

# Bridgewater Township Ordinance Number 59

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*An ordinance regulating the extraction of sand, gravel and other earthen materials.*

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The Township of Bridgewater, Washtenaw County, Michigan ordains:

## Section 1. Title

This ordinance shall hereinafter be known and cited as Bridgewater Township Extraction Ordinance.

## Section 2. Purpose and Authority

2.01 **Purpose.** Bridgewater Township recognizes that sand, gravel and other earthen deposits within the Township's boundaries are nonrenewable natural resources necessary and beneficial to the welfare of its inhabitants and the surrounding regional area.

To provide for the utilization of these resources in a manner compatible with nearby residential and agricultural uses, to protect human health and the environment, and to insure complete restoration for another land use at the conclusion of the extraction, it is necessary to regulate and provide procedures and standards for extraction of earthen materials and for the restoration of the land at the conclusion of the extractive operations.

These regulations are required because such extraction operations and the related activities can disrupt or pollute the environment, impair the water quantity and quality, cause noise and dust nuisances, damage the roads, and create conditions that are dangerous to Township residents. Completed mineral extraction operations, if unregulated, can leave land in a condition that is unsightly, polluting, or dangerous. It is in the Township's interest to control cumulative impact within areas of the Township, or the Township as a whole, and to recognize there are limitations within the capacity of the land for this land use. The Township has the authority to regulate extraction operations to protect the public health, safety and welfare pursuant to P.A. 246 of 1945, as amended MCL 41.181, et seq, This ordinance is enacted for the purpose of promoting the public health, safety, and welfare of the residents of the Township, to preserve the natural resources, and prevent the creation of nuisances and hazards to the public health, safety, and welfare.

2.02 **Authority.** The Bridgewater Township Planning Commission shall have the authority to review and recommend approval, approval with conditions or denial of an application for a mineral extraction license and the Bridgewater Township Board shall have the sole authority to approve, approve with conditions or deny an application to further the above purposes.

## Section 3. Exemptions

- 3.01 **Applicability of Ordinance.** Subject to compliance with all other applicable statutes, ordinances, rules, and regulations, this ordinance does not apply to the following:
- A. Operations that involve the removal of 100 cubic yards or less of material per calendar year.
  - B. The usual and customary excavation associated with the construction of structures or septic tanks/fields under a permit from the Township and/or County.
  - C. The usual and customary balancing of land by cutting and filling on a site in preparation for a development approved by the Township in accordance with all Township ordinances and regulations. This exemption shall not permit the removal of more than 100 cubic yards of material from the site.
  - D. The ordinary and necessary grading of land for the tilling and cultivation of soils for the growing of crops and trees.
  - E. The usual and customary excavation of land in the public right-of-way, when associated with a public utility or public facility improvement.
  - F. Ponds constructed in accordance with applicable provisions of the zoning ordinance.

## Section 4. Definitions

When used in this ordinance, the following terms shall have the meaning associated with them:

- 4.01 **Applicant / Owner / Operator.** The terms “applicant”, “owner”, and “operator” shall include the tenants, lessees, agents, servants or assigns thereof.
- 4.02 **Aquifer.** A geological formation, group of formations or part of a formation, capable of yielding significant quantities of groundwater to wells or springs.
- 4.03 **Board or Township Board.** The Bridgewater Township Board.
- 4.04 **De-watering.** The act of using a well or pump to remove water from a surface or subsurface area as a part of construction project, mining operation or any other operation involving surface or subsurface pumping removal of water.
- 4.05 **Dry Extraction.** The removal or mining of earthen materials from an area which is situated above the water table and for which dewatering is not required.
- 4.06 **Extraction.** The extraction, mining, quarrying, excavation, or other removal or processing of sand, gravel, soil, minerals or any earthen material from any site.
- 4.07 **Earthen Deposits.** Any naturally occurring material at the Earth’s surface and subsurface which includes topsoil, peat, clay, sand and gravel, bedrock or other materials produced

thereof.

- 4.08 **Fines.** Materials mined from the site passing the no. 200 mesh sieve opening as defined by the National Standard Sieve Size (ASTM-E11) that are a product of any Extraction operations at the site.
- 4.09 **Ground Water.** Water below the land surface in a zone of saturation.
- 4.10 **Water Table.** The surface between the zone of saturation and the zone of aeration; that surface of a body of unconfined groundwater at which the pressure is equal to that of the atmosphere.
- 4.11 **Ground Water Monitoring.** The collection of hydrogeologic data and representative water samples in order to measure the characteristics of the saturated zone.
- 4.12 **Ground Water Recharge.** The processes involved in the addition of water to the zone of saturation.
- 4.13 **Ground Water Recharge Area.** Any area on the ground where ground water recharge occurs.
- 4.14 **Hydrogeologic Report.** A document presenting and interpreting field information or published hydrogeologic conditions and predicting the potential impact on nearby or otherwise affected water and/or water features, including ground water.
- 4.15 **Interflow.** The lateral movement of water in the unsaturated zone during and immediately after a precipitation event. The water moving as interflow discharges directly to a lake, stream or spring
- 4.16 **Mineral Extraction License / License.** A license granted by Bridgewater Township authorizing a licensee to extract earthen materials from land located in the Township pursuant to the terms of this ordinance and to the conditions set forth at the time of the granting of the license.
- 4.17 **Operations.** A process or action that is part of the mineral extraction process and includes the extraction, storing, processing or transportation of mined materials, as well as related activity necessary to facilitate mining, such as maintenance and restoration.
- 4.18 **Overburden.** Earthen materials situated below the layer of topsoil and above the materials to be extracted from the site.
- 4.19 **Part 91.** Soil erosion and sedimentation control requirements of the Environmental Protection Act, MCL 394.9101 et seq., and/or Natural Resources and Environmental Protection Act of 1994 PA 451 as amended, Part 91 Soil Erosion and Sedimentation Control.
- 4.20 **Planning Commission.** The Bridgewater Township Planning Commission.
- 4.21 **Processing.** The washing, sorting, crushing, aggregating, grinding, blending, mixing, conveying or cutting of extracted material from the extraction site.

- 4.22 **Reclamