

**Section 0345 - An Ordinance Regulating  
Mining & Extraction Activities**  
(adopted 6/2/15)

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**Section 345.01      Statement of Purpose**

The City of Wabasha Does Ordain based on the following Findings of Fact & Statement of purpose:

Subd. A. The excavation of different mineral resources and aggregates have the potential for different levels of impact on the community based on:

1. Content of the mineral resource being excavated,
2. The excavation process of the resource and its potential impact on water and air quality and on safety and visual impacts,
3. The size of particulates which become airborne,
4. The cleaning, sorting, and processing of the resource,
5. The amount of material excavated over a given period of time along with the method of transporting the material away from the mine site, and
6. The treatment of the land after the resource is removed.

Subd. B. Atmospheric particulate matter under the size of 10 microns are respirable; they are small enough to penetrate the nose and upper respiratory system and enter deep into the lungs<sup>1</sup>.

Subd. C. The respiration of some mineral resources have the potential to cause health impacts to those breathing them in over time.

Subd. D. The noise and vibrations created by some mining activities impact neighbors (in particular residential) in a negative manner.

Subd. E. The location and depth of a mine has the potential to impact underground water sources depended upon by the public for drinking water.

Subd. F. The methods and treatment of a mine site after the excavation process ends has a great impact on the ultimate use of the property and the impact of that site on neighboring properties and the community as a whole.

Subd. G. The mining of industrial aggregates is generally more intensive than construction aggregate mining in terms of its negative impact on the land and the operations impact on plant, animal and human lives within the community.

Subd. H. Minnesota State Statute 462.357 allows: "A municipality may, by ordinance, permit an expansion or impose upon nonconformities reasonable regulations to prevent and abate nuisances and to protect the public health, welfare, or safety."

Subd. I. Guiding Principles of The Comprehensive Plan include:

1. A Balanced Approach to managing change and growth through Community Development, which is the combined efforts to sustain the community for the benefit of those living in it, considering and weighing all topic areas identified within this plan.
2. Creation of an environment that allows for and encourages Economic Opportunities for individuals and businesses choosing to locate in the city of Wabasha.

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<sup>1</sup> As supported by The Integrated Science Assessment for Particulate Matter (U.S. EPA Integrated Science Assessment for Particulate Matter (Final Report). U.S. Environmental Protection Agency, Washington, DC EPA/600R-08/139F,2009.)

3. Creation and maintenance of a Healthy Environment. Providing a living, working, and recreational environment which allows individuals residing or visiting Wabasha to make choices for a healthy lifestyle.
4. Creation and maintenance of a Human Habitat that includes the natural and physical environment and the relationship of people with that environment.
5. Preservation of natural and cultural elements which gives the Wabasha community an exceptional sense of place and attracts people to live and visit.
6. Continued commitment to tourism, sharing the natural, cultural, and built environment of the community with visitors and striving to provide services to meet the needs of that growing industry.

**Now therefore, the City of Wabasha does ordain for the purpose of protecting the health, safety, and general welfare of the community the following standards and regulations pertaining to mining, mineral resource extraction operations and subsurface mineral exploration within the City.** The objective of this provision is to minimize soil erosion and land scarring, to monitor the consumption of natural resources and minimize the impact of these activities on the adjacent lands, resources and persons residing in the area, preventing mining and extraction operations from creating a nuisance and health hazards within the community.

**Section 345.02      Definitions**

Construction Sand & Gravel:	Mineral Resources which typically are mined by open pit excavation (or by dredging) carried out with power shovels, draglines, front end loaders, and bucket wheel excavators. Typically mined locally from Dolomite geological strata, Standard Classification Code categories include: SCC 3-05-025, SIC 1442, NAICS 21232.1.
Cultivation:	The process of disturbing the land for agriculture purposes with no direct removal of mineral resources.
C.F.R.	Code of Federal Regulations.
Excavation:	A development process and not an ultimate land use including any artificial movement of the earth, including grading, digging, filling, removal, or addition of earth material made by tunneling or breaking or undermining the surface of the earth.
Extraction:	The process whereby materials are removed from the sub surface of the earth to be sold or used elsewhere.
Extractive Operation/Mine:	The surface or subsurface removal only of sand, gravel, rock, or other nonmetallic minerals, and peat from the site for use as a product elsewhere not regulated under Minnesota Statutes, sections 93.44 to 93.51 through an excavation or quarrying process. Excavations for the purpose of impounding water for agricultural purposes are exempted.
Fill, Filling, or Filling Operation:	The depositing of fill, dredge, sand, gravel, dirt and all other similar material in excess of 1,000 cubic yards or more onto or into a parcel of land.

Heavy Processing:	Compounding, mixing, or treatment of sand, gravels, rocks, or any other extracted material with chemicals and/or into consumable products such as concrete, asphalt, and other similar products or to an industrial sand or gravel product or to a volume which exceeds 500 tons per day (or 150,000 tons per year) or uses 500 gallons of water per minute (g.p.m.) or more.
Industrial Sand & Gravel:	Mineral Resources which typically are mined from quartz-rich sand and sandstone including the St. Peter, Jordan, and Wonewoc geological strata locally. Standard Classification Code categories include: SCC 3-05-027, SIC 1446, NAICS 212322.
Industrial Use:	The use of land or buildings for the production, manufacture, warehousing, storage, or transfer of goods, products, commodities, or other wholesale items.
Industrial Warehousing Distribution or Storage:	Establishments involved in the storage or distribution of materials or equipment on a primarily wholesale basis or as support to a service industry includes but is not limited to: warehousing facilities, Freight terminals, fleet storage, Contractors yards, wholesale Industrial equipment sales and rental, and ancillary business offices.
Mine or Mine site:	See Extractive Operation/Mine Definition.
Mineral resources:	Rock, gravel, sand and metallic and non-metallic substances of commercial value.
NAICS Code:	The North American Industrial Classification System is a system for classifying industries by a six-digit code.
Non-conforming mining operations	Existing mines which do not meet the standards of this ordinance or mining standards of the zoning code
Particulate Matter:	Material, except water, which exists at standard conditions in a finely divided form as a liquid or solid as measured by an applicable reference method, or an equivalent or alternative method or as amended in MN Rules 7005.0100, Subp.31.
PM 10:	Finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal ten micrometers as measured by an applicable reference method, or an equivalent or alternative method or as amended in MN Rules 7005.0100, Subp.30b.
PM 2.5:	Finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by an applicable reference method, or an equivalent or alternative method or as amended in MN Rules 7005.0100, Subp.30a.
Processing:	The sorting, washing, crushing and/or screening of extracted material to construction grade sand, gravel or stone product.
Reclamation:	To renew land to a self-sustaining, long term use that is compatible with pre-mining situations and/or the City's Comprehensive Land Use Plan.

Reference Method; or method (used in the context of performance test measurements):	Means the procedures for performance tests in Code of Federal Regulations, title 40, part 60, appendix A, as amended; part 61, appendix B, as amended; and part 51, appendix M, as amended or as amended in MN Rules 7005.0100, Subp.35c.
Reference Method or method (used in the context of measuring ambient air):	Means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in an appendix to Code of Federal Regulations title 40, Section 50.1 in accordance with part 53 of the same chapter; it does not include a method for which a reference method designation has been cancelled in accordance with § 53.11 of the chapter and which is incorporated by reference Minnesota Rules 70090050.
Equivalent Method	Means a method of sampling and analyzing the ambient air for an air pollutant that has been designated as an equivalent method in accordance with part 53 of the same chapter ;it does not include a method for which an equivalent method designation has been cancelled in accordance with § 53.11 or § 53.16 of the chapter and which is incorporated by reference Minnesota Rules 70090050.
SCC Code:	Source Classification Codes are an EPA classification system. Each SCC represents a unique source category-specific process or function that emits an air pollutant. The SCCs are used as a primary identifying data element in EPA's WebFIRE, the National Emissions Inventory (NEI), and other EPA databases. The SCCs are also used by many regional, state, local and tribal agency emissions data systems. Point source emissions use eight digit codes.
SIC Code:	The Standard Industrial Classification is a system for classifying industries by a four-digit code used by many departments of the U.S. Government including OSHA.
Soil Erosion & Sediment Control Plan:	A document that illustrates, how the site will be designed to prevent or minimize soil erosion on a parcel of land and off-site sediment damages.

**Section 345.03      Administration/Application Process**

**Subd. A.** New mines are allowed to locate in any place of the City where Zoning (Section 305 of Wabasha City Code) allows them as permitted, conditional or interim uses. A Permit shall be required for all mining/mineral extraction and subsurface mineral exploration operations as defined in this section of City Code as follows:

1. New operations shall apply for a permit prior to any commencement of excavation activities.
2. Changes in activity for existing non-conforming mining operations shall require an application for a permit prior to the commencement of any work or operational changes for the following changes:
  - a. Source for material mined, going into different group or formation of geological strata as illustrated on the Wabasha County Geological Survey from what was previously mined or approved. For example going from the Prairie du Chein Group (including dolomite, limestone and thin sands of the Shakopee, New

Richmond (or Root River) and Oneonta formations), to the Jordan formation sandstone

- b. The process of removing the material is modified (e.g. tunneling vs surface mining) when such changes provide for a departure from the original nature and purpose of the mining operation.
- c. Subsurface Mineral Exploration as detailed in Section VII of this ordinance.

**Subd. B.** All applications shall include the submittal of a form as provided for by the City of Wabasha completed along with all required attachments as identified in this section and any fees established under Chapter VIII of City Code.

1. Permit Review

- a. Any application for a permit within a designated shoreland zone (as indicated in the City Zoning Ordinance) or floodplain shall require a submittal by the City of the application and Planning Commission/City Council meeting information to the DNR area hydrologist at least 10 days prior to the Planning Commission review.
  - b. Application materials shall be submitted to the City Planning Commission for review.
  - c. The Planning Commission shall hold a public hearing and review and consider the impact of the proposed operation and its conformance to this section of City Code along with anticipated impact to the future development of the City.
  - d. Notice of time and place of such hearing shall be published at least once not less than 10 days nor more than 30 day preceding said hearing in the newspaper of general circulation in the City.
  - e. A similar notice shall be mailed at least ten days before the day of the hearing to each property situated wholly or partly within ½ mile of the property line of the land under ownership (of the contiguous parcel) of the proposed mine site.
  - f. The Planning Commission may require additional review with additional materials to be submitted.
  - g. City Staff or the Planning Commission may request review and comment (to be forwarded to the City Council) from the Board of Water & Soil Resources, DNR, Department of Health, Pollution Control Agency, or similar state or county departments as deemed appropriate.
  - h. The Planning Commission shall provide a recommendation for issuance or denial of the permit with drafted findings of facts in support of their recommendation to the City Council.
2. The City Council shall consider the application materials and recommendation of the Planning Commission as well as any comments or recommendations from other agencies and shall determine the approval or denial of the permit. The City Council shall also require a performance bond or a bank letter of credit for one hundred and ten (110) percent of estimated reclamation expenses (as approved by the City) from the land owner to be submitted prior to or as a condition of the issuance of the mining permit. Total amount of assurance shall be based on the planned open mine cell in its entirety. The bond or letter of credit shall continue to be in effect until released by the city or completion of reclamation process occurs. City Council shall also require any additional assurances as indicated herein along with proof of liability insurance for \$2,000,000.
3. The document "Tools to Assist Local Governments in Planning for and Regulating Silica Sand Projects" adopted by the Minnesota Environmental Quality Board March 7<sup>th</sup> 2014 and similar advisory documents will be utilized for proposal analysis.

4. Permit renewal is required every 2 years starting with the date of initial application submittal. The City Council *may* extend the renewal period to every 5 years after the first renewal permit has expired or the operation has been in existence for more than three years without receiving citations of improper operations.
5. Consulting Fees: The applicant shall be required to submit to the City sufficient funds to cover all expected consulting fees related to application review, activity and site monitoring and post activity requirements. These may include, but are not limited to, establishing and monitoring environmental (e.g. air & water) or infrastructure (e.g. road and stormwater management) concerns. The City shall establish an escrow account for this purpose.
6. Reasons for denial (including renewal permits) include but are not limited to the following:
  - a. Failure of the operation to follow agreed upon practices under previously issued permit.
  - b. Air quality monitoring results that pose a health issue to the public.
  - c. Applicants failure to provide an adequate permit application, reclamation plan, financial assurance or any other submittal required by this ordinance. The City of Wabasha has discretion to assess the adequacy of the information provided in the permit application, including whether human health and the environment will be protected. Denial of a permit based on inadequate application submittal shall not be construed to disallow future applications on the same project however such applications shall be deemed a new review process.
  - d. Failure to prevent ground or surface water contamination.

**Section 345.04      Required Information for all permit applications**

The following information shall be provided by the person requesting the permit in order for the City to consider the potential effects from the proposal on environmental, economic, and social effects of the proposed project onto the community and shall be completed by a licensed engineer, geologist, surveyor or landscape architect or other professional specialist (as appropriate):

1. Name and address of the property owner.
2. Name, address, phone number and e-mail contact of the company or person conducting the excavation/mining on the property.
3. The person or company requesting the mining permit if different then the land owner or mine operator.
4. The legal property description and acreage of the entire property under ownership and the area and volume of resource to be mined.
5. A deed or other proof of ownership of the property along with a lease or other agreement with the property owner if applicant and property owner are not the same.
6. The following maps/documents of the entire site and including all areas within 1/4 mile of the site. These shall be drawn to a legible scale.
  - a. Map/Document 1 - Existing conditions to include:
    1. Contour lines at two (2) foot intervals.
    2. Existing vegetation.
    3. A DNR Natural Heritage Information System (NHIS) Data Request Form with NHIS response.
    4. Existing drainage & water retention areas.
    5. Location of all wetlands per the National Wetland Inventory or as determined by a wetland delineation.
    6. Location of all archaeological, historic and cultural resources (including any cemeteries or known burials) located on the proposed mine prepared

by a professional in the field of historic resource management property including:

1. Any such resources known by the property owner.
  2. Those listed on or determined eligible for listing on the National Register of Historic Places.
  3. Those indicated on the statewide inventories or other statewide lists as overseen by the State Historic Preservation Office.
  4. Those included on any local list of significant resources kept by the City of Wabasha under the guidance of the Heritage Preservation Commission.
  5. Existing structures (with photos and a keyed map of locations).
  6. Existing fuel stations or chemical storage tanks.
- b. Map/Document 2 - Proposed operations to include:
1. Structures to be erected.
  2. Location of sites to be mined showing depth of proposed extraction in two (2) foot contours.
  3. A description of the proposed depth of the mine, the geological strata from which material will be removed, and the distance (vertically & horizontally) from any public or private drinking water source aquifers along with a plan for dewatering (if needed) and, of deemed necessary by the City Engineer a well interference response plan which must be approved prior to, and will be made a condition of approval of the permit.
  4. Location of storage of excavated materials, showing the height of storage deposits.
  5. Location of vehicle parking including surface treatment, number of spaces, and numbers of employees.
  6. Location of storage of explosives (if any) along with containment structure description.
- c. Map/Document 3 - Reclamation Plan to include:
1. Final grade of proposed site showing elevations and contour lines at two (2) foot intervals.
  2. Location and list of non-invasive species of vegetation to be replanted.
  3. Location and nature of any structures to be erected in relation to the end use plan.
- d. Map/Document 4 – proposed method to convey extracted material along with map showing the proposed route. If the mine operation meets the definition of major traffic generators (as defined in the City Zoning Ordinance, Section 305 of City Code), all standards and requirements for that CUP must be met and that process may occur concurrently to the review of the mine permit application.
1. A geologic survey and a karst features survey of the property and the surrounding area within 1,000 feet of the property prepared by a licensed and accredited mining geologist.
  2. Plans for dust control, noise control and a soil erosion and sediment control plan.
  3. A plan for air quality monitoring which will address the following:
7. Data on the type and specifications of the monitoring equipment proposed to be used.

8. Monitoring Siting criteria As established by the U.S. Environmental protection Agency (EPA) which are described in 40 Code of Federal Regulations Part 58 Appendix E.
  - a. For horizontal and vertical placement of monitors based on a study (submitted with the air quality plan) to determine the criteria for placement of air monitoring probes or sample inlets. In most cases, air monitoring probes and inlets must be located between 7 and 23 feet above ground level. As a result, monitoring sites located at ground level typically require the installation of an elevated platform or shelter. Air monitoring sites may also be located on the roof of a building which is no higher than two-stories.
  - b. For placement of monitors with spacing from emission sources for source-oriented or hot-spot monitoring. Air monitors should be located as close to the area of expected maximum air pollution concentration as safely possible.
  - c. Spacing from obstructions: Buildings and other obstacles can impact air monitoring results by scavenging pollutants and restricting airflow to the monitor, resulting in inaccurate air concentration measurements. In general, if an obstruction is located near an air monitoring site, the distance of the air monitor from the obstruction must be two-times the height of the obstruction.
9. The monitoring of ambient air to compare air monitoring results with air quality standards. The air monitoring site must be measuring ambient air outside of the facility's property line if a fence or other physical obstruction prevents public access. If no such obstruction exists, air quality monitors located within a facility's property boundary may be considered ambient. Air monitors must conform to US EPA's design standards as outlined in 40 CFR pts. 50, 53 and 58. The use of reference or equivalent methods to help assure the reliability of air quality measurements is required.
10. Recording of air concentrations of: Total suspended particles (TSP), Inhalable particles (PM<sub>10</sub>), Fine particles (PM<sub>2.5</sub>), and Crystalline silica as PM<sub>10</sub> or PM<sub>4</sub> per the standards agreed to in the accepted monitoring plan.
  - a. A completed Nonmetallic Mining and Associated Activities Compliance Audit Checklist (created by the Minnesota Pollution Control Agency). A copy of the issued NPDES/SDS permit may be provided with the application instead and (if required under state law) may be required as a condition of permit approval.
  - b. A full and adequate description of all phases of the proposed operation to include an estimate of duration of the mining operation and reclamation for each area.
  - c. Type of material being removed from the site and intended use according to SCC, SIC, and NAICS codes including Identification of particle size ('s) being removed from the site.
  - d. A complete list of any chemical or toxic substance proposed for use of any excavation or mining process including through injection, land application or other method of use.
  - e. A description of the proposed depth of the mine.
  - f. Identification of water needs including amount (overall and gallons per day), source of water, and plans for water recycling/reclamation along with permits for any existing or approved wells from Wabasha County and from the Minnesota Department of Natural Resources.
  - g. Location and depth of any existing and proposed wells on the property and within one and ½ mile radius of the mine pit. All wells including those for monitoring, dewatering, industrial processes and drinking water shall be indicated.

- h. A blasting and monitoring plan (for those operations using explosives) to include the following information:
1. An indication of the circumstances blasting is proposed for the mining activity at that site along with anticipated timing and duration of blasting.
  2. The process and procedures which will be used to prepare for blasting at the site, including:
  3. Company policies and procedures on blasting and use of explosives (generally and specific to this site).
  4. Security procedures to be used for securing the site before and during the blasting activity.
  5. An indication of the use of best management practices to assure that the release of chemicals including Ammonia nitrate/fuel oil, nitrates, polyacrylamide, and acrylamide into the environment during any point of the blasting process is minimized to the fullest extent possible.
  6. These procedures shall include notification to the city to be provided at least three (3) business days prior to blasting activity and will include the following:
    - a. The date and time blasting will start along with the anticipated duration of the activity.
    - b. Name, address, license number, contact phone numbers, and email address of the blaster in charge of the blast.
    - c. Name, address, contact phone numbers, and email address of any person (agent or employee) in charge of the operation who will respond to inquiries by the City.
    - d. A map showing the location of the blasting site including the location of all the buildings located within ½ mile of the controlled blasting site, names, addresses, and contact information of owners of those buildings.
    - e. Copy of license and/or permits issued by the State Fire Marshal (as required by MN Statute 299F.73 and 299F.74 or as amended).
    - f. Copy of any license and/or permit issued by the Federal Mining Safety and Health Administration (MSHA) (as required by 30 C.F.R §56.61-56.63 or as amended).
- i. In any situation where the operation proposed will require a *mandatory* Environmental Assessment Worksheet or Environmental Impact Statement, pursuant to Minnesota state statute 116D.04 and 116D.045 and the administrative rules Chapter 4410, this process shall be initiated upon mining permit application to the City. A discretionary E.A.W. may be required per the standards and procedures set forth in state law after the mining permit is submitted. Review of the mining permit per Section III.B of these regulations may occur concurrently but the project may not proceed, no final approvals shall be made by the City, and a permit shall not be issued until the environmental review process is complete as indicated by one of the following
1. A petition for an EAW is dismissed.
  2. A negative declaration on the need for an EIS is made (by the RGU).
  3. An EIS is determined adequate; or
  4. A variance is granted by the Environmental Quality Board.
  5. Current or proposed pollution prevention measures & emergency/spill response plan including:
  6. Spill prevention and fueling plan.
  7. Employee training and housekeeping practices.
  8. Storage locations and methods of containment for any chemicals or fuels.

9. Existing and planned erosion and sediment control structures and methods.
10. Any other information requested by the Planning Commission or City Council.
11. The City may utilize professional outside consultants to assist in review of submitted materials and the cost of such review shall be borne by the permit applicant.
12. Proof of liability insurance for \$2,000,000.

**Section 345.05      Registration of Non-conforming Mines**

1. Existing mines which do not meet the standards of this ordinance or mining standards of the zoning code are deemed non-conforming mining operations. These shall be allowed to continue to operate per Minnesota state statute 462.357. The extent of the non-conforming mine shall be established and recorded by the City.
2. A non-conforming mine may register their operation as prescribed below. The City shall also investigate the nature and extent of the non-conforming use making a final determination of the extent of the nonconformity based on its own investigation and upon the information provided by the mining operation, and the City shall record and file the same with the Wabasha County Recorder. The following information is needed to register:
  - a. Name and address of the property owner.
  - b. Name, address, phone number and e-mail contact of the company or person conducting the excavation/mining on the property.
  - c. A general history of the operation indicating when mining began and major changes to the operation occurred (if known).
  - d. The legal property description and acreage of the entire property under ownership by the land owner currently and at the time the mine became non-conforming
  - e. A description of the specific area to be mined
  - f. Any lease or mining agreements between the property owner and mine operator indicating the extent of the mining operation existing at the time the mine became non-conforming.
  - g. One or more maps or site plans showing:
    1. Existing mine location
    2. Proposed extent of mine boundary including distances between the mine opening and any neighboring property boundaries, road rights of way and the top and toe of any bluffs
    3. Anticipated time frame of mine extensions (a phasing plan of which areas will be mined and when)
    4. Proposed depth of mine
    5. Existing drainage patterns & water retention areas, if any
    6. Location of any known sinkholes, wetlands, springs or similar surface features, located on property
    7. Existing and proposed fuel stations or chemical storage tanks with description of material and size of tank
    8. A general description of any processing which occurs on site and a list of any chemicals used in that process
    9. Location of storage of excavated materials along with the height of storage deposits
  - h. An indication of any expectation of the need for dewatering and anticipated source of water (ground water or accumulating stormwater/snow melt) along with a plan for water disposal or drainage routing.

- i. If blasting is used at the mine site, a general description of the process used including any safety or emergency response plans. The City may request additional information be provided to the City Fire Chief or Director of Emergency Management if deemed necessary to protect the public health and safety.
- j. Annual registration of the non-conforming mine indicating:
  - 1. Items A-D above along with an updated site plan showing:
    - a. Areas mined in full where no additional mining is planned to occur
    - b. Areas proposed for mining over the subsequent two year period
    - c. Any areas proposed for reclamation within the next two year period
  - 2. Items from section E-H shall be provided during annual registration only where changes have occurred since the previous registration provided to the City.
- k. A plan for eventual reclamation of the mine site is requested to be provided upon initial registration with as much detail as the property owner/mine operator has at that time. Additional information, proposed changes and updates to the reclamation plan shall be provided during annual registration. The following information shall be provided in the reclamation plan:
  - 1. Proposed final grades and elevations shown on a map along with a general description of the reclamation process such as filling or re-grading
  - 2. A proposed description of final use of the mine site
  - 3. Locations of any areas proposed for final ponding including proposed depth of and slope of pond edges
    - 1. Location and type of (non-invasive species) vegetation to be replanted
    - 2. Location and nature of any structures to be erected in relation to the end use planned for the site
- l. Mine operators may provide to the City any additional information or data they would like for the City to have on file
- m. Mine operators may record their registration along with any City approvals at the County Recorder's office
- n. Non-conforming mine registration materials shall be provided to the City Planning Commission for review and official acceptance and shall be kept on file at City Hall documenting the legal non-conforming mine status
- 3. When no registration is provided, the City shall conduct a study, gathering data indicated in section B above and other available information making a final determination of the extent of the nonconformity based on its own investigation. The City shall record and file the same with the Wabasha County Recorder

**Section 345.06 Minimum Standards for all mines**

- Subd. A. The Following activities shall be prohibited at any mine:
  - 1. The use of any excavation or mining process that injects, applies, or uses any chemical or toxic substance, unless expressly permitted in the mining permit, Approval with potential conditions shall be based on:
    - a. Amount of toxic material being stored and used on site
    - b. Location and security of the storage of the toxic material
    - c. Level of toxicity of the material based on material safety data sheets (MSDS').
    - d. Proposed use of the material and its potential short and long term nuisance to neighboring properties as well as to the local environment and to the public health welfare and safety.
  - 2. The use of any excavation or mining process that includes hydraulic dredging or similar process or method.

3. The use or application of any flocculants or chemical to wash or process excavated and mined industrial minerals at a mining site unless processing is allowed per Subsection V.(letter) of this Section VI (roman numeral) "Processing at the mine site".
4. The use or placement of previously mined, processed and/or contaminated sand as fill material or reusing that sand at the mining site.

Subd. B. Allowed Mine Locations:

1. New mines are allowed to locate in any location of the City where the Zoning Ordinance (Section 305 of Wabasha City Code) allows them as permitted, conditional or interim uses with the issuance of a permit under this section of city code.
2. Existing mines (defined as "legal non-conforming" uses under the City Zoning Ordinance) may continue to operate in their existing location even when not permitted, conditional, or interim in their zoning district. However, they are not allowed to expand beyond the boundaries of the parcel under which the mine has ownership, contract or lease at the time it became non-conforming under this or other city ordinance, or change in the any manner as indicated in Section III.A.2 of this ordinance.

Subd. C. Water Resources:

1. Pollution Prevention measure shall be employed at the mine operation including the following (depending on specific operations, which may be made condition of permit approval):
  - a. Confinement of equipment /vehicle maintenance activities indoors to the greatest extent feasible.
  - b. Confinement of outdoor fueling activities to designated areas to the greatest extent possible that are covered, away from high traffic areas, outside of drainage pathways, and on impervious surfaces.
  - c. Regularly cleaning of areas used for equipment/vehicle maintenance and fueling using dry clean-up methods rather than wet (e.g., sweeping, squeegee and dust pan).
  - d. Use of drip pans under all vehicles and equipment awaiting maintenance. Empty and clean drip pans and containers rather than leaving them full.
  - e. Proper disposal of liquid waste (including wash water), which shall not be poured into floor drains, sinks, outdoor storm drain inlets, or other storm drain or sewer connections.
  - f. Avoidance of topping off fuel tanks.
2. Surface Water
  - a. The extraction pit/mine operation shall not be allowed to interfere with surface water drainage beyond the boundaries of the operations property.
  - b. The work done shall not adversely affect the quality of surface or subsurface water resources in a negative manner. Surface water originating outside and passing through the mining site shall, at its point of departure from the site, be of equal or better quality than the water at the point where it enters the site.
  - c. The mining operation shall utilize best management practices specific to pollution prevention so that storm water runoff does not come into contact with any activities or materials of concern such as petroleum products, fueling areas etc.
  - d. Engineered structures may be required for new or expanding mines or suggested for any mine per the Minnesota Stormwater Manual and the Industrial Stormwater BMP Guidebook.
3. Groundwater protection

- a. Mining activity shall not be allowed if it reduces the use in terms of quality or quantity of any neighboring domestic well.
  - b. Prior to the establishment of new mines or the modification of an existing mine (per Section III.A.2 of this ordinance) the mine operator shall offer property owners with a domestic well within ½ mile of the mining site an inspection of their well and associated equipment and structures; evaluation of hydrologic conditions and sampling of the well water for quality analysis to determine baseline data. The neighboring property owner shall be given 30 days to respond to the offer and to allow on-site work after receiving the offer. The mine operator shall further offer these neighboring private well owners annual sampling and water quality analysis. This work shall be performed by an independent, credentialed, third party at the expense of the operator. Samples shall be analyzed by a certified laboratory. Analysis shall include all chemicals and fuels used at the mine site that may impact groundwater. In the event that monitoring shows that mining or reclamation activities have caused state or federal groundwater quality standards to be exceeded, this information shall be provided to the MPCA and the operator shall seek to mitigate these effects by altering site operations and shall supply the well owner with bottled water for drinking until testing indicates levels are to pre-mining amounts. The reduction of quality of neighboring domestic wells shall be one reason for revocation of the mining permit. The City may require the permit holder to take corrective action in the event it is shown that the contamination was caused by the operation.
  - c. The import, storage or disposal of any solid waste, recyclable materials, or refuse generated outside the mine site is not allowed.
4. Ground water use: Permits for well construction from Wabasha County and for water appropriation from the Minnesota DNR shall be required and copies of these shall be provided to the City. The use of groundwater for any mining activity shall not be allowed if it:
- a. Reduces water availability in existing domestic wells.
  - b. Reduces water availability in municipal production wells.
  - c. Degrades calcareous fens, wetlands, ponds, lakes, streams, springs, seeps, and watercourses and/or other fish and wildlife habitat.
- Subd. D. Safety Fencing: Any operation adjacent to a residential zone, within three **hundred (300)** feet of two or more residential structures, or within 30 feet of a public right of way shall be bound by the following standards:
- 1. Where collections of water occur that are one and one-half (1½) feet or more in depth existing for any period of at least one (1) month, and occupy an area of seven hundred (700) square feet or more, all access to such collections of water shall be barred by a fence of at least four (4) feet in height.
  - 2. In locations where slopes occur that are steeper than one (1) foot vertical to three (3) feet horizontal existing for a period of one (1) month or more, access to such slopes shall be barred by a fence or some similar effective barrier such as a snow fence at least four (4) feet in height. Earthen berms also may be constructed to prevent access to the steeper slopes.
- Subd. E. Access Roads: All access roads must meet City, County, and/or State standards. The location of the intersection of access roads with any public roads shall be selected such that traffic on the access roads or public roads will have a sufficient site and breaking distance and room enough for adequate turn radii. Sufficiency shall be determined by the authority of the public road.
- Subd. F. Driveway/Access For Site:

1. Driveway/access to the mine site and/or ancillary uses shall not be located within twenty-five (25) feet of adjacent property boundaries.
2. Driveway/access shall also receive applicable County/Highway Department/State/Federal approval with copies of such approvals provided to the City.

Subd. G. The tracking pad/ pavement shall be installed prior to site disturbance. Any material that is tracked on to the public road system shall be cleaned up at the end of the workday.

Subd. H. Setback: Mining operations shall not be conducted closer than one hundred (100) feet to the boundary of any zone where such operations are not permitted, or closer than one hundred (100) feet to the boundary of an adjoining property line, unless the written consent of the owner of such adjoining property is first secured in writing. Mining operations shall not be conducted closer than one hundred (100) feet to the right-of-way line of an existing or platted street, road or highway, except that excavating may be conducted closer to the right of way line in order to match the contour of the existing or platted street, road or highway. The City may impose greater setbacks as a condition of the mining or interim use permit when there is a finding that this is required to protect adjoining property from negative impact and in order to protect health, safety, or welfare of the general public. Additional setback requirements for bluff areas are contained in the Performance Standards of the City Zoning Code.

Subd. I. Appearance: All buildings, structures and plants as allowed at the mining site shall be maintained in such a manner as is practical and according to building code to assure that such buildings, structures and plants will not become dangerously dilapidated.

Subd. J. Screening Requirements: The use of vegetation, fencing, and/or berms may be required.

Subd. K. Hours of operation shall be set at the time of interim use or mining permit approval and shall be based on (including but not limited to):

1. Distance and geographical situation between the mine and the closest residences
2. Proposed traffic being generated from the mining operation
3. type and location of activity proposed at the mine which will create noise or other nuisances or public health, safety, or welfare concerns

Subd. L. Lighting: all lighting at the mine site shall be required to meet any adopted city lighting standards (full cut off standards (downward lighting) of 80 percent maximum per city zoning ordinance or as amended, modified, or replaced). More intense lighting will be considered if needed to meet OSHA<sup>2</sup> and/or MSHA<sup>3</sup> safety standards if there is a finding by the City that it will have no greater impact on neighboring properties (in particular on adjacent residences) than the baseline standard. Conditions of permit approval for such lighting may include modifications to topography, vegetative planting, fencing or similar screening techniques to block light from neighboring properties, roadways, or other public areas.

Subd. M. Interior roads, driveways and parking areas shall be arranged on site to have the least amount of impact on neighboring properties in particularly those with residences. Conditions for screening, lighting and hours of operation may be imposed based on the proposed locations of such facilities and any other on site that may produce noise, light, or air pollution.

Subd. N. Topsoil Management:

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<sup>2</sup> Occupational Safety and Health Administration

<sup>3</sup> Mining Health and Safety Administration

1. Removal of on-site topsoil and topsoil substitute material removal, when specified in the reclamation plan, shall be performed, prior to any mining activity associated with any specific phase of the mining operation.

Subd. O. The operator shall obtain the volume of soil required to perform final reclamation by removal of on-site topsoil or topsoil substitute material or by obtaining topsoil or substitute material as needed to make up the volume of topsoil as specified in the reclamation plan approved pursuant to this chapter.

1. Once removed, topsoil or topsoil substitute material shall, as required by the reclamation plan approved pursuant to this chapter, either be used in contemporaneous reclamation or stored in an environmentally acceptable manner. The location of stockpiled topsoil or topsoil substitute material shall be chosen to protect the material from erosion or further disturbance or contamination. Runoff water shall be diverted around all locations in which topsoil or topsoil substitute material is stockpiled.

Subd. P. Inspections: With the issuance of a mining permit, the City reserves the right to inspect the mine site for compliance with this and other sections of City code and any conditions issued as part of the permit. At City staff discretion County, State, or Federal authorities may be contacted to assist the City in determining compliance to any local, state, or federal regulations.

Subd. Q. Dust Control: Roadway and site dust control shall be required and may be accomplished via methods approved by the City which may include but are not limited to berming, landscaping, watering, dust extraction equipment, wheel washing, paving etc. Operators shall be responsible for providing continuous dust control during facility operation and during hauling activity on gravel roads used to access the facility.

Subd. R. Air Quality Monitoring: All mining operations shall provide air monitoring based upon a plan for such submitted as required in Section IV. Subd.I. and agreed upon with the city in the issuance of the permit.

1. This monitoring shall be performed by an independent, credentialed, third party at the expense of the operator.
2. The results from air monitoring will be submitted to the City on a quarterly basis until the city deems under subsequent renewal permit review that air quality monitoring is no longer required at the facility.
3. Results of monitoring may be submitted to the Minnesota Pollution Control Agency, the Minnesota Environmental Quality Board (or a technical team of that board) and/or to a private consultant as chosen by the City for assistance in the review of such results.

Subd. S. Site clearing

1. All topsoil, subsoil and overburden in areas of mining shall be systematically and individually stripped and stockpiled for future use in reclamation.
2. Burning of stumps or any other material at the mine site is prohibited. Woody material shall be ground or chipped and used in reclamation activities if possible.
3. Removal of vegetative cover and the amount of exposed earth must be kept to a minimum and be consistent with good construction practices.

Subd. T. Blasting & use of explosives

1. Blasting Logs shall be prepared by the mining operation and shall be maintained for a period not less than 5 years after a blasting event.
2. Copies of blasting logs shall be given to the LGU within 5 working days upon request.
3. Information to record in a blasting log includes:
  - a. Name, signature, and license number of the blaster in charge of the blast.

- b. Specific blast location, including address, bench and station number if applicable.
  - c. Type of blasting operation.
  - d. Date and time of the blast.
  - e. Copy of information provided to the City prior to blasting as required in Section IV Subd.Q.2.d.
  - f. Meteorological conditions, including temperature inversions, wind speed, and directions as can be determined from the United States Weather Bureau, and ground-based observations.
  - g. Diagram of the blast layout and the delay pattern.
  - h. Number of holes.
  - i. Hole depth and diameter.
  - j. Spacing of holes.
  - k. Burden.
  - l. Maximum holes per delay.
  - m. Maximum pounds of explosives per delay.
  - n. Number, type and length of stemming used between decks.
  - o. Total pounds and type of explosives per each delay.
  - p. Distance to nearest inhabited building not owned by the applicant
  - q. Type of initiation used.
  - r. Seismographic and airblast records, which shall include all of the following:
    - i. Type of instrument and last laboratory calibration date.
    - ii. Maps of the exact location of monitoring instrument(s).
    - iii. Records of the date, time, and distance from the blast.
    - iv. Trigger levels for ground and air vibrations.
    - v. The vibration and airblast levels recorded.
  - s. Particle velocity should be recorded in three mutually perpendicular directions.
4. In the event that seismograph monitoring exceeds standards identified in either the Blast Plan or local permit, the company will notify the City within 1 working day.
  5. Water Resource Management Plan should address potential nitrate contamination due to blasting.
  6. Whenever explosives are used, they shall be of such character and in such amount as is permitted by state and local laws and ordinances and all respective agencies having jurisdiction over them.
  7. The regulatory requirements of OSHA Safety and Health Standards 29 CFR, Part 1926, Subpart U, "Blasting and Use of Explosives", shall be applied.
  8. Operators will use all industry standard measures to control fly rock with the intent that fly rock not leave the mine property.
  9. Prior to any blasting event at the excavation and mining site, the mining operation is responsible for giving notice of the impending blasting event by displaying a fluorescent flag and legible sign within 100 feet of all public roads bordering the blasting site.
  10. Untreated ANFO should not be used in blastholes with standing water in the bottom. Waterproof blasting agents such as emulsions or gels, developed to prevent the release of nitrates into the groundwater, should be used in blastholes with standing water at the bottom.
  11. The maximum single component peak particle velocity resulting from construction activity should not exceed the safe blasting criteria established in Office of Surface Mining recommendations, OSM Alternative Blasting Level Criteria (Modified from Figure B 1, RI 8507 U.S. Bureau of Mines). This criteria allows a constant peak particle velocity (ppv) of 2.0 inches per sec (ips) above 30 Hz. Below 30 Hz, the

maximum velocity decreases at a rate equivalent to a constant peak displacement of 0.01 inch to 11 Hz. Between 11 Hz and 4 Hz the maximum velocity is 0.75 ips. Below 4 Hz the maximum velocity decreases at a rate equivalent to a constant peak displacement of 0.03 inch.

12. Appropriate vibration levels shall be used where there is the presence of fragile or extremely fragile historically significant buildings, or sites. The following table is to be used as a guideline but limits shall be determined ultimately based on:
  - a. Proximity of the resource to the blasting site and on site (ground conditions) and the anticipated travel of damaging vibrations.
  - b. The level of significance of a resource as determined by its official listing on any federal, state, or local register and as by the City Council, and
  - c. Level of protection afforded to the resource by its official listing on any federal, state, or local register.

Structure & Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic structures, ruins, or monuments	0.12	0.08
Fragile Buildings	0.2	0.1

13. The mine operator shall provide a notification to all property owners within a ½ mile of the mine site at least 15 days prior to blasting activity occurring. A copy of such notification shall also be sent to the City along with a list of those being sent the notification. For blasting anticipated to occur for more than one day within a one month period, one notification with the anticipated dates will suffice. The notification shall include:
  - a. The date('s) or range of dates that blasting is anticipated to occur.
  - b. The contact information including a contact person, a phone number and an address for questions to be addressed during business hours.
  - c. An offer to property owners for a pre-blast survey which shall:
    - ii. Be performed by an independent, credentialed, third party at the expense of the operator.
    - iii. Consist of a record on paper, video, or an unalterable electronic file to document the condition of a dwelling, structure, or water well before the commencement of blasting activity.
    - iv. Provide a record of inspection of the condition of a well and/or structure including the interior and exterior as requested by the owner.
  - d. A written statement that *such survey must be requested in writing* which shall identify the structures and/or well to be surveyed.
  - e. A written statement indicating that all surveys completed will be available upon request of the property owner within a 72 hour period after such request is made.

14. The City Engineer shall inspect, review and monitor all blasting operations.

Subd. U. Intermittent mining may be conducted provided that all other standards of this ordinance are followed and the possibility of intermittent cessation of operations is addressed in an operator's application for mining permit. This shall also be accounted for in the reclamation plan. The city shall be given 72 hour notice prior to the cessation or resumption of activities.

Subd. V. Direct impact to any historic, archeological, or culturally significant resource shall not be allowed prior to providing proposed activity by the MN State Historic Preservation Office and the City of Wabasha Heritage Preservation Commission and allowing for their response.

Subd. W. Processing at the Mine Site

Unless the site is eligible under the zoning ordinance for heavy industry (which shall require any additional permits for this activity within the zoning district the mine is located) processing at the mine site shall be limited to the following:

1. Scalping, the first cut of the incoming material including removing the largest size particles, cleaning the incoming material from foreign body contamination such as twigs, trash, glass, or other unwanted oversize material.
2. Separation of product into different rock sizes, gravel, and general sand category
3. No fine screening for separation of sand into different classifications (for hardness/shape) shall be permitted.
4. Use of water for washing shall be limited to 250,000 gallons per day (g.p.d.).
5. Crushing for new or expanded operations shall be limited to 150,000 tons per year
6. No use of chemicals in the processing, cleaning or separating of aggregate materials is allowed.
7. Any processing of minerals shall not be conducted closer than one hundred (100) feet to the property line nor closer than five hundred (500) feet to any residential or commercial structures located prior to commencement of processing operations without the written consent of all owners and residents of said structures for any new or expanded operation. The City may impose greater setbacks as a condition of the mining or interim use permit when there is a finding that this is required to protect adjoining property from negative impact and in order to protect health, safety, or welfare of the general public. Additional setback requirements for bluff areas are contained in the Performance Standards of the City Zoning Code.

Subd. X. Road Maintenance Agreement: All new or expanded mining operators will be required to enter into road maintenance agreements with the governing road authority('s) if agreed to by the specific authority. The Road Maintenance Agreement will provide for:

1. A roundtrip hauling route for the shipping of nonmetallic minerals from the excavation or mining site to a targeted delivery location, including the estimated number of tons to be hauled per truck and estimated number of tons hauled per month.
2. Mining operator's agreement to pay a road pavement impact fee as decided by the local government, which will be assessed on a per ton, per mile basis to reimburse the local government for the projected costs of repairing and replacing road pavement damaged by the hauling of nonmetallic minerals from an excavation or mining site. The fee established at the time of application will be reviewed every two years.
3. All fees collected will be placed in a fund administered by the road authority, dedicated to the sole purpose of maintaining, repairing, and replacing roads.

Subd. Y. Along with a plan for reclamation required as part of an application for all mines, applicants shall submit, as part of the application for a permit to mine, a documented estimate of costs necessary to implement the reclamation plan (consistent with MN Rules under part 6132.1300, subpart 4). This estimate shall include closure and postclosure maintenance activities required if operations cease within the first calendar year.

1. The permittee shall annually adjust the contingency reclamation cost estimate.
2. Cost estimates shall be based on the following:
  - a. Current dollar value at the time of the estimate; and

- b. The cost to the City of administering and hiring a third party to implement the contingency reclamation plan.
3. No salvage value attributed to the sale of wastes, facility structures, equipment, land, or other assets shall be used for estimating purposes.

**Section 345.07      Reclamation Standards**

All sites shall be reclaimed after operations cease. The City may require the assistance in design and or review of reclamation plans of a credentialed consultant at the expense of the mine operator. The following standards shall apply along with any additional or more stringent standards adopted under subsequent state law:

- A. Reclamation for each cell shall be completed within one (1) calendar year after operation ceases.
- B. Within a period of three (3) months after the termination of a operation, or within three (3) months after abandonment of such operation for a period of six (6) months, or within three (3) months after expiration of a permit, all buildings, structures and plans incidental to such operation shall be dismantled and removed by, and at the expense of, the mining operator last operating such buildings, structures and plants.
- C. At least four (4) months prior to the commencement of reclamation, the operator shall notify the City of its intent to commence reclamation. A preconstruction meeting shall be held at which the mine operator and the on-site reclamation construction supervisor shall attend to review the terms and conditions of the mining permit.
- D. Topsoil Redistribution for Reclamation: All uncontaminated soil from the site shall be retained on-site for reclamation purposes. Topsoil or topsoil substitute material shall be redistributed in accordance with the reclamation plan approved pursuant to this chapter in a manner which minimizes compacting and prevents erosion. Topsoil or topsoil substitute material shall be uniformly redistributed except where uniform redistribution is undesirable or impractical. Topsoil or topsoil substitute material redistribution may not be performed during or immediately after a precipitation event until the soils have sufficiently dried.
- E. End Land Use Use of reclaimed land shall be appropriate to interim and final reclamation plan for the site and to the City's adopted land use policies and maps. The reclamation plan shall address final drainage and storm water plans, final topography indicating appropriate spaces for buildings, roads or other necessary infrastructure per intended proposed use and anticipated soil fertility for any proposed farming operations. Development of final uses may occur on the site as reclamation phasing occurs but shall be identified and addressed in reclamation plan phasing.
- F. Final Grading & Slopes:
  1. All areas directly affected by mining shall be addressed in the approved reclamation plan to provide that a stable and safe condition consistent with the post-mining land use is achieved. The reclamation plan may designate high walls or other unmined and undisturbed natural solid bedrock as stable and safe and not in need of reclamation or designate other areas affected by mining including slopes comprised of unconsolidated materials that exceed a 3:1 slope, whether or not graded, as stable and safe. For slopes designated as stable under this Subsection, the City may require that a site-specific engineering analysis be performed by a registered professional engineer to demonstrate that an acceptable slope stability factor is attainable at a steeper slope.
  2. Final reclaimed slopes covered by topsoil or topsoil substitute material may not be steeper than a 4:1 horizontal to vertical incline, unless recommended by on

- site-specific engineering analysis performed by a registered professional engineer. All areas in the extraction pit site where topsoil or topsoil substitute material is to be reapplied shall be graded or otherwise prepared prior to topsoil or topsoil substitute material redistribution to provide the optimum adherence between the topsoil or topsoil substitute material and the underlying material.
- G. If the approved post-mining land use includes a body of water, the approved final grade at the edge of a body of water shall be a slope no steeper than 6:1.
  - H. Vegetation requirements. The plan for re-vegetation should include a mix of grass basal cover, native vegetation cover, and rock cover, similar in type, diversity, and percentage mix and location to pre-mining situation. Use of fast-growing vegetation to stabilize slopes is appropriate. Use of Invasive species shall not be allowed in re-vegetation and the plan shall address the how invasive species will be managed during the operation of the mine.
  - I. Water requirements. The reclamation plan shall identify final surface and groundwater conditions and no reclamation shall be conducted in a manner which will cause a permanent lowering of the water table or result in adverse effects on surface waters or reduce the quality of groundwater reasonably available for future users of groundwater.
  - J. Assessing Completion of Successful Reclamation:
    - 1. The criteria for assessing when reclamation is complete shall be specified in the reclamation plan approved pursuant to this Chapter. Criteria to evaluate reclamation success shall be quantifiable.
    - 2. Compliance with the re-vegetation success standards in the approved reclamation plan shall be determined by:
      - a. On-site inspections by the City or its agent; and/or the MN DNR.
      - b. Reports presenting results obtained during reclamation evaluations including summarized data on re-vegetation, photo documentation or other evidence that the reclamation plan criteria have been met.
  - K. In those cases where the post mining land use specified in the reclamation plan requires a return of the mining site to a pre-existing condition, the operator shall obtain baseline data on the existing plant community for use in the evaluation of reclamation success pursuant to this section.
  - L. Re-vegetation success may be determined by:
    - 1. Comparison to an appropriate reference area;
    - 2. Comparison to baseline data acquired at the mining site prior to its being affected by mining; or
    - 3. Comparison to an approved alternate technical standard.
  - M. Maintenance: During the period of the site reclamation the operator shall perform any maintenance necessary to prevent erosion, sedimentation or environmental pollution, comply with the standards of this Subchapter, or to meet the goals specified in the reclamation plan approved pursuant to this Chapter.

**Section 345.08      Subsurface Mineral Exploration**

Exploration of natural resources can have a serious effect on land and the groundwater below. It is the intention of this Section of the Ordinance to monitor any exploratory activity. Remote sensing/exploration that does not disturb any soil do not require a mining permit.

- A. All Subsurface Mineral Exploration borings shall require a permit in all zoning districts and shall only be allowed in zoning districts where the potential mining activity is allowed as a permitted, conditional or interim use. The following information shall be required to be submitted by the applicant as part of the permit for exploratory borings if any of the following criteria is met:

- N. The drill hole will intercept a water bearing layer.
- O. The drill hole will be either deeper than 25 feet or penetrate a confining layer.
- P. The drill hole will be used for testing without extracting water.
- B. The following shall be submitted:
  1. Individuals or organizations wishing to undertake *mineral exploration* in the City of Wabasha must provide sufficient proof to the City, legal authority to explore and/or mine the property.
  2. A description of the mineral or minerals which are the subject of the exploration.
  3. A copy of the lease arrangement with the landowner shall be provided. This lease shall be recorded in the County Recorder's Office prior to granting the permit. The time limit and the location of the permit shall be incidental to that of the lease arrangement.
  4. A map indicating the location of the proposed exploratory boring(s).
  5. The applicant shall post a surety performance bond in an amount of one hundred and ten (110) percent of cost of installation per hole to assure that sufficient funds will be available to carry out required reclamation and, if necessary, decontamination of affected ground water and surface water. The bond shall be released two (2) years after exploration has ceased unless the city finds, for good cause shown, that the water quality of the affected area has not been restored or the reclamation plan has not been completed.
  6. An exact, technical description of the exploration process, types of equipment to be used, and an estimated timetable for each phase of work and for final completion of the program.
  7. A general description of the regional environmental conditions to include surface land use and vegetation, as well as a general description of the area's geological formations and hydrology.
  8. A description of the major environmental impacts that exploration will create as well as a proposed plan to mitigate those impacts including such items as soil erosion, air and water contamination, as well as related hazards to public life and safety.
  9. A plan shall be provided for the reclamation of the land after exploration is completed. Surface reclamation shall take into account the impact on adjacent land uses, natural resources and the proposed future use of the lands explored. The plans shall include:
    - B. A reclamation schedule.
    - C. Method used to plug drill holes which must meet state standards.
    - D. Method of grading, backfilling and contouring of exploration sites and access roads.
    - E. Methods of waste management and disposal, including liquid and solid wastes such as tailings.
    - F. Method of re-vegetation.
- C. Exploratory Boring Construction Requirements
  1. All test borings shall be constructed in accordance with the following and shall be constructed in a manner as to prevent all known sources of contamination from entering the boring at any time.
    - a. Drilling mud additives shall be stored in clean containers and shall be free of material that may adversely affect the aquifer.
    - b. Water used for cooling parts of engines, air compressors or other equipment may not be returned into the boring.
    - c. Drilling mud, cuttings and discharge water shall not be disposed of in a manner so as to create damage to public or private property.

- d. Exploratory borings encountering flowing artesian conditions should be constructed to prevent erosion of the aquifer or the overlying confining mantle.
  - e. Any boring which encounters a karst feature shall be cased and grouted to prevent the introduction of surface water into the groundwater and to prevent the passage of water from one aquifer to another.
  - f. In the case of an unexpected emergency, including but not limited to any act or condition that would affect the health, welfare and property of area residents, the explorer shall have the ability to cap the boring at any time. In this instance the explorer shall immediately notify the City of Wabasha and proper State agencies of such an emergency. In case of such an emergency, all costs shall be borne by the explorer.
  - g. A boring for aggregate exploration must not be used for any purpose that is regulated under Minnesota Statutes, Chapter 103I and Minnesota Rules, chapters 4725 or 4727, unless that well or boring is constructed in accordance with all applicable requirements of statute and rule, including licensing, notification, permitting, construction, sealing, testing and reporting requirements. Wells and borings regulated under state statute and rule include water supply wells, dewatering wells, monitoring wells, bored geothermal heat exchangers, elevator borings, environmental bore holes, and exploratory borings as defined in Minnesota Rules, chapter 4727.
- D. Exploratory Boring Setbacks, the following setbacks shall be applicable to exploratory drilling sites:
1. Required setbacks from Road Center line:
    - a. One hundred thirty (130) feet for State Highways.
    - b. One hundred (100) feet for County and State Aid Roads.
    - c. Sixty-five (65) feet for City streets.
  2. Two hundred (200) feet to adjoining property line.
  3. Five hundred (500) feet to nearest occupied residence.
  4. One hundred (100) feet to any overhead or underground electrical line.
  5. One hundred and fifty (150) feet to any gas line.
  6. One hundred and fifty (150) feet to a preparation or storage area of spray materials, commercial fertilizers or chemicals that may result in pollution of the soil or groundwater.
  7. One hundred (100) feet from a below grade manure storage area if in conformance with the Minnesota Pollution Control Agency.
  8. One hundred (100) feet from a buried sewer, septic tank, subsurface disposal field or privy.
  9. Two hundred (200) feet from existing water wells.
  10. Two hundred (200) feet from any lake, stream or river.
- E. Abandonment of Exploratory Borings
1. Abandonment of all exploratory borings shall be carried out in accordance with the following provisions:
    - a. Abandonment, whether temporary or permanent, shall be undertaken immediately upon completion of drilling activities. When the test hole is to be abandoned, the City shall be notified so that the abandonment process may be inspected.
    - b. Within thirty (30) days of the completion of drilling or the drilling equipment leaving the site, whichever occurs first, an abandonment report shall be completed by the explorer, and filed with the City. The report shall include, but not be limited to, such things as water bearing formations encountered, method

- of construction used and method of abandonment. The abandonment report shall specify whether the boring is being temporary or permanently abandoned.
2. A boring which is temporarily abandoned shall be constructed to prevent the introduction of surface contaminants into the boring and to prevent passage of water from one aquifer to another.
    - a. At the minimum, a temporary abandoned boring shall be cased from bedrock or from the bottom of the boring if the boring terminates in unconsolidated materials, to a point one (1) foot above the ground surface, or if in a floodplain, at least two (2) feet above the level of the highest flood of record. The casing shall be protected with an overlapping cap which will prevent any surface contamination from entering the boring.
    - b. Any boring which is temporarily abandoned shall be marked and protected with four (4) steel posts (schedule 40 pipe) of at least four (4) inch diameter at equal distance from each other, two (2) feet from the center of the casing. Such posts shall be installed to a minimum depth of three (3) feet into solid ground.
    - c. A boring shall not be temporarily abandoned for more than two (2) years.
  3. Permanent Abandonment
    - a. Whenever the explorer determines that a boring needs not remain open any longer, or whenever the explorer is about to lose the right to explore, the explorer shall permanently abandon the boring. The boring shall be filled with grout to prevent contaminating materials from entering the water bearing ground formations.
    - b. All materials, debris and obstructions that may interfere with sealing operations shall be removed from the boring.
    - c. All casing and screen may be salvaged except for casing that has been cemented in place.
    - d. The top of the hole shall be fitted with ten (10) feet of cement or concrete grout to within two (2) feet of the land surface. Casing remaining in the hole shall be cut off at least six (6) feet below the land surface. The remaining two (2) feet of the hole shall be filled with native topsoil.
    - e. When concrete or cement is used as a grout material, it shall be inserted in the boring through a grout pipe from the bottom of the boring upward to the surface under pressure.
    - f. A permanently abandoned boring shall be filled and sealed using one (1) or more of the following substances in accordance with geological materials penetrated:
      - i. The section of a boring in unconsolidated deposits shall be filled with neat cement, concrete or heavy drilling fluid to provide a permeability no greater than the natural condition.
      - ii. The section of a boring in a rock formation shall be filled with neat cement or concrete.
      - iii. The section of a boring in a cavernous or crevice rock such as cavernous limestone or creviced granite shall be filled with concrete or neat cement and gravel or stone aggregate. At the top of cavernous or creviced formation, the filling shall be completed by a layer of neat cement or concrete extending at least ten (10) feet into the above overlying formation and finished as provided in those rules.
      - iv. When a temporarily abandoned boring is permanently abandoned, a separate abandonment report shall be filed.

- A. An annual report of mining activities shall be submitted to the City of Wabasha specifying:
  - 1. The amount of material removed from the mine site in the previous year.
  - 2. The areas in which mining is complete and areas in which mining is ongoing.
  - 3. Area of the mine which has been reclaimed or is ready to be reclaimed.
  - 4. If mining into groundwater, actual pumping rates and times, actual groundwater discharge locations and quantities.
  - 5. Groundwater and surface water monitoring results.
  - 6. Restoration performed and restoration yet to be performed.
  - 7. Area proposed to be mined within the next year.
  - 8. Evidence the required bond and liability insurance is valid and enforceable.
  - 9. Copies of all reports given to State or Federal Agencies within the past year (including those for air and water quality monitoring) and any other permits or approvals issued.
  - 10. A log containing record of any grievances received by the operation and how they were addressed.
- B. Upon receiving the annual report, the City shall have the right to make an inspection.

**Section 345.010      Transfer of Permits**

The City will transfer existing mining permits to new operators upon request under the following circumstances:

- A. The new operator provides in writing that they will follow all plans and conditions of the previously approved permit.
- B. The new operator provides financial sureties to replace those of the past operator. The existing financial assurance shall remain in effect until the new operator's financial assurance is approved.

**Section 345.011      Permit Revocation**

Corrective actions, fines, and/or temporary or permanent revocation of mining permit may be implemented by the City if the mining operation is non-compliant with the terms of the permit.

**Section 345.012      Violations and Penalties**

Any person, firm or corporation who fails to comply with the provisions of this Ordinance shall, upon conviction thereof, be guilty of a misdemeanor, subject to a fine of not more than \$1,000 or imprisonment for not more than ninety (90) days, or both. Each day a violation exists or continues shall constitute a separate offense. The City reserves the right to seek injunctive relief in addition to the criminal penalties set forth herein.