff has met with Minnesota Sands and is preparing a cost agreement for the scoping process. Note that this agreement is for the scoping process only. The scoping process will determine the scope of the EIS itself. A separate cost agreement will be prepared at the conclusion of the scoping process to cover the cost of preparing the EIS. Interested parties should rest assured that the scoping cost agreement does not put limits on the scope of the EIS. There has been confusion about this.

**Discussion:** Staff will provide updates on these topics.

## **VII. Environmental Review Progress Update**

- Environmental Review Document Database
- Electronic Notification
- *EAW Guidelines* Update
- Mandatory Categories Rulemaking

**Presenter:** Kate Frantz  
EQB Staff, 651-757-2370

**Materials enclosed: None**

### **Background:**

Environmental Review Document Database: In an effort to make data more accessible, EQB staff have been working with the MPCA database, OnBase, to construct a framework for a database of environmental review documents submitted to the EQB.

Electronic Notification: EQB staff have implemented the email service GovDelivery as the mode of email communication for the *EQB Monitor* and other notices. Those wanting to receive the *EQB Monitor* should subscribe via the GovDelivery link on the EQB website.

EAW Guidelines Update: The revised EAW form which was approved at the July EQB meeting has been posted to the EQB website for use by responsible government units (RGUs) and the public. The *EAW Guidelines* document provides guidance to RGUs preparing EAWs for projects. Work on this guidance document began as part of the EAW form revision project in 2010. The updating work was resumed this year and the new document will be finished soon.

Mandatory Categories Rulemaking: The request for comments regarding the Mandatory Categories potential rulemaking ended on August 23, 2013 and EQB staff received approximately fifteen comments. These comments have been documented and are currently being routed to agency staff for review.

### **Discussion:**

Staff will give an update on the various projects in progress regarding environmental review.

## **VIII. Discussion of EQB Climate Change Work Plan**

**Presenter:** Ellen Anderson

**Materials Enclosed: None**

**Background:**

One of the recommendations from the EQB's planning workshops with GICD was to "Establish the EQB as the central point for implementing and tracking the State's climate change efforts." Public input at the Environmental Congress, from the Next Generation Congress, and the Citizen Forums called on the EQB to build upon the Minnesota Climate Change Advisory Group (MCCAG) recommendations made in 2008.

**Discussion:**

Ellen will present a brief summary of the proposed Work Plan for this effort. The Work Plan includes formation of an EQB Subcommittee to oversee and guide the work of interagency teams.

**IX. Adjourn**

**116C.99 SILICA SAND MINING MODEL STANDARDS AND CRITERIA.**

Subd. 2. **Standards and criteria.** (a) By October 1, 2013, the Environmental Quality Board, in consultation with local units of government, shall develop model standards and criteria for mining, processing, and transporting silica sand. These standards and criteria may be used by local units of government in developing local ordinances. The standards and criteria shall be different for different geographic areas of the state. The unique karst conditions and landforms of southeastern Minnesota shall be considered unique when compared with the flat scoured river terraces and uniform hydrology of the Minnesota Valley. The standards and criteria developed shall reflect those differences in varying regions of the state. The standards and criteria must include:

Legislation	Recommended Standards/Criteria	Source and notes
(1) recommendations for setbacks or buffers for mining operation and processing, including:		
(i) any residence or residential zoning district boundary	<ul style="list-style-type: none"> <li>• Setbacks:                             <ul style="list-style-type: none"> <li>○ any existing dwelling, public school church, public institution, park: 500 feet</li> <li>○ residential zoning district boundary: 500 feet</li> </ul> </li> <li>• LGU should require applicant to identify and map buildings and zoning districts within 600 feet of project site on plan or survey prepared and signed by licensed professional.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6130, 6131, 6132</li> <li>- DNR recommends these setbacks</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(ii) any property line or right-of-way line of any existing or proposed street or highway	<ul style="list-style-type: none"> <li>• Setbacks:                             <ul style="list-style-type: none"> <li>○ property line or public road right of way: 100 feet</li> </ul> </li> <li>• LGU should require applicant to identify and map property boundaries and roads on plan or survey prepared and signed by licensed professional.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6130.100, 6131.0100, 6132.2000</li> <li>- DNR recommends these setbacks</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(iii)ordinary high water levels of public waters	<ul style="list-style-type: none"> <li>• Setbacks:               <ul style="list-style-type: none"> <li>○ no mining or processing in shorelands</li> <li>○ structure setbacks as in shoreland ordinance</li> </ul> </li> <li>• LGU should prohibit mining below the water table in flood prone areas, floodplains.</li> <li>• LGU should require applicant to identify and map the following features on plan or survey prepared and signed by licensed professional:               <ul style="list-style-type: none"> <li>○ public waters and their ordinary high water levels</li> <li>○ shoreland (1000' from lakes, 300' from streams)</li> <li>○ floodplains and flood elevations (100-year and, if available, 500-year)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6120 (shorelands)</li> <li>- Minn. Rules 6130, 6131, 6132 (metallic and peat mining)</li> <li>- DNR recommends these setbacks</li> <li>- Flood potential should receive special consideration for sand mining and storage. Sand can be washed away by flooding. If mining occurs below the water table, flood waters encroaching in a mine may pose risks to groundwater. This should be prevented by prohibiting such mines in flood prone areas or floodplains.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>



