

Silica Sand Mining Moratorium Report

Brief Overview

This section touches upon considerations of regulatory approaches to silica sand mining operations for the City of Red Wing. Our joint workshop of Sustainability & Planning Commissions have been tasked to study the particulars of silica sand mining but this overview may be part of a broader need of an overall Resource Extraction Ordinance for the City of Red Wing. This is meant to be a framework for discussion and relies on a comprehensive view of the zoning considerations inherent in an overall Resource Extraction Ordinance but is not complete without thorough review of relevant Minnesota State statutes in all areas of Non-Metallic Mining.

Definition of Nonmetallic Mining Activities

Nonmetallic minerals means a product, commodity or material consisting principally of naturally occurring, organic, inorganic, nonmetallic, non-renewable material. Nonmetallic minerals include but are not limited to stone, rock, sand, gravel, asbestos, beryl, diamond, clay, coal, feldspar, peat and talc.

Nonmetallic mining means any or all of the following:

- (a) Extraction from the earth of mineral aggregates or nonmetallic minerals for off-site use or sale, including drilling and blasting as well as associated activities such as excavation, grading and dredging of such materials.
- (b) Manufacturing or processing operations that may involve the use of equipment for the crushing, screening, separation, or blending of the mineral aggregates or nonmetallic minerals obtained by extraction from the mining site or with materials transferred from off-site.

- (c) Manufacturing processes aimed at producing non-metallic products for sale or use by the operator.
- (d) Stockpiling of nonmetallic products for sale or use off-site and stockpiling of waste materials.
- (e) Transport of the extracted nonmetallic materials, finished products or waste materials to or from the extraction site.
- (f) Disposal of waste materials.
- (g) Reclamation of the extraction site.

Some exempted considerations to all nonmetallic mining operations

- (a) Excavations or grading by a person solely for domestic or farm use at a person's residence or farm.
- (b) Excavations or grading conducted for the construction, reconstruction, maintenance or repair of a highway, railroad, or any other transportation facility where the excavation or grading is entirely within the property boundaries of the highway, railroad or other transportation facility.
- (c) Grading conducted for preparing a construction site or restoring land following a flood or natural disaster.
- (d) Excavations for building construction purposes conducted on the building site.
- (e) Nonmetallic mining at nonmetallic mining sites where less than one acre of total affected acreage occurs over the life of the mine.
- (f) Removal from the earth of products or commodities that contain only minor or incidental amounts of nonmetallic minerals, such as commercial sod, agricultural crops, ornamental or garden plants, forest products, Christmas trees or plant nursery stock.

The above descriptions should be considered and weighed against already existing regulations & any already existing activity of a like nature in the Red Wing City Code

City of Red Wing Resource Extraction Ordinances should regulate at a minimum the following:

- 1) The location, the specific type, size and depth of the Resource Extraction/Nonmetallic Mining Operations, including any related commercial and industrial Operations (processing plants, rail/barge/truck load out areas, etc.)
- 2) Hours and days of Operations
- 3) Setbacks from roadways and property lines
- 4) Noise, odor, visual and light emission controls
- 5) Financial protections for the City of Red Wing
- 6) Closure/reclamation requirements
- 7) Blasting, stockpiling, drilling and excavation requirements
- 8) Waste disposal requirements
- 9) Specific operation plan approvals
- 10) Off-site requirements
- 11) Air and ground water protection requirements
- 12) Hazardous waste controls
- 13) Reporting, inspection and security requirements
- 14) Penalty provisions
- 15) Fee assessments

The City of Red Wing may already have many regulatory controls in place regarding a number of these items but having a comprehensive ordinance directly addressing the factors of resource extraction will allow the City of Red Wing to receive honest and comprehensive answers to any application or inquiry from a resource extraction interested party

ZONING CONTENT

This may be a tad redundant but it is important to understand the actual and specific regulatory content within the Zoning Ordinance that will serve to regulate, administer, and enforce the Resource Extraction Operations, closure and reclamation of Resource Extraction activities, including periphery, related, or supplementary commercial and industrial operations. These are the crucial items to be included in all Resource Extraction/Nonmetallic Mining Zoning Ordinances:

- (a) The proper definition of what specific type or types of nonmetallic minerals are to be regulated by the Zoning Ordinance
- (b) In what Zoning Districts are the operations and related commercial and industrial operations to be “permitted” uses and what districts are “conditional” uses
- (c) The proper definition and description of what is to be a “Resource Extraction” Site including the related commercial and industrial operations, OR any expansion of a current site or other related operations.
- (d) The creation of a DETAILED COMPREHENSIVE APPLICATION form. Application should address SPECIFIC concerns and compliance under Federal and State laws and regulations, including specific concerns related to:
 - i. Exploration
 - ii. Mining
 - iii. Processing
 - iv. Refining
 - v. Transporting
 - vi. Closure
 - vii. Reclamation
 - viii. Worker Safety
 - ix. Inspection Concerns

- x. Compliance with Local Ordinance
- xi. Financial Penalties, Fees, Considerations

(e) Specific Operation requirements for proposed new or expansion site operation (all Nonmetallic mining operations, including related commercial and industrial) are to be in full compliance with Federal and State law and regulations, and with the proposed Conditional Use Permits. Permits should include at a MINIMUM the following:

1. Specific property on-site mine control provisions in the permit for protection of adjacent or near land owners and residents, including

- i. Buffer zones/setbacks from property and road lines
- ii. Berms/screening/other aesthetic controls
- iii. Fencing
- iv. Specific notice provisions to neighbors regarding blasting, drilling or other possible nuisance actions
- v. Erosion/run-off controls
- vi. Noise controls
- vii. Air/dust controls
- viii. Light pollution controls
- ix. Ground water/surface water protection controls
- x. Hazardous waste controls
- xi. Specific site boundaries

2. Specific off-site requirements, including the related and associated commercial or industrial site requirements.

(f) A detailed closure and reclamation plan with proper and complete financial security (e.g. bond, line of credit) to be filed with the City of Red Wing to provide financial assurance of full land restoration in compliance with the restoration requirements of the State of Minnesota and the City of Red Wing. ***highly recommend that there be provisions in the Ordinance that ensure all reclamation includes native vegetation and organic/inorganic materials consistent with the existing natural surroundings of the immediate region, perhaps even higher requirements than currently provided for by nominal standards***

- (g) Specific insurance requirements for bodily injury coverage at the site and related operations with required certificate of insurance demonstrating the required coverage and amounts of coverage
- (h) Specific topsoil removal and topsoil storage requirements for the estimated term of operation
- (i) Specific road control and usage requirements, for Resource Extraction/Nonmetallic Mining operators, employees, agents and INDEPENDENT CONTRACTORS, at the site and related operations including access routes, transport routes, transport vehicle weight limits, road speed limits, road parking and specific required contracts for road maintenance and use.
- (j) Specific daily operation requirements
 - i. Hours/days of operations (including off-site related facilities)
 - ii. Road access locations at site
 - iii. Water usage at site
 - iv. Hazardous waste storage at site
 - v. Chemical/flammable material storage at site
 - vi. Specific areas to be mined at site, including the timeline and sequence or areas to be mined
 - vii. Location of building, structures and equipment at site
 - viii. Erosion/surface water controls to site from adjacent or near landowners
 - ix. Specific public health and safety daily requirements as a result of vehicle traffic impacts and material or dust discharge off-site from transport vehicles