

**ANN ARBOR CHARTER TOWNSHIP  
BOARD OF TRUSTEES**

**ORDINANCE TO AMEND CHAPTER 74, ZONING, ARTICLE V SUPPLEMENTARY  
DISTRICT REGULATIONS TO ADOPT MINERAL MINING CODE SECTION 74-592a  
and REPEAL SECTION 74-592.**

**October 21, 2024**

The Ann Arbor Charter Township Board of Trustees ordains and adopts the following amendments to Chapter 74, Zoning, Article V Supplementary District Regulations. It is hereby ordained as follows:

**SECTION 1. Repeal of Code Section 74-592.** Section 74-592 of the Ann Arbor Charter Township Code is repealed upon the effective date of this Ordinance.

**SECTION 2. Adoption of New Code Section 74.592a.** A new section 74-592a to the Ann Arbor Charter Township Code, herein referenced in its entirety as the “Ann Arbor Charter Township Mineral Mining Ordinance”, is hereby created to read in its entirety as follows:

**(a) PURPOSE AND AUTHORITY**

- (1) Exportation of Non-Metallic Minerals and Importation of Fill Materials.** The Township recognizes that sand, gravel and other non-metallic minerals within the Township’s boundaries are nonrenewable natural resources necessary and beneficial to the welfare of its inhabitants and the surrounding region. To provide for utilization of these resources in a manner compatible with nearby residential uses, to protect human health and the environment, and to ensure complete reclamation for another land use at the conclusion of the extraction operation, it is necessary to regulate and provide procedures and standards for extraction of non-metallic minerals and for the reclamation of the land at the conclusion of the operation. These regulations are required because extraction operations and related activities, such as the importation of fill material, can cause unique and substantial impacts upon the environment and the welfare of adjacent properties and the community as a whole. They can disrupt the environment, impair water quality and quantity, cause noise and dust nuisances, damage roads and create conditions dangerous to Township residents.
  
- (2) Preservation of Wetlands, Water Bodies and Groundwater.** Wetlands are indispensable and fragile natural resources that provide many public benefits, including maintenance of water quality through nutrient cycling and sediment trapping, and by serving as biological and chemical oxidation basins; flood and storm water runoff control through temporary water storage; groundwater recharge; and by providing open space, passive outdoor recreation opportunities, and fish and wildlife habitat. Preservation of Township wetlands, water bodies, aquifers and ground water in a natural condition is necessary to maintain hydrological, economic, recreational, and aesthetic natural resource values for existing and future Township residents.

(3) **Applicability.** Subject to compliance with all other applicable statutes, ordinances, rules and regulations, this Ordinance does not apply to the following activities:

- a. Ordinary and necessary grading of land for the tilling and cultivation of soils for the growing of crops and trees.
- b. Ordinary and necessary grading or excavation for construction of buildings, structures or related septic systems pursuant to all required permits from the Township and any other governmental authority having jurisdiction over such activities.
- c. Ordinary and necessary grading, excavation, or maintenance within a public right-of-way by any governmental authority having jurisdiction over that public right-of-way road or drainage easement.
- d. Remediation of environmental contamination.
- e. Construction of solid waste disposal facilities in accordance with Michigan Department of Environment, Great Lakes and Energy (EGLE) permits.

**(b) DEFINITIONS**

- (1) **Applicant/Owner/Operator.** Means a person who submits an Application under the Ann Arbor Charter Township Mineral Mining Ordinance. The terms “applicant”, “owner”, and “operator” shall include the tenants, lessees, agents, servants or assigns thereof.
- (2) **Application.** Means an application for a conditional use permit pursuant to the Ann Arbor Charter Township Mineral Mining Ordinance.
- (3) **Application Fee.** Means a sum to be paid by the applicant to the Township which is fixed by resolution of the Township Board of Trustees.
- (4) **Aquifer.** Means a saturated permeable geologic unit capable of yielding a significant amount of groundwater to a well or spring.
- (5) **Base Document(s).** Means a document required to be submitted under the Ann Arbor Charter Township Mineral Mining Ordinance.
- (6) **Beneficiation.** Means to process the extracted materials for any of the following purposes: (i) Regulating the grain size of the desired product; (ii) Removing unwanted constituents; and (iii) Improving the quality and purity of the desired product.

- (7) **Commencement Date.** Means the date a conditional use permit issued under the Ann Arbor Charter Township Mineral Mining Ordinance is signed by the Township Supervisor and Chairperson of the Planning Commission.
- (8) **De-watering.** Means the use of a well, pump or other mechanism to remove water from a surface or subsurface area as part of a mineral mining operation to lower the groundwater or surface water elevation.
- (9) **Discharge.** Means the discharge of process water out of the extraction area either onsite or off site.
- (10) **Dredging.** Means the extracting and removing of minerals carried out via a scoop or bucket or similar mechanism which are underwater or partially underwater and in which minerals are extracted and removed without de-watering.
- (11) **Escrow Account.** Means a sum paid by the applicant to the Township to be held by the Township in an account and drawn upon to defray reasonable actual costs and expenses incurred by the Township to review an application and/or administer a permit and includes (but not limited to) costs for engineering, geologic, hydrologic, land use planning, legal, and other expert assistance and analysis; testing; inspections; publications, mailings; recording fees; special meetings; and road maintenance.
- (12) **Extraction.** Means the digging, dredging, quarrying, excavation, or other removal of sand, gravel, soil, or other non-metallic minerals from a site.
- (13) **Extraction Area.** Means the area, as depicted on a topographical map, from which earth materials are removed or are intended to be removed including where processing occurs.
- (14) **Fill.** Means soil, rocks, sand, clay, that adds to or displaces soil or water or reduces water retention potential.
- (15) **Fines.** Means materials mined from the site passing 200 mesh sieve opening as defined by the National Standard Sieve Size (ASTM-E11) that are a by-product of any extraction operations at the site.
- (16) **Groundwater.** Means water below the land surface in a zone of saturation.
- (17) **Groundwater Elevation.** Means the elevation of the water table above mean sea level at any selected location..
- (18) **Groundwater Recharge.** Means the process involved in the addition of water to the zone of saturation or the amount of water added.

- (19) **Groundwater Recharge Area.** Means any area on the ground that facilitates the addition of water to the zone of saturation; generally, it is that portion of the drainage basin where the direction of groundwater flow near the surface is downward.
- (20) **Inert Materials.** Means a substance that will not decompose, dissolve, or in any other way form a contaminated leachate upon contact with water or other liquids, determined by the Township or EGLE as likely to be found at the fill area, percolating through the substance.
- (21) **Mineral Mining Operation.** Means extraction from the earth of mineral aggregates or non-metallic minerals for sale or use by the operator and includes the use of mining equipment or techniques to remove materials from the in-place non-metallic mineral deposit, as well as associated activities such as excavation, grading, dredging, loading and unloading. Also, it includes processes carried out at a non-metallic mineral mining site that are related to the preparation or processing of the mineral aggregates or non-metallic minerals obtained from the non-metallic mineral mining site, such as, but not limited to, stockpiling of materials, blending mineral aggregates or non-metallic minerals with other mineral aggregates or non-metallic minerals, grading, crushing, screening, and scalping.
- (22) **Monitoring well. Also, “test” or “observation” well.** Means a well constructed with the purpose of obtaining information about groundwater. This includes wells to quantify water levels, wells to collect samples for analysis, and observation wells for pumping tests.
- (23) **Non-Metallic Minerals.** Means a product, commodity or material consisting principally of naturally occurring, organic or inorganic, non-metallic, non-renewable material. Non-metallic minerals include, but are not limited to, stone, sand, gravel, clay, peat, and topsoil.
- (24) **Normal Routes.** Gravel roads and those paved roads that are subject to normal load and dimension maximums as defined by statute.
- (25) **Notice of Reclamation.** Means a document recorded with the Washtenaw County Register of Deeds, signed by the titleholder(s), which provides notice that a site is subject to a reclamation plan.
- (26) **Operator.** Means an owner and/or lessee of mineral rights or any other person engaged in or preparing to engage in extraction activities with respect to mineral rights within an existing or proposed extraction area.
- (27) **Ordinance.** Means the Ann Arbor Charter Township Mineral Mining Ordinance, as amended.

- (28) **Overburden.** Means earth materials situated below the layer of topsoil and above the mineral deposit to be extracted from the site which must be removed prior to mining.
- (29) **Permit.** Means a document issued pursuant to the Ann Arbor Charter Township Mineral Mining Ordinance which authorizes the extraction of natural resources.
- (30) **Person.** Means any individual, corporation, limited liability company, partnership, or other legally recognized entity, or combination thereof.
- (31) **Process Water.** Means any water used in processing of extracted materials from the Extraction Area, or water from de-watering operations.
- (32) **Processing.** Means the washing, sorting, crushing, aggregating, grinding, blending, mixing, or cutting of extracted material from the extraction site.
- (33) **Reclamation.** Means the reconditioning, rehabilitating or restoring of the extraction area and associated property, or portions thereof, to a self-sustaining, long term useful purpose which is compatible with contiguous land uses, which protects the natural resources, including controlling of erosion and the preventing of land or rock slides and air and water pollution, and which includes the re-establishing of vegetation, soil stability and establishing of safe conditions appropriate to the intended use of the land in accordance with the Township’s Master Plan and the permit conditions allowing for excavation and/or processing on the site.
- (34) **Runoff.** Means water from rain, snowmelt, irrigation, or other source that flows over the land surface.
- (35) **Sediment (or Settling) Ponds.** Means a series of ponds that are designed to remove fine particles from water used for processing materials extracted from the site.
- (36) **Site.** Means a parcel of land in the Township upon which activities are conducted subject to the Ordinance.
- (37) **Surface Water.** Means water that is on the earth’s surface, such as in a stream, river, lake or reservoir.
- (38) **Topsoil.** Means the fertile, dark-colored surface soil; the upper layer of soil, usually richer than the subsoil; generally, the “A” horizon.
- (39) **Water Table.** Means the surface of unconfined groundwater at which the pressure is atmospheric. The water table is found at the level at which water stands in wells that penetrate the unconfined groundwater zone.

- (40) **Wetland.** Means a land or water feature, commonly referred to as a bog, swamp, or marsh, inundated or saturated by water at a frequency and duration sufficient to support, and that under normal circumstances does support, hydric soils and a predominance of wetland vegetation or aquatic life.

(c) **CONDITIONAL USE PERMIT REQUIRED.**

Mineral mining shall require a conditional use permit, as described in Chapter 74, Article II, Division 3, as amended.

(d) **REQUIRED INFORMATION.**

- (1) **Comprehensive Plan.** The applicant shall submit a comprehensive plan that provides the following information:

- a. All information required under Chapter 74, Article II, Division 3, Conditional Use Permits, and Chapter 74, Article II, Division 4, Site Plan Review.
- b. **Property Use Plan.** A property use plan that provides the following information:
  1. Boundary lines of the property; dimensions and bearings of the property lines, correlated with the legal description;
  2. Aerial photo, showing property and adjacent areas, location and outline of wooded areas, streams, marshes, and other natural features;
  3. Existing site improvements such as buildings, drives, wells, and drain fields;
  4. Existing topography at contour intervals of two feet;
  5. Location and description of soil types;
  6. Tree areas and other natural features to be retained, and/or impacted;
  7. Location and width of driveways from the site and sight distances on public roads at intersections with these driveways;
  8. Extent of future mining areas and depth thereof;
  9. Location and nature of structures, including pipes for water movement, and stationary equipment to be located on the site during mining operations; these structures shall also be shown on preliminary and final site plans;
  10. An estimate of the kind and amount of material to be withdrawn from the site and the expected termination date of mining operations;

11. Description of all operations to be conducted on the premises, including the phasing of such operations, such as, but not limited to, loading and unloading, excavating, crushing, sorting, and washing operations, and the type, size, power source and nature of equipment to be used with each operation;
  12. Description of pollution and erosion control measures;
  13. Certified statement by a qualified engineer, with supporting data and analyses, concerning expected impact on the water table and water supply wells in the vicinity of the site; and
  14. Map showing truck transportation routes to and from the site.
- c. **Market Analysis.** The applicant shall submit a report prepared by a geologist or other experts with credentials satisfactory to the Township Board to demonstrate that the natural resources to be extracted are valuable, and the applicant can receive revenue and reasonably expect to profit from the proposed mineral mining operation. The applicant shall also provide documentation to demonstrate that there is a need for the natural resources to be mined by either the applicant or in the market served by the applicant.
- d. **Reserve/Exploration map.** A Reserve/Exploration map and cross sections shall be prepared by an engineer or geologist and certified to the Township as true and accurate showing the extent, location and nature of all subsurface materials on the proposed extraction site on a topographic map including:
1. Estimated areal extent of deposit limits of materials to be mined;
  2. Depth and lowest elevations of exploration (e.g., drill holes) and the claimed deposit of materials to be extracted from the site;
  3. Groundwater elevations;
  4. Estimated quantity of reserves;
  5. Depth and estimated quantity of topsoil to be stripped;
  6. Depth, lower elevations and estimated quantity of overburden to be stripped; and
  7. Ten (10) foot contour intervals indicating the anticipated vertical and horizontal extent of excavation below the existing surface elevations.

- e. **Site Natural Features Inventory Map.** The Applicant shall provide a map and associated narrative describing the location and type of natural features on or adjacent to the site, including wetlands, watercourses, 100-year floodplains, woodlands, landmark trees, steep slopes, endangered species habitat as identified by the Michigan Department of Natural Resources, and groundwater recharge areas. This map shall be consistent with that required for the preliminary site plan pursuant to Section 74-175.
  
- f. **Hydrogeological Work Plan and Pre-study Meeting.** Prior to commencement of the hydrogeological study required in subsection g. below, a hydrogeological work plan shall be prepared and submitted to the Township to communicate aspects of the hydrogeological study. A pre-study meeting shall be held with the Applicant and the Township and relevant consultants to discuss the work plan and the parameters of the proposed hydrogeological study. The hydrogeological work plan shall contain:
  - 1. A brief assessment of geology and existing hydrogeological data within one (1) mile of the proposed mining site. This may be based upon readily available literature and online references;
  - 2. Identify applicable permits required from the United States, State of Michigan, County or other governmental entity, and any applications, correspondence or conversations pertaining to the same;
  - 3. A description of the proposed drilling methodology and monitoring well installation methods to evaluate groundwater presence and flow direction;
  - 4. A table summarizing the number of proposed soil borings and monitoring wells, the likely depth of drilling, along with corresponding rationale;
  - 5. A table summarizing the number of surface water gauging locations;
  - 6. A map or description showing the proposed surface water gauging, soil boring, and monitoring well locations;
  - 7. A map showing the property boundary and the conceptual or anticipated direction of groundwater flow;
  - 8. A table summarizing the frequency to collect water level and quality measurements;
  - 9. A description of proposed monitoring well construction; and
  - 10. A description of the survey methodology for determining groundwater and surface water elevations.
  
- g. **Hydrogeological Study.** A hydrogeological study shall be prepared by a certified professional geologist or professional engineer who specializes in hydrogeology

and who certifies the accuracy of the contents and findings of the study. The Planning Commission may have the study reviewed by the Township's consultant at the Applicant's expense. The hydrogeological study is intended to document the hydrogeological conditions on site and within the influence of the site and assess any impact the proposed mining operation may have on the water resources of the Township (both on and off-site). The applicant's consultant shall provide a report addressing the following minimum hydrogeological data and evaluation requirements (the hydrogeological report shall be a "stand alone" document). Some of the following information may be reduced at the discretion of the Township based upon the evaluation of the hydrogeological work plan described in subsection f.:

1. **Site and Mineral Mining Operation Description.**

i. Site location map(s) showing the regional setting. At a minimum, the map should cover an area with a two-mile radius measured in all directions from the center of the property. Depending on specific conditions for a particular site the Township may require an increase in the geographic area covered by this map. The site location map must show the following features:

- (1) Township name;
- (2) Township and range numbers;
- (3) Scale and north arrow;
- (4) Section lines and numbers;
- (5) Highways and roads;
- (6) Location of existing lakes, streams, drainage ditches, surface impoundments and wetlands within the geographic area covered by this map;
- (7) Boundaries for the property where the proposed mineral mining operation will occur;
- (8) Proposed limits of excavation;
- (9) Location and identification of any previous soil borings and wells, including abandoned and destroyed wells, and surface water monitoring points.

- ii. A detailed site map that covers an area that extends at least two thousand (2,000') feet beyond the property boundaries of the permit applicant. This map must depict:
  - (1) Scale and north arrow;
  - (2) Applicant's property boundaries;
  - (3) Boundaries and owner names for all adjoining land parcels;
  - (4) Based on available public information, provide the location of all existing lakes, streams, drainage ditches, and wetlands on-site and within two thousand (2,000') feet of the property boundaries;
  - (5) Based on available public information, provide water surface elevation for all existing lakes, streams, drainage ditches, and wetlands located on-site and within two thousand (2,000') feet of the property boundaries.
  - (6) Wetlands expected to be impacted by the extraction operation;
  - (7) Boundaries of proposed extraction area; and
  - (8) Land surface elevations for the property shown by appropriately selected contour intervals.
- iii. Describe the existing land use, site conditions and the basic scope of the operation.

2. **Field Investigations.**

- i. Test borings must be drilled to determine the subsurface geology. A minimum of four (4) test borings shall be located outside the perimeter of the proposed Mineral Mining Operation. At least one boring shall be near the center of the proposed Extraction Area. These borings must be drilled to a depth sufficient to ascertain the geology of the aquifer systems that could be impacted by the Mineral Mining Operation. The locations of these borings must be clearly shown and labeled on the detailed site map. Descriptive logs for each boring should be prepared by a geologist using the Unified Soil Classification System ("USCS") to describe the different layers. Boring logs must contain the following minimum information:

- (1) Boring name;
- (2) Land surface elevation;
- (3) Depth of boring;
- (4) Description of different layers encountered to the bottom of the boring;
- (5) Construction details;
- (6) Depth to water.

- ii. Permanent monitoring wells shall be installed on site near the perimeter of the site and outside of any proposed excavation or construction. If more than one aquifer is encountered in the test borings, separate monitoring wells must be screened in each aquifer to determine the vertical head gradient between aquifers, groundwater flow direction, and water quality in each aquifer, and to calculate the impacts from lowering the head in one aquifer and raising the head in the other aquifer. The monitoring well construction logs shall be included in the report appendix. Monitoring wells shall be constructed to requirements of the United States EPA, EGLE and Washtenaw County Environmental Health. Applicant shall not abandon or remove permanent monitoring wells without the prior approval of the Township. The groundwater monitoring system shall consist of a sufficient number of wells at appropriate locations and depths to collect groundwater samples that provide the required information. Such monitoring system shall accurately measure the quality and levels of background groundwater that has not been affected by mining. Such monitoring system shall also accurately measure the quality and levels of groundwater passing the downgradient boundary of the property which ensures detection of groundwater contamination or changes in water chemistry in the subject aquifer and other aquifers potentially affected by the Mineral Mining Operation. In addition, the monitoring system must include a minimum of one upgradient (highest groundwater elevation on site) and three downgradient (lowest groundwater elevation on site) monitoring wells; however, additional monitoring wells must be installed as necessary to accurately represent the quality of background groundwater and the quality of groundwater leaving the property boundary.
- iii. Water levels and water quality in the monitor wells and on-site wetlands, streams, and lakes shall be measured. All static water levels shall be related to a common USGS datum and elevations

shown on a map and in a report table. Water quality parameters shall be collected in accordance with the process outlined in the baseline water quality section below.

3. **Baseline Water Quality.**

i. Groundwater Monitor Wells. All monitor wells shall be sampled and analyzed in accordance with EGLE sampling and analysis protocols prior to commencing extraction operations to establish background groundwater quality. A minimum of two (2) sampling events are required (four or more are preferred), one event during a high groundwater elevation period and the other during a low groundwater elevation period. All laboratory testing shall be conducted in conformance with the most sensitive current applicable U.S. Environmental Protection Agency Test Method available, and data shall be compared to EGLE Generic Residential Cleanup Criteria and Screening Levels promulgated or issued under Part 201 of the Michigan Natural Resources and Environmental Protection Act, MCL 324.20101 et seq., as amended. Testing shall include the following indicator parameters:

- (1) static water level elevation;
- (2) groundwater temperature;
- (3) specific conductance;
- (4) pH;
- (5) dissolved oxygen;
- (6) redox potential;
- (7) total dissolved solids (TDS);
- (8) The concentrations of each the following: chloride, sodium, calcium, sulfate, bicarbonate, magnesium, manganese, iron, potassium, phosphorus, and nitrate nitrogen;
- (9) Resource Conservation and Recovery Act (RCRA) metals, and
- (10) total petroleum hydrocarbons (TPH);
- (11) If TPH is detected, then the following testing is also required:

- (a) Polycyclic aromatic hydrocarbons (PAH)
  - (b) Volatile organic compounds (VOCs) and Semi-volatile organic compounds (SVOCs)
  - (c) Methyl tert-butyl ether (MTBE)
- ii. Surface Water. After conferring with the applicant's consultant, the Township's consultant shall determine, the number, type and location of surface water samples necessary to identify potential surface water impacts from extraction operations. Each river, stream and other readily flowing body of water shall be sampled in locations, subject to obtaining rights of access, to be determined in consultation with the Township's consultant for the following parameters:
  - (1) water elevation;
  - (2) base/bed elevation;
  - (3) pH;
  - (4) conductivity;
  - (5) total dissolved solids (TDS); and
  - (6) total suspended solids (TSS).
  - (7) RCRA metals;
  - (8) total petroleum hydrocarbons (TPH);
  - (9) If TPH is detected, then the following testing is also required:
    - (a) PAHs;
    - (b) VOCs and SVOCs
    - (c) MTBE.

4. **Site Characterization.**

i. Site conceptual model (written and illustrative) showing conceptual groundwater flow at the site shall be provided for each aquifer within the extraction zone or potentially affected by the extraction operation. The following site characterization data shall be provided:

(1) Description of Geologic Units. The composition, structure and distribution of each layer, and the range of variation in each including the soil or rock description and classification;

(a) A map showing the location of geologic cross-sections;

(b) Multiple geologic cross-sections passing through the proposed Extraction Operation and all areas of concern (e.g., wetlands, streams, lakes, residential wells, etc.) to a distance of approximately two miles from the center of the site. On these cross-sections, show the following information:

a. Vertical and horizontal scale;

b. Existing land surface elevations;

c. Boundaries and depth of any proposed excavation;

d. Well locations and logs used to prepare the cross-sections;

e. Thickness and extent of the subsurface geologic strata;

f. Location and depth of all water supply wells, wetlands, streams, and lakes falling on and near the cross-section; and

g. Static water level elevations.

(2) Description of Hydrogeologic Units. Descriptions of the hydrogeologic units within the saturated zone including their thickness, hydraulic properties, such as transmissivity and storage coefficient or specific yield; descriptions of the role of each as confining beds, aquifers, or perched saturated

zones; and their actual or potential use as water supply aquifers.

- (a) Brief discussion of the regional and local hydrogeology.
- (b) A contour map of the water table elevations, including water-level elevation measurements from on-site wetlands, streams, and lakes and that depicts the site boundaries.
- (c) Description of the Flow System. Description of the groundwater flow system, illustrated with potentiometric contour lines and streamlines on appropriate plans, and specifically describing the following and discussing their significance with respect to groundwater:
  - a. Direction and rates of groundwater movement within the identified hydrogeologic units, including the vertical components of flow. Seasonal or other temporal fluctuations in potentiometric head. The change in recharge rates that will occur due to the presence of the proposed mining operation, or for renewal plans the change in recharge rates that may have occurred
  - b. The role of confining beds with regard to limiting downward or upward movement of groundwater.
- (d) Tabulate and summarize water quality data with tools such as tables that highlight detection of organic compounds and graphics such as piper and stiff diagrams that highlight the distribution of cations and anions. Analytes shall be compared to water quality standards.
- (e) The applicant shall provide a numerical model of the area within a radius of two-miles from the site if deemed necessary by Township consultants, or Planning Commission, based on the nature of proposed operations, the potential for contamination, or known or anticipated declines in water levels. The

parameters of the numerical model shall be agreed to by the Township.

5. **Potential Environmental Impacts.** A narrative that documents existing site conditions and identifies potential short-term and long-term impacts on the Township water resources during and after the proposed Extraction Operations shall be provided. At a minimum, this section must contain the following elements:
  - i. Description of present land use and the relationship of the site to surrounding properties. The site location map shall be used for this description.
  - ii. Discussion of the proposed Extraction Operation and schedule, along with the intended future use of site. The topographic map showing proposed extent of the Extraction Operation and different phases, if applicable.
  - iii. Water quality impacts on existing surface water and groundwater quality and quantity, and an analysis and conclusion discussing the expected impacts;
  - iv. If applicable, prepare maps and cross-sections showing the nature and extent of the hydrogeologic impact(s), (e.g. water-level decline or increase).
  - v. Elevations of groundwater (e.g. project water level decline/rise in each aquifer) and surface water bodies on and proximate to the site, considering both short-term and long- term potential impacts.
  - vi. If the Mineral Mining Operation creates or enlarges an excavated lake, the evaporation impact shall be analyzed through a water budget analysis using EGLE 's applicable guidance for how to perform this analysis.
6. **Additional Hydrogeological Data.** The Planning Commission may require additional data related to the site, including, but not limited to, the following:
  - i. If the applicant is applying to dewater, the applicant shall provide a numerical model of the area within a radius of two-miles from the site to determine water-level decline over the life of the mine at various distances from the center of the Mineral Mining Operation. The parameters of the numerical model shall be agreed to with the Township.

- ii. **Surface Water Diversions.** Additional investigations may be needed to demonstrate that no diversion of surface water will impact existing surface water bodies or wetlands located on-site or very near the proposed Mineral Mining Operation. Site operation, stockpiling, and reclamation plans must be evaluated for the potential to divert water toward an excavation and away from an existing surface water body or wetland.
  
- h. **Reclamation Lake Creation.** Where lakes are proposed as part of site reclamation a hydrogeological investigation, consistent with what is required under Part 301 of the Michigan Natural Resources and Environmental Protection Act, MCL 324.30101 et seq., as amended must be provided.
  
- i. **Transportation Routes.** The Township may, as a condition of the conditional use permit, designate which public roads within the Township that trucks or any other vehicle accessing the site may use. Any entrances and exits to and from the site shall be adjacent to all-season primary road, if possible. Transportation routes through the Township shall minimize truck traffic through residential areas. Trucks used to transfer the natural resources shall follow a route that poses the least interference with other traffic, minimizes traffic through residential areas, and uses public streets constructed for high volumes of heavy truck traffic. The applicant must submit a proposed transportation route plan including:
  - 1. The route to be used for the proposed operation, accompanied by a letter of preliminary comments from the road commission impacted by the transportation route.
  - 2. A description of all proposed transportation routes to be used to transport natural resources from the mining area to all freeways or state trunk line highways proposed to transport natural resources to destinations, other than for local deliveries.
  - 3. Estimated type, size, number, and hourly count of trucks leaving the site daily, during peak season and annually;
  
- j. **Mining Plan.** A mining plan shall be provided that contains the following:
  - 1. Topographical map;
  - 2. Nature of operation, including:
    - i. Methods of excavating, including excavation equipment;

- ii. Methods of transporting material from mine site to processing plant, including earth handling equipment to be used on-site;
  - iii. Types of processing activities, such as screening, washing, crushing, etc.;
  - iv. Estimated quantity, use and disposal of material fines;
  - v. Size of settling ponds;
  - vi. Estimated annual production in tons;
  - vii. The contemplated phasing for the operations as well as a date for completing the mineral mining operation, such date to be based upon the estimated volume of material to be extracted and an average annual extraction rate; and
  - viii. If the proposed extraction activity includes beneficiation or treatment of the extracted material, the application documents shall include specific plans depicting the methods, techniques, and manufacturer's material safety data sheets on all chemicals, or other additives that are not natural to the site, that will be utilized in the process. The operator shall also obtain all applicable state and federal permits prior to beginning the beneficiation process.
- k. **Noise control plan.** A noise control plan prepared by a qualified professional estimating the noise levels at the property boundaries containing the Mineral Mining Operation, at successive stages of the operation and along the transportation route shall be provided. See 74-592a(f)(15).
- l. **Erosion control plan.** An erosion control plan shall be provided which provides a complete description of all the soil erosion measures, including (but not limited to) all erosion strategies and control measures such as silt fences, vegetation screens, sediment basins, and settling ponds; location of control measures particularly on bare surfaces including steep slopes; time schedule and installation description for each control measure; all temporary and permanent measures and maintenance of each. The plan shall conform to any and all requirements of soil erosion and sedimentation requirements promulgated by Federal, State and County government as well as the Township soil erosion and sedimentation requirements pursuant to Section 58-119. The applicant shall submit this plan to the appropriate County agency for approval. The plan approved by the Township shall be incorporated into the extraction permit issued under this Ordinance.
- m. **Pollution prevention plan.** A pollution control plan containing a complete description of proposed pollution prevention methods based on National Fire

Protection Association, State of Michigan and Washtenaw County pollution prevention laws shall be provided. The plan must address all sediment, storm water and settling basins, as well as any probable impacts from processor activities or on-site fuel or chemical storage;

- n. **Lighting plan.** A lighting plan showing the location of exterior lighting on the site including a photometric plan shall be provided. Exterior lighting shall conform to Section 74-606 of this ordinance.
- o. **Environmental impact analysis (EIA).** Applicant shall prepare an environmental impact analysis addressing the impact the operation will have on the site's natural features, flora, fauna as well as impacts on human and natural environments on adjacent lands and along the transportation route. Applicant shall identify any mitigation measures needed to eliminate or minimize these impacts.
  - 1. At a minimum the statement should address the following: noise; dust; mud; drainage; erosion; sedimentation; views of the mine site from adjacent roads and properties; wetlands; floodplains; special habitats; threatened or endangered species; areas and features of historic, archeological and natural significance; truck traffic and access to and from the site; traffic study; compatibility with adjacent land uses; impacts to residents adjacent to site and along transportation route; changes in social patterns and/or economic conditions of residents; and any additional items that the applicant, Planning Commission or Board of Trustees deems significant. This section is intended to provide an environmental impact analysis using the assembled data identified in the previous sections. The applicant should analyze how the various data interrelate and how the proposed operation will affect the human and natural environments. Environmental impacts identified in the hydrogeological study should be incorporated into the EIA and related to the discussions of other impacts; although the hydrogeological support data does not have to be re-stated, it should be referenced in the environmental impact analysis.
  - 2. In addition to the items in section immediately above, the EIA shall address the following issues:
    - i. An inventory of the physical environmental elements of the proposed site;
    - ii. A description of the quality of the environment as it exists prior to commencement of mining activity or, for a renewal, as it exists at the time of renewal;
    - iii. A description of the environment as projected at the end of mining activity;

- iv. Compatibility of the proposed extraction activity with adjacent existing land uses and future land use plans/Township Master Plan;
  - v. Impact of the proposed extraction activity on flora and wildlife habitats;
  - vi. Economic impact of the proposed extraction activity on the surrounding area;
  - vii. Effects of the proposed extraction activity on groundwater supply, level, quality, and flow on site and within two miles of the proposed extraction activity;
  - viii. Effects of the proposed activity on adjacent surface water resources;
  - ix. Effect of the proposed activity on air quality within one thousand (1,000') feet of the proposed extraction; and
  - x. Whether the proposed activity is located within one thousand (1,000) feet of a residence, two thousand (2,000) feet of a school, and/or 500 feet of a commercial development.
- p. **Property value impact analysis.** Applicant shall provide a report on the impact of the applicant's Mining Operation use on property values in the vicinity of the mineral mining property and along the proposed transportation route serving the property.
- q. **Reclamation plan.** A reclamation plan showing that the entire property will be left in a form for development with uses that are permitted in the district, relating such reuse to existing uses or probable uses for surrounding properties, shall be provided and shall include the following elements:
- 1. All rehabilitation activity shall comply with soil erosion and sedimentation requirements of Part 91 of the Michigan Natural Resources and Environmental Protection Act, MCL 324.9101 et seq., as amended.
  - 2. Proposed topography at contour intervals to provide adequate grading information, subject to the Township engineers recommendation, with two (2) feet being the minimum. Such grade and slope designations shall be included with respect to areas proposed to be beneath the surface of permanent water areas.
  - 3. Schedule of progressive rehabilitation: The plan should provide that after mining is completed on one specified area, reclamation shall commence in that area before mining continues on other areas of the site. The plan shall provide that as mining areas are worked out or abandoned they are

progressively rehabilitated to a condition of being entirely lacking in hazards, inconspicuous, and blended with the general surrounding ground form so as to appear natural.

4. Proposed ground cover and other plantings to stabilize the soil surface and to beautify the restored area, as well as to protect from erosion and siltation.
5. Concept plan(s) for the proposed end use of the site when restored drawn to scale, and prepared by a professional engineer, or licensed landscape architect, registered in the State of Michigan. The concept plan shall include:
  - i. The proposed circulation system, including the location of internal roads and connection to the external road network.
  - ii. Delineation of drainage patterns, identification of lakes, flood plains, wetlands, and, if residential use is proposed, conceptual layout of lots.
  - iii. A description of the permits and other legal steps that would be required to implement the proposed end-use.
6. A landfill or other disposal or refuse site will not be considered a suitable or satisfactory use.
7. A description of the construction and rehabilitation techniques that will be used, including:
  - i. A description of methods and materials to be used in restoring the site.
  - ii. The proposed date for completing all extraction operations and handling of all spoils and extraneous materials.
  - iii. The date for completing the final reclamation.
  - iv. A list of all seeding and planting materials, which must include native stock.

**(e) CONDITIONAL USE PERMIT STANDARDS AND REVIEW CRITERIA**

- (1) **Conditional use permit required.** Mineral mining shall require a conditional use permit, as described in Section 74-131. It shall be a violation of this Ordinance for any person or entity to engage in the extraction of natural resources without an approved conditional use permit approved by the Township, or to engage in mining activity that is not expressly authorized in an approved conditional use permit.

- (2) **Conditional use permit standards.** If the Township finds any of the following, it shall not grant a conditional use permit: (i) there are no valuable natural resources located on the property; (ii) that there is not a need for the natural resources by the applicant or in the market served by the applicant; or (iii) a very serious consequence would occur from the proposed mining activity or (iv) if requirements of this ordinance have not been met. The burden of demonstrating competent, material and substantial evidence meeting each standard is on the applicant. The applicant's failure to provide sufficient information, data or documentation necessary to meet a standard is a basis for denial of the application. In determining if "very serious consequences" would occur, the applicant and Township must consider the cumulative impacts of all adverse impacts. The following factors shall be considered in making that determination that a very serious consequence would occur:
- a. The relationship of extraction and associated activities with existing land uses.
  - b. The impact on existing land uses in the vicinity of the property.
  - c. The impact on property values in the vicinity of the property and along any proposed transportation route serving the property, based on credible evidence.
  - d. The impact on pedestrian and traffic safety in the vicinity of the property and along any proposed transportation route serving the property, including:
    1. The average and maximum number of loaded trucks per day anticipated to leave the proposed operation during the operating season.
    2. The impact on motorized and non-motorized vehicular and pedestrian traffic, resulting from the number, size, weight, noise, and fumes of vehicles, vehicular control, braking, and vehicular movements in relation to routes of traffic flow, proximity and relationship to intersections, adequacy of sight distances, location and driveways and other means of access, off-street parking and provisions for pedestrian traffic.
    3. Overall, the impact of the proposed use, including transportation route(s), on children, older persons, and handicapped/disabled persons, with consideration to be given to the extent to which such persons shall be required to forgo or alter their activities.
  - e. The impact on other identifiable health, safety, and welfare interests in the township.
  - f. The overall public interest in the extraction of the specific natural resources on the property.
  - g. The impact on other important natural resources, such as wetlands, lakes, watercourses, aquifers, natural habitats and similar environmental resources, the

preservation of which is necessary for the public health, safety and welfare of the Township.

- (3) In addition to the above standards, the proposed use must also meet the standards for all conditional use permits, Section 74-136 and 74-137, and for preliminary site plans, Section 74-175b and where applicable, final site plans, section 74-176c.
- (4) **Detailed mining requirements.** Mining operations shall meet the following requirements:
  - a. Side slopes around the active extraction-area perimeter shall have a grade not exceeding one (1) vertical foot per four (4) horizontal feet. The banks adjacent to any submerged areas shall have a grade not exceeding one (1) vertical foot per six (6) horizontal feet, out to a depth of six (6) feet.
  - b. Extraction areas which are inactive for over one year must be stabilized and slopes reduced to 1:4.
  - c. The post-reclamation use proposed in the concept plan must be acceptable based on a review of the zoning district, Township master plan, surrounding land uses, and site characteristics.
  - d. Upland Slope. All upland reclamation grades for extraction operations shall have a slope not steeper than one (1) foot vertical rise in a four (4) foot horizontal plane, except that the Planning Commission may approve plans that allow steeper reclaimed slopes in order to provide a smoother transition to undisturbed topographic features or the protection of existing environmental features.
  - e. Submerged slope. All submerged grades established by the excavation of material below the water table and the creation of a water body shall have underwater slopes as follows:
    1. For water bodies the submerged grades shall be one (1) foot vertical rise in a six (6) foot horizontal plane, or flatter, to a depth of six (6) feet, unless designated for future public access or the future use is not specified.
    2. For all water bodies where the future use is not specified and/or the reclamation plan designates a final use after mining as public access, the area designated for public access shall have submerged grades of one (1) foot vertical rise in a ten (10) foot horizontal plane, or flatter, to a depth of six (6) feet as measured from the low water elevation.
  - f. Wetlands. Mining in wetlands is discouraged. In instances where mining in a wetland is proposed, a township wetland use permit is required. If the wetland use permit has been approved by the Township, mitigation may be required.

- g. Surface Water. Before disturbing the surface of the site and removing topsoil, all necessary measures for diversion and drainage of runoff from the site to prevent pollution of waters of the state shall be installed in accordance with approved site reclamation plans. Diverted or channeled runoff resulting from reclamation may not adversely affect neighboring properties. Site reclamation shall be conducted and completed in a manner that assures compliance with the EGLE water quality standards for surface waters.
- h. Groundwater. The site shall be reclaimed in a manner that does not cause a permanent lowering of the water table resulting in adverse effects on surface waters or a significant reduction in the quantity or quality of groundwater reasonably available for future users of groundwater. Site reclamation shall be conducted in a manner which does not degrade groundwater quality in the aquifers. Where on-site lakes or ponds are connected to the groundwater, to ensure that future on-site uses adjacent to these lakes and ponds do not lead to degradation of the quality of the groundwater, enforceable conditions that protect groundwater quality must be provided in a restrictive covenant or master deed to run with the land.
- i. Endangered Species. If threatened or endangered species are identified within the extraction area boundaries, the extraction and reclamation plan shall indicate how the threatened or endangered species shall be protected.
- j. Setbacks. A two hundred (200') foot minimum setback distance from the property line to the reclamation area boundary line shall be provided on all reclamation plans. The Township may approve plans requiring more than the minimum setback to protect public health, safety, welfare, and the natural environment.
- k. Road track out control plan to alleviate mud, soils, dust and other materials from the under carriage, and wheels of trucks resulting from the mining operation, which may include sweeping; spraying the under carriage, wheels and wheel wells; or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of the road commission(s). This plan is to be reviewed annually by the Township Board;
- l. Dust control plan to alleviate dust resulting from mining operations, which may include sweeping, paving, spraying water, windbreaks, strategic placement of stockpiles, or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of the road commission(s). This plan is to be reviewed annually by the Township Board;
- m. Prior to coming on-site, all imported fill materials shall meet the following specifications: (i) Materials shall be inert materials; (ii) Materials shall be free of contaminants, (iii) meet the definition of fill provided in this ordinance. Ann Arbor

Township may require imported materials be inspected and tested, at the applicant's expense, to determine that the materials are inert and free of contaminants. If the applicant, or persons associated with the applicant, seeks authorization from any federal, state or county governmental body or agency related to the importation of materials on a site, the applicant shall simultaneously file a copy of that application with the Township.

**(f) SPECIFIC OPERATING CONDITIONS**

(1) **De-watering.** Mineral Mining Operations shall not include de-watering operations for extraction or any other processing of natural resources unless all of the following conditions are met to the satisfaction of the Township:

- a. The hydrogeological study required under 74.592a(d)(1)g. demonstrates with a high degree of confidence and to the satisfaction of the Township that no adverse impacts, when considered alone or in combination with other adverse impacts that may occur from the mining operations, will result in very serious consequences due to the proposed de-watering operations, including but not limited to, adverse impacts to domestic water supply wells or natural resources;
- b. An aquifer monitoring plan, including monitoring wells installed and monitored at the operator's expense, is provided for Township review and, if satisfactory to the Township, approval; and
- c. The Conditional Use Permit specifically states that if there is any evidence of adverse impact to water resources, as determined by the Township, de-watering operations shall immediately cease. The applicant shall immediately report any such known adverse impacts to the Township Supervisor and mitigate the same. De-watering operations may not resume until a plan to address the adverse impact has been submitted by the applicant and approved by the Township.
- d. When de-watering or discharge is proposed, the public notice must include that de-watering or discharge has been requested.

(2) **Discharge.** Mineral Mining Operations shall not include discharge of process water out of the extraction area unless all of the following conditions are met to the satisfaction of the Township:

- a. The comprehensive hydrogeological study required under 74.592a(d)(1)g. demonstrates with a high degree of confidence and to the satisfaction of the Township that: (i) any discharge out of the extraction area returns water directly and in a substantially undiminished volume to any aquifer affected by an approved de-watering operation; and (ii) this discharge has no adverse impacts, when considered alone or in combination with other adverse impacts that may occur from the mining operations, that will result in very serious consequences to the quality

and quantity of water feeding water supply wells that draw from the affected aquifer, wetlands, water bodies, or other natural features.

- b. The Conditional Use Permit specifically states that if there is any evidence of adverse impact to water resources, as determined by the Township, discharge operations shall immediately cease. The applicant shall immediately report any such known adverse impacts to the Township Supervisor and mitigate the same. Discharge operations may not resume until a plan to address the adverse impact has been submitted by the applicant and approved by the Township.
- (3) **Blasting.** Mining operations shall not include blasting operations for extraction of natural resources unless all of the following conditions are met to the satisfaction of the Township:
- a. A comprehensive blasting plan and impact analysis demonstrates that, with a high degree of confidence and to the satisfaction of the Township that no adverse impacts, when considered alone or in combination with other adverse impacts that may occur from the mining operations, will result in very serious consequences due to the proposed blasting operations including but not limited to, adverse impacts to schools or residences within 1 mile of the mineral mining operation property line. Adverse impacts include sound greater than 85dB at the property line or at residential or educational properties within 1 mile, vibrations, dust that can be discerned at the property line or at residential or educational properties within 1 mile of the boundary of the Mineral Mining Operation site.
  - b. Blasting may not occur within 1500 ft of an adjacent residence.
  - c. Blasting shall be underground.
  - d. Blasting may only occur between the hours of 1:00 and 3:00 p.m., one day per week and not on a Saturday, Sunday or legal holiday.
  - e. Blasting shall not produce debris outside the excavation area.
  - f. For each occurrence of blasting, at least one week notice of blasting shall be provided to the township and all residents within 1 mile of the mineral mining operation boundary.
  - g. A blasting monitoring plan, including noise and vibration measurements which shall be installed and monitored at the operator's expense, is provided for Township review and, if satisfactory to the Township, approval.
  - h. The Conditional Use Permit specifically states that if there is any evidence of adverse impact due to the blasting activity, blasting operations shall immediately cease. The applicant shall immediately report any such know adverse impacts to the Township Supervisor and mitigate the same. Blasting may not resume until a

plan to address the adverse impact has been submitted by the applicant and approved by the Township.

- (4) **Access.** There shall be no more than one access point from a public road to such lot for each 660 feet of front lot line. Such entrance shall be located not less than 500 feet from an intersection of two or more public roads.
- (5) **Hours of Operation.** Unless further limited by other sections of the Ann Arbor Charter Township Mineral Mining Ordinance, Mineral Mining Operations shall be permitted only between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, and between 8:00 a.m. and 12:00 noon on Saturday. Operations shall not be permitted on Sunday or legal holidays.
- (6) **Setbacks.** The following setbacks shall be required:
  - a. A setback of the Extraction Area from the nearest public road right-of-way or adjoining property line of not less than 100 feet, and not less than 500 feet from the nearest residential dwelling on adjacent property as of the date of submittal of the plan for extraction. Additional mitigation requirements for dust and noise may be required at the discretion of the Township.
  - b. The following minimum setbacks of fixed machinery, equipment and buildings, and equipment used for screening, crushing and washing:
    1. Not less than 300 feet from the nearest public road right of way.
    2. Not less than 300 feet from the nearest adjoining property line.
  - c. A setback of 150 feet from the perimeter of the site to internal roads, and 300 feet from the perimeter of the site to all stockpiles.
- (7) All roads, driveways, parking lots, and loading and unloading areas within 100 feet of any lot line shall be paved or treated in an environmentally sensitive manner so as to limit the impact of windborne dust on adjoining lots and public roads.
- (8) The Operator shall be held responsible for all public roads upon which trucks transport materials from the mineral mines to keep those roads in a drivable condition at least equal to that which existed prior to the beginning of mineral mining operations; and to keep the roads dust free and to clean any and all spillage of material and dirt, rock, mud, and any other debris carried onto the roads by these trucks or other equipment. Trucks must be limited to those that are within load and dimensional limits for County Normal Routes including seasonal load limits, and trucks shall not be operated from the mine when conditions along the route are unsafe due to rainy or icy conditions
- (9) Any noise, odors, smoke, fumes, or dust generated on the site by any excavating, loading, or processing operation and able to be borne by the wind shall be confined

within the boundary lines of such site as much as possible so as not to impact any adjoining lot or public road and shall comply with any applicable Township ordinances.

- (10) Truck loads shall be fully secured before leaving the site, and trucks shall not idle or queue outside of the Extraction Area or on public roads.
- (11) All areas within a mineral mine shall be progressively rehabilitated in accordance with the reclamation plan.
- (12) Only equipment owned or leased by the operator of the mineral mining operation and used in the operation of the mineral mine shall be stored overnight or for longer periods anywhere on the premises. Storage of any other equipment on the premises shall be prohibited.
- (13) Operator shall have obtained approval of a potable water supply and sanitary sewage disposal systems by the Washtenaw County Health Department.
- (14) All materials that are transported from the site must have been mined on site. No materials may be brought to the site for subsequent sale or transportation from the site.
- (15) Concrete, cement, or asphalt production shall not be allowed as part of a mineral mining operation.
- (16) **Perimeter Berms.** Prior to the commencement of any extraction operations under any Conditional Use Permit the Applicant/Owner/Operator shall have completed construction of a berm in accordance with the approved site plan, seeded to prevent erosion around those areas of the site where adjacent properties are exposed to the views and noise of the extraction operation and as provided in the approved site plan. The berm shall be of variable height with the top and outside sides of the berm varying in slope from four (4) feet horizontal to one (1) foot vertical to ten (10) feet horizontal to one (1) foot vertical. The berms shall not be uniform or geometric in shape and shall be blended into the natural landscape. The lower or “valley” parts of the berm shall be heavily planted with a mix of evergreen and deciduous trees and shrubs to create an effective visual screen and as provided in the approved site plan. Each berm shall be constructed so as to prevent surface water running off the berm onto any property adjacent to the site. The location of the berm shall be noted in the approved site plan. Exterior facing berms for settling ponds or similar structures are considered perimeter berms and shall meet this standard.
- (17) **Noise.** Noise levels at the boundary of the site shall not exceed 65dB. Noise levels caused by applicant’s truck traffic along the transportation route shall not exceed 82dB in a single occurrence, or 74dB based upon the arithmetic average of daily readings of maximum sound levels from truck traffic events during permitted hours of operations, such readings taken from noise monitors approved by the Township installed by the applicant at each entrance and exit to the site, and at off-site locations chosen at the

discretion of the Township and installed by the Township at the expense of the applicant along the designated route. The applicant's Noise control plan referenced in Section 74-592a(d)(1)(k) shall include the acknowledgment and agreement that if such average readings due to truck traffic to and from the site exceed 74 dB at any noise monitoring location, the applicant shall reduce the amount of daily trips to and from the mine until such noise readings fall within the permitted daily average limit of 74 dB, and the applicant shall reduce such trips accordingly upon each such occurrence.

- (18) The applicant shall demonstrate compliance with all of the provisions of Section 74-594, Performance Standards, as amended.
- (19) The Township shall require a schedule of water sampling, the frequency of which shall be determined by the Township. At a minimum, monitor wells shall be sampled and analyzed annually for the indicator parameters and two times per year for the full list of chemical parameters identified in Section 74-592a (d)(1)g.3.i., and compared to the EGLE Generic Residential Cleanup Criteria and Screening Levels promulgated or issued under Part 201 of the Michigan Natural Resources and Environmental Protection Act, MCL 324.20101 et seq., as amended, as well as baseline water quality data for the site, if available. At the option of the Township, annual residential and public water supply well sampling shall commence at a time based on consideration of groundwater flow rate, direction, and distance from the site boundaries. Water supply wells shall be sampled and analyzed for the parameters identified for baseline water quality data including water levels. The Township, at the expense of the applicant, may require additional testing frequency and/or analyses for additional parameters to better assess any potential water quality or quantity risks or concerns. The results of such water testing shall be provided to the Township as soon as they are available.
- (20) The applicant shall have an analysis of any water samples performed at a state-certified water quality laboratory. Tests shall be performed on water supply and monitor wells in accordance with standards and parameters jointly established by the Township's expert and the applicant's expert taking into consideration the type and level of extractive activities which have and/or which will occur on the site. In the event the Township's expert and applicant's expert disagree, then the Township's expert shall make the determination.
- (21) The Township shall be entitled to split at any time any samples taken by the applicant. The Township, at the expense of the applicant, may cause tests to be performed on the split samples. Results of such tests shall be provided to the applicant.

**(g) REPORTS AND INSPECTIONS**

- (1) **Annual Report.** Each year at the anniversary of approval of the Conditional Use Permit by the Township Board of Trustees, the Applicant/Owner/Operator shall submit a report to the Township, which shall be considered by the Township at the next meeting of the Township Board that is at least thirty (30) days after the date of submission of the report. The report shall include the following information:

- a. Tonnage and cubic yards of sand, gravel, and other materials removed from the mineral mining site.
- b. Description of reclamation activities undertaken during the year.
- c. Description of landscaping activities undertaken during the year.
- d. Total acres of unrestored, disturbed land from one annual inspection date to the next, including processing plant area, un-seeded berms and slopes, un-reclaimed areas, un-reclaimed shorelines, areas stripped of topsoil, and water areas where active extraction is occurring.
- e. Total acres of land reclaimed during the year, include amount and types of reclaimed land (e.g., acres of open water, acres of uplands, etc.) and total acres reclaimed since operations began at site.
- f. Summary of truck trips. A truck trip is a one-way trip in or out of the mining site:
  1. Daily truck trip log with loaded truck weights broken out by axle counts for each operating day of the year
  2. An annual trip log containing weekly and monthly trip averages and weekly and monthly average truck weights broken out by axle counts.
- g. As part of the annual report applicant shall provide a narrative summary of results of all water testing.
- h. Statement and location of planned extraction and reclamation activities for the next year.
- i. Statement regarding conformance to the approved mineral mining operations and reclamation plans and compliance with required State and Federal regulations including but not limited to the volume of material excavated and removed from the site, the volume of restoration material stockpiled on site, and the sufficiency of the stockpiled material to restore the then excavated site pursuant to the approved Reclamation Plan.
- j. Description of any complaints received during the prior calendar year and procedures used to resolve the complaints.
- k. A list of all equipment that is located on and used at the site, whether temporary or permanent.
- l. An aerial photograph of the entire site on a scale not smaller than one (1) inch equals two hundred (200) feet, taken prior to the date of the Annual Report required under this Ordinance. In addition to the aerial photograph, upon recommendation from the Township Engineer, the Board of Trustees may require the submission of an aerial topographic photograph.

- m. List of all road improvements paid for by the Applicant.
  - n. Written evidence that the financial guaranties and liability insurance required pursuant to the Ordinance are in full force for a period of not less than twelve (12) months from the date of the Annual Report.
  - o. Copies of applicable permits and/or reports that may be required from other governmental agencies.
  - p. Documentation of any enforcement actions whether pending or concluded, as well as, the disposition.
  - q. Applicant shall provide a list of fill materials deposited on the site stating:
    - 1. the nature of the materials;
    - 2. location from which the materials were imported;
    - 3. quantity of materials deposited from each such location; and
    - 4. the location on the site where the materials were deposited. The Township may perform, at the expense of the applicant, such reasonable tests on the material to ensure that the materials do not pose a threat to health, safety or welfare of the public.
  - r. Any other information deemed necessary by the Township to evaluate compliance of the CUP.
- (2) **Additional Meeting(s).** Following receipt of the Annual Report, the Ann Arbor Charter Township Board of Trustees may require additional reports, presentations and/or meetings with representatives of the CUP holder to review the Annual Report and to discuss any existing or anticipated issues associated with the extraction operation.
- (3) **Inspections.**
- a. **Inspections and Testing.** The Township, at the expense of the applicant paid from the escrow account, may conduct periodic inspections and cause or perform such tests as are reasonable to ensure the activities conducted on the site comply with the Ann Arbor Charter Township Mineral Mining Ordinance, other applicable ordinances, rules and regulations.
  - b. **Annual Inspection.**
    - 1. The Township Board of Trustees shall set an annual inspection date for the site. The Township Board of Trustees shall provide the applicant(s) written notice of an annual inspection at least fourteen (14) days before the annual inspection.

2. A representative from the applicant(s) may accompany the Township representatives on the annual inspection.
3. The Township shall take photographs of the site to establish a historic record of activities and changes on the site. The photographs shall be submitted to the Board of Trustees with a print to be submitted to the applicant. The photographs and prints shall be dated and signed by the person taking the photographs.
4. The Township, at the expense of the applicant to be paid from the escrow account, shall prepare a report to include the following:
  - i. An evaluation of the Annual Report submitted by the applicant,
  - ii. An evaluation of the site and operations in terms of its compliance with the conditional use permit, to include (but not limited to) conditions, base documents and reclamation plan, the Ann Arbor Charter Township Mineral Mining Ordinance and other applicable ordinances, rules and regulations;
  - iii. An evaluation of the water quality parameters, and
  - iv. Analysis and recommendation as to the appropriateness of the amount of the financial guarantees in light of the present circumstances. The report shall include the following:
    - (1) set forth any observed deviation from the base documents and non-compliance with a condition set forth in the permit,
    - (2) render an opinion whether the applicant is in compliance with the terms and provisions of the permit, Ann Arbor Charter Township Mineral Mining Ordinance, and other applicable ordinance, and
    - (3) make recommendations as deemed appropriate. The report shall be signed and dated by the person(s) preparing the report and submitted to the Board of Trustees, with a copy to the applicant.

**(h) RENEWAL**

The conditional use permit shall not be issued for a period to exceed five years from commencement date. Any extension of operations beyond that date shall require a new conditional use permit. Such renewal conditional use permit shall be processed as provided for in this Ordinance and may only be applied for upon proof by the applicant that restoration of areas that are no longer actively mined has begun. Applications for CUP Renewal shall include the same information required in 74-592a (d) and (g). To the extent such information was previously provided in complete form as part of an initial application, the previously submitted information

may be updated in the discretion of the Township. Applications for renewal of a conditional use permit shall be made not later than six months nor sooner than eighteen months prior to the expiration date of the current CUP.

**(i) FINANCIAL GUARANTEE AND INSURANCE**

**(1) Financial Guarantees.**

- a. **Guarantee Performance.** To ensure compliance with the provisions of the Ann Arbor Charter Township Mineral Mining Ordinance and the permit, to include (but not limited to) compliance with the systematic site reclamation, the applicant shall furnish a financial guarantee prior to the commencement of the extraction operation. The guarantee shall be set by the Township Board in an amount to cover applicant's obligations and contingencies under the permit and the Arbor Charter Township Mineral Mining Ordinance. The guarantee may be revised from time to time to reflect the amount necessary to cover the obligations and contingencies.
- b. **Form.** Guarantees shall be in the form of a letter of credit or surety bond payable to Ann Arbor Charter Township executed by the applicant and a reputable surety company. The letter of credit or surety bond must be issued by a corporate surety licensed to do business in the State of Michigan and rated AAA, as provided by the current Best's Key Rating Guide. Ann Arbor Charter Township must be named as obligee. The letter of credit or surety bond must be renewed at least sixty (60) days prior to its expiration. In the event the guarantee is not renewed within sixty (60) days of its expiration, the Township may make a demand on all or some of the guarantee. If a guarantee lapses, all excavation activities on the site shall immediately cease and full reclamation commence.

**(2) Site Insurance.**

Applicant shall provide a specific liability insurance policy of not less than Five Million Dollars (\$5,000,000.00) per incident for all liability claims arising out of the site issued by an insurer rated AAA, as provided by the current Best's Key Rating Guide. The adequacy of this amount shall be subject to yearly review by the Ann Arbor Charter Township Board of Trustee. The liability insurance shall be in an amount and form approved by the Ann Arbor Charter Township Board of Trustees, naming Ann Arbor Charter Township, its elected officials and appointed officials as additional named insureds and provide a copy of this policy to the Township Clerk. Said insurance shall provide an endorsement that provides that the general aggregate limit of the operations commercial and general liability applies separately to the site, and that Ann Arbor Charter Township shall be sent a notice of intent to cancel the insurance not less than thirty (30) days before the cancellation thereof. Failure of the operator, or any persons, firm or corporation named in the

policy to maintain the insurance shall cause immediate suspension of the conditional use permit.

**SECTION 3. SEVERABILITY.**

The provisions of this Ordinance are hereby declared to be severable and if any part is declared invalid for any reason by a court of competent jurisdiction it shall not affect the remainder of this Ordinance which shall continue in full force and effect.

**SECTION 4. REPEAL.**

All other ordinances or parts of ordinances in conflict with this ordinance are hereby repealed, but only to the extent to give this Ordinance full force and effect.

**SECTION 5. SAVINGS CLAUSE**

All proceedings pending and all rights and liabilities existing, acquired or incurred, at the time this ordinance takes effect, are hereby saved, and such proceedings may be consummated under and according to the ordinance in force at the time such proceedings are or were commenced. It is the legislative intent that this ordinance shall not be construed to alter, affect or abate any pending prosecution or enforcement action, or prevent prosecution or enforcement hereafter instituted under such repealed sections, for violations committed prior to the effective date of this ordinance; and all prosecutions or enforcement actions pending at the effective date of this ordinance, and all prosecutions or enforcement actions instituted after the effective date of this ordinance for violations that occurred prior to the effective date of this ordinance may be continued or instituted under and in accordance with the provisions of the ordinance in force at the time of the occurrence of such violation.

**SECTION 6. EFFECTIVE DATE.**

This Ordinance shall take effect upon publication as provided by law.

**CERTIFICATION**

It is hereby certified that the foregoing Ordinance was adopted by the Township Board of Ann Arbor Charter Township, Washtenaw County, Michigan at a meeting of the Board duly called and held on Oct. 21, 2024.

By: \_\_\_\_\_  
Diane O’Connell, Supervisor

By: \_\_\_\_\_  
Rena Basch, Clerk