Legislation	Recommended Standards/Criteria	Source and notes
(iv)bluffs	<ul style="list-style-type: none"> <li>• Setbacks: <ul style="list-style-type: none"> <li>○ mining: 50 feet</li> <li>○ processing: 300 feet</li> <li>○ structure setbacks as in shoreland ordinance</li> </ul> </li> <li>• LGU should consider adopting bluffland protection measures.</li> <li>• LGU should require applicant to identify and map any bluffs in vicinity on plan or survey prepared and signed by licensed professional.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6120</li> <li>- DNR recommends these setbacks.</li> <li>- The setbacks eliminate the possibility of bench mining leaving open pit and underground mining as remaining options. The greater setback distance for processing facilitates, including buildings and stock piles, provides better visual screening and less intrusion on the view scape.</li> <li>- Some LGUs have bluffland protection in ordinance.</li> <li>- While more applicable to the Paleozoic Plateau, there are locations along the Minnesota River Valley that may qualify as bluffs. Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
<p>(v) designated trout streams, Class 2A water as designated in the rules of the Pollution Control Agency, or any perennially flowing tributary of a designated trout stream or Class 2A water</p>	<ul style="list-style-type: none"> <li>• Setbacks: <ul style="list-style-type: none"> <li>○ Mining and processing setback: as required in DNR designated trout stream setback permit in Southeast Minnesota.</li> <li>○ LGU should confer with DNR to determine if trout stream setback permit is required.</li> <li>○ If DNR trout stream setback permit required, LGU should require applicant submit to LGU a copy of the DNR permit prior to commencing mining activity.</li> </ul> </li> <li>○ Mining and processing setbacks from trout streams and tributaries in MN River Valley: 900 feet</li> <li>• LGU should require applicant to communicate with DNR and MPCA to identify designated trout streams and Class 2A waters near project site. Application should identify and map these waters on plan or survey prepared and signed by licensed professional.</li> <li>• LGU should require plans to include measures to prevent erosion, discharges, spills, and other potential negative environmental effects on these waters.</li> </ul>	<ul style="list-style-type: none"> <li>- HF 976 (Laws 2013, Chapter 114), Art. 4, Sec. 66: Trout stream setback permits apply to Driftless area (Paleozoic Plateau Ecological Area) of Southeastern Minnesota.</li> <li>- DNR recommends 900 feet in MN River Valley.</li> <li>- Statewide: designated trout streams identified in Minn. Rules 6264. Designated trout stream maps can be found on DNR website: <a href="http://www.dnr.state.mn.us/fishing/trout_streams/south_mn_maps.html">http://www.dnr.state.mn.us/fishing/trout_streams/south_mn_maps.html</a></li> <li>- Statewide: Class 2A is a water quality classification intended to maintain “a healthy community of cold water sport or commercial fish and associated aquatic life”. Parameters for this classification are listed in Minn. Rules 7050.</li> <li>- Buffers designed for the specific site to prevent negative impacts may be effective within or in addition to setbacks.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(vi)calcareous fens	<ul style="list-style-type: none"> <li>• Setback: 3 mile setback for mines requiring a DNR Appropriation Permit and pumping from the fen source aquifer unless a calcareous fen management plan has been approved by the DNR Commissioner.</li> <li>• No discharge of any sewage, industrial waste, or other waste to any calcareous fen.</li> <li>• LGU should require applicant to confer with DNR to identify and map any calcareous fens within three miles.</li> <li>• LGU should require plans to include measures to prevent erosion, discharges, spills into these waters and other potential negative environmental effects.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Stat. 103G.223 protects fens.</li> <li>- DNR recommends this setback.</li> <li>- Large appropriations of groundwater have potential to reduce groundwater discharge to a fen over a long distance. The recommended setback is appropriate for the Paleozoic Plateau and Minnesota River Valley because calcareous fens are identified in both geographical regions. The three mile setback distance is based on DNR experience at silica sand mining operations along the Minnesota River Valley.</li> <li>- Minn. Rules lists Outstanding Resource Value Waters, including calcareous fens, and restrictions on impacts.</li> <li>- Historic experience with calcareous fen being affected (drained) by water appropriation by a project.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
<p>(vii)wellhead protection areas as defined in section 103I.005</p>	<ul style="list-style-type: none"> <li>• LGU should require applicant to identify and map on plan or survey prepared and signed by licensed professional any wellhead protection areas and drinking water supply management areas in vicinity.</li> <li>• All activities should be consistent with wellhead protection plan.</li> <li>• Mining should not be allowed if mining would occur below the ground water level within a wellhead protection area.</li> <li>• Processing activities using water, chemicals, should not be allowed in wellhead protection areas.</li> <li>• Storage of equipment, fuel, explosives, or other potential contaminants should be prohibited in drinking water supply management areas.</li> <li>• LGU should require applicant, in consultation with MDH and using MDH modeling, to evaluate the potential vulnerability to public and private drinking water supplies from removal of geologic materials.</li> <li>• Setback: wastewater ponds 300 feet from any water-supply well (not in public wellhead protection plan area)</li> </ul>	<ul style="list-style-type: none"> <li>- Wellhead protection area is “the surface and subsurface area surrounding a well or well field that supplies a public water system, through which contaminants are likely to move toward and reach the well or well field” (Minn. Stat. 103I.005). The protection area is identified in the wellhead protection plan.</li> <li>- Although private drinking water supplies are not included under wellhead protection areas, they are an issue of concern.</li> <li>- Wellhead protection plans in Minn. Rules 4720</li> <li>- See information on wellhead protection and mining activities: <a href="http://www.health.state.mn.us/divs/eh/water/swp/mining.pdf">http://www.health.state.mn.us/divs/eh/water/swp/mining.pdf</a></li> <li>- Minn. Rules 4725, water-supply well distances from contamination (setbacks)</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
<p>(viii)critical natural habitat acquired by the commissioner of natural resources under section 84.944</p>	<ul style="list-style-type: none"> <li>• Setback: 500 feet</li> <li>• Applicant and LGU should work with DNR, BWSR, or other agencies to identify and map critical natural habitat within one mile or three miles for calcareous fens.</li> <li>• Different types of critical habitats may require unique considerations that would be dependent on the type of operations proposed and the sensitivity of that habitat to the activity proposed.</li> </ul>	<p>- DNR recommends this setback. No critical habitat setback exists in Minn. Rules. Types of critical natural habitats include: scientific and natural areas, riparian habitat, fish spawning areas, wildlife management areas, wildlife management projects conducted or assisted by the DNR on state or private land, aquatic management areas, heritage forests, state-listed species habitat, etc. DNR recommends that project proposers identify all critical natural habitats that are located within one mile of the project boundary (three miles for calcareous fens as discussed above). If critical natural habitats are found to be located within the search radius, the DNR should be contacted for further guidance.</p> <p>- Same standards recommended for both geographic areas of the state.</p>

Legislation	Recommended Standards/Criteria	Source and notes
(ix) a natural resource easement paid wholly or in part by public funds	<ul style="list-style-type: none"> <li>• Setback: 500 feet</li> <li>• LGU should require applicant to identify and map any natural resource easements in vicinity on plan or survey prepared and signed by licensed professional.</li> <li>• LGU should consider setbacks depending on the purpose and characteristics of the easement.</li> </ul>	<ul style="list-style-type: none"> <li>- No easement setback requirement exists in Minn. Rules. The 500 feet is suggested for consideration by DNR, comparable to setbacks for “public institutions, county and municipal parks” in Minn. Rules 6130, 6131, 6132.</li> <li>- Easements typically are recorded and can be identified through title work.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
<i>Additional recommended standards not in legislation</i>		
➤ <i>floodplains</i>	<ul style="list-style-type: none"> <li>• Prohibit mining below the water table in flood prone areas or floodplains. <ul style="list-style-type: none"> <li>○ LGU should review allowable uses in floodplain ordinance.</li> </ul> </li> <li>• LGU should require applicant to identify and map the following features on plan or survey prepared and signed by licensed professional: <ul style="list-style-type: none"> <li>○ floodplains and flood elevations (100-year and, if available, 500-year)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Flood potential should receive special consideration for sand mining and storage.</li> <li>- Sand can be washed away by flooding.</li> <li>- If mining occurs below the water table, flood waters encroaching in a mine may pose risks to groundwater. This should be prevented by prohibiting such mines in flood prone areas or floodplains.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
<ul style="list-style-type: none"> <li>➤ <i>state or national wilderness areas</i></li> <li>➤ <i>state or national parks</i></li> <li>➤ <i>national monuments</i></li> <li>➤ <i>state or national wild, scenic, or recreational river</i></li> <li>➤ <i>designated scientific and natural areas</i></li> </ul>	<ul style="list-style-type: none"> <li>• Setback: ¼ mile for mining or processing</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6130, 6131, 6132</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
<p>(2) standards for hours of operation</p>	<ul style="list-style-type: none"> <li>• 7 a.m. to 8 p.m. Monday - Saturday No activity on Sunday or legal holidays</li> <li>• LGU should specify hours of operation. This could depend on location, surrounding land uses, and type of activity (mining, processing, transporting/transloading).</li> </ul>	<ul style="list-style-type: none"> <li>- DNR Checklist of Terms and Conditions for Removal of Earth Materials (Aggregate) Leases. Recommendation is one hour later start time (7 a.m. vs. 6 a.m. in DNR checklist).</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
<p>(3) groundwater and surface water quality and quantity monitoring and mitigation plan requirements, including:</p>	<ul style="list-style-type: none"> <li>• LGU should require applicant to seed stockpiles within <u>60</u> days to prevent erosion and introduction of undesirable weeds. Specify seed mix(es).</li> <li>• LGU should require grading, stormwater management, and erosion control plan prepared and signed by licensed professional (PE, ASLA, AIA).</li> <li>• All activities should be consistent with wellhead protection plan.</li> <li>• Any wells constructed for monitoring must be consistent with Minn. Statutes 103I and Minn. Rules 4725.</li> <li>• LGU should require applicant to check site and surrounding lands for wells and document search method. LGU should require applicant to identify and map wells on plan or survey prepared and signed by licensed professional.</li> <li>• Surface drainage from adjacent properties shall be diverted away from the mining area so that it does not directly enter pit areas.</li> </ul>	<ul style="list-style-type: none"> <li>- DNR Checklist of Terms and Conditions for Removal of Earth Materials (Aggregate) Leases.</li> <li>- Wisconsin staff have learned that stormwater ponding requirements haven't always been large enough because of significant rain events.</li> <li>- Wellhead protection plans in Minn. Rules 4720</li> <li>- Minn. Statutes 103I</li> <li>- Minn. Rules 4725</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>



Legislation	Recommended Standards/Criteria	Source and notes
(i) applicable groundwater and surface water appropriation permit requirements	<ul style="list-style-type: none"> <li>• If DNR water appropriation permit required, LGU should require that applicant provide copy of the DNR permit prior to commencing activity.</li> <li>• Any wells constructed for dewatering must be consistent with Minn. Statutes 103I and Minn. Rules 4725.</li> </ul>	<ul style="list-style-type: none"> <li>- Groundwater water level and surface water stage/discharge monitoring needs are determined on a site specific basis following groundwater technical review of an Appropriation Permit application. If issued, the Appropriation Permit will contain permit conditions that detail the monitoring requirements.</li> <li>- Minn. Statutes 103I</li> <li>- Minn. Rules 4725</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(ii) well sealing requirements	<ul style="list-style-type: none"> <li>• Well sealing must occur in accordance with MDH requirements.</li> <li>• LGU should require applicant to check site and surrounding lands for wells and document search method. LGU should require applicant to identify and map wells on plan or survey prepared and signed by licensed professional.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 4725</li> <li>- Documenting search and mapping the wells ensures that the possible presence of wells received the attention it deserves.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(iii)annual submission of monitoring well data	<ul style="list-style-type: none"> <li>• Monitoring for acrylamides should be required for all facilities that propose to use acrylamides. This should be required as soon as practicable once monitoring methodology and standards are developed.</li> <li>• When monitoring wells are required for a mine or processing facility, requirements per Minn. Rules 7001.0150 should be included in approval conditions. These include type, interval frequency of monitoring and testing; use, maintenance, installation of equipment and methods; record keeping</li> </ul>	<ul style="list-style-type: none"> <li>- MDH and MPCA are working on monitoring methodology and standards for acrylamides.</li> <li>- Minn. Rules 7001.0150 includes requirements for monitoring wells.</li> <li>- Appropriation Permit monitoring conditions typically require quarterly reporting of data to the DNR Groundwater Monitoring Coordinator in a standard DNR reporting format.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(iv)storm water runoff rate limits not to exceed two-, ten-, and 100-year storm events	<ul style="list-style-type: none"> <li>• LGU should require a grading, stormwater management, and erosion control plan prepared and signed by licensed professional.</li> <li>• Storm water runoff rate limits should not exceed two-, ten-, and 100-year storm events.</li> <li>• Consider volume control as well as rate control.</li> </ul>	<ul style="list-style-type: none"> <li>- Large storm events are increasing in number and intensity. The standard 100-year event requirement may not be sufficient. Wisconsin staff have learned that stormwater ponding requirements haven't always been large enough because of significant rain events.</li> <li>- Volume control—keeping stormwater on the site rather than running off the site—is being required by some LGUs.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(4) air monitoring and data submission requirements	<ul style="list-style-type: none"> <li>• LGU should require application to include list of criteria used to determine what MPCA air permits will be required and specify which criteria apply to project. LGU then should confer with MPCA. Example: equipment that will be used on the site is one important criterion to determine if permits needed.</li> <li>• Air monitoring should be designed in cooperation with MPCA.</li> <li>• If MPCA permit(s) required, LGU should require that applicant provide copy of the MPCA permit(s) prior to commencing permitted activity.</li> </ul>	<ul style="list-style-type: none"> <li>- LGUs and state agencies both would benefit if LGUs became more familiar with criteria used by agencies to determine what state permits will be needed. Better communication will foster better cooperation and government efficiency.</li> <li>- MDH recently arrived at a health-based value for silica in the air. MPCA is working this value into air quality permitting.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(5) dust control requirements	<ul style="list-style-type: none"> <li>• LGU should require applicant to specify dust control BMPs: street sweeping, watering of product, dust collection and containment systems, sediment control and clean up, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- State agency permits often include specific dust control measures. These measures could be adopted by LGU.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(6) noise testing and mitigation plan requirements	<ul style="list-style-type: none"> <li>• LGU should become familiar with noise information:               <ul style="list-style-type: none"> <li>○ Minn. Rules 7030</li> <li>○ <a href="http://www.pca.state.mn.us/index.php/view-document.html?gid=5356">http://www.pca.state.mn.us/index.php/view-document.html?gid=5356</a> and</li> <li>○ <a href="http://www.pca.state.mn.us/index.php/view-document.html?gid=5355">http://www.pca.state.mn.us/index.php/view-document.html?gid=5355</a></li> </ul> </li> <li>• LGU should review its ordinances with consideration of noise and other potential impacts.               <ul style="list-style-type: none"> <li>○ Allowable uses in zoning districts should be reviewed.</li> <li>○ Nuisance section should be reviewed.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 7030 and MPCA info on website.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(7) blast monitoring plan requirements	<ul style="list-style-type: none"> <li>• LGU should incorporate Minn. Rules 6130.3900 Blasting Requirements into local requirements. Summary:               <ul style="list-style-type: none"> <li>○ maximum intensity standard</li> <li>○ monitor stations by nearest off-site structure</li> <li>○ keep blasting log for six years; log to contain specified data</li> <li>○ meteorological focusing conditions must not be present</li> <li>○ blasting in daylight hours only</li> </ul> </li> <li>• This likely will require technical assistance and expertise. Local government can include costs in approval mechanism such as CUP and/or development agreement.</li> </ul>	<ul style="list-style-type: none"> <li>- Minn. Rules 6130.3900 and 7500 regulate the use of explosives.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

<b>Legislation</b>	<b>Recommended Standards/Criteria</b>	<b>Source and notes</b>
(8) lighting requirements	<ul style="list-style-type: none"> <li>• LGU should review lighting requirements in ordinance to ensure they address lighting concerns relevant to mining, processing, and transportation sites. This could be in a section specific to lighting or in CUP or other specific approvals. Some lighting considerations:               <ul style="list-style-type: none"> <li>○ Definitions.</li> <li>○ Maximum lighting levels measured at property lines and public roads.</li> <li>○ Photometric lighting plan required with application.</li> <li>○ Light measuring methodology for monitoring.</li> <li>○ Light should be deflected away from adjacent properties.</li> <li>○ Hooded fixtures with 90 degree cutoff, shining light down rather than horizontally.</li> <li>○ Maximum light pole heights.</li> <li>○ Only lights for security needs during non-working hours (refer to hours of operation). Others turned off.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- “Night sky” considerations often are considered important to protect community character.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(9) inspection requirements	<ul style="list-style-type: none"> <li>• LGU should conduct periodic site inspections with checklist of approved conditions/requirements.</li> <li>• Project should pay for LGU inspection. Costs should be included in escrow and/or development agreement.</li> <li>• LGU should require notification of commencing each mining phase.</li> <li>• LGU should conduct inspection of reclamation at specified progress points.</li> </ul>	<ul style="list-style-type: none"> <li>- DNR Checklist of Terms and Conditions for Removal of Earth Materials (Aggregate) Leases</li> <li>- Wisconsin staff noted that they have learned that inspections should occur often.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(10) containment requirements for silica sand in temporary storage to protect air and water quality	<ul style="list-style-type: none"> <li>• LGU should require applicant to specify dust control BMPs: street sweeping, watering of product, dust collection and containment systems, sediment control and clean up, etc.</li> <li>• LGU should require grading, stormwater management, erosion plan, prepared and signed by licensed professional. Require control of runoff. This should include containment requirements to keep sand out of stormwater runoff.</li> <li>• Floodplains should get special attention. (see floodplain setbacks above)</li> </ul>	<ul style="list-style-type: none"> <li>- State agency permits often include dust control measures. These measures could be adopted by LGU.</li> <li>- As noted above, floodplains present special challenges.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>
(11) containment requirements for chemicals used in processing	<ul style="list-style-type: none"> <li>• LGU should require grading, stormwater management, erosion plan, prepared and signed by licensed professional. Require control of runoff. This should include containment requirements to prevent stormwater runoff being contaminated by process chemicals.</li> </ul>	<ul style="list-style-type: none"> <li>- MPCA general water permit requires facility to limit and control use of materials that can cause water impairments. Monitoring wells may be appropriate.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

Legislation	Recommended Standards/Criteria	Source and notes
(12) financial assurance requirements	<ul style="list-style-type: none"> <li>• LGU should require a development agreement/contract that includes such things as:               <ul style="list-style-type: none"> <li>○ Cash escrow or <i>non-expiring</i> letter of credit or bond to cover nonperformance, corrective actions, etc. Notification of LGU prior to expiration. Applicant must keep a current financial assurance and supply periodic proof.</li> <li>○ Agreement applies to site and project and any “assigns”, not just to current applicant.</li> <li>○ CUP conditions, reclamation plan, other applicable requirements.</li> <li>○ LGU should consider what potential liabilities may be appropriate for insurance.</li> </ul> </li> </ul>	<p>- DNR Checklist of Terms and Conditions for Removal of Earth Materials (Aggregate) Leases</p> <p>- Minn. Rules 6132.1200</p> <p><u>Paleozoic Plateau</u> – Financial assurance within the Trout Stream Setback could be required by multiple and potentially overlapping regulating authorities (i.e. County and State). Within this geographic area, standards and criteria for financial assurances may need to reflect/resolve dual authority for financial assurance.</p> <p><u>Minnesota River Valley</u> – Financial assurance would only be issued by the County (no trout stream setback permit).</p>

<b>Legislation</b>	<b>Recommended Standards/Criteria</b>	<b>Source and notes</b>
(13) road and bridge impacts and requirements	<ul style="list-style-type: none"> <li>• LGU should require traffic study to examine impacts on traffic volumes, levels of service, and road impacts.</li> <li>• LGU should require application to identify haul routes.</li> <li>• LGU should adopt policies to communicate with surrounding LGUs to cooperate on road impact policies, haul routes, and other cross-jurisdictional issues.</li> <li>• Counties should adopt fee policy to pay for road repair needs caused by heavy vehicles.</li> <li>• LGU may want to consider requiring that project approvals are contingent on infrastructure adequacy.</li> </ul>	<ul style="list-style-type: none"> <li>- Project approval criteria can include considerations of the adequacy of infrastructure to accommodate traffic generated by a project. A comprehensive plan with a transportation chapter provides important guidance and a basis for infrastructure improvement decisions. LGUs cannot regulate traffic on state and federal highways but have great discretion on capital improvements on county and local roadways.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>

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Legislation	Recommended Standards/Criteria	Source and notes
<p>(14) reclamation plan requirements as required under the rules adopted by the commissioner of natural resources</p>	<ul style="list-style-type: none"> <li>• LGU should require a reclamation plan. Include:               <ul style="list-style-type: none"> <li>○ A ‘reclamation goal’ statement as guide for conditions. e.g. “The goal of reclamation is a safe, stable, non-eroding, nonpolluting site that is usable for future activities in accordance with the comprehensive plan.”</li> <li>○ Mining in phases, with reclamation in phases rather than entire site mined at once: e.g., no more than <u>10</u>-acres per active phase.</li> <li>○ Public water supply well time of travel areas have the highest priority for reclamation.</li> <li>○ Retain topsoil on site for reclamation.</li> <li>○ Do not mix overburden or debris of any type with topsoil stockpiles.</li> <li>○ Minimize amount of topsoil in other stockpiles.</li> <li>○ Seeding with species identified in plan as appropriate to location and future use.</li> <li>○ Maximum time frame for suspension of activity before reclamation required.</li> <li>○ Debris shall not be buried on site: no construction debris, nothing from other sites.</li> <li>○ Address how future land use and/or the surface-water drainage will be controlled to reduce the potential for infiltration of contaminants into an aquifer.</li> <li>○ Plans should use a minimum of two (2) foot contours.</li> <li>○ Vegetation for reclamation should be native species or similar species that do not require regular or seasonal applications of nutrients or pesticides.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- DNR Checklist of Terms and Conditions for Removal of Earth Materials (Aggregate) Leases.</li> <li>- Several LGUs have reclamation requirements with some of the DNR elements in different combinations.</li> <li>- Effects on wells should be considered.</li> <li>- Same standards recommended for both geographic areas of the state.</li> </ul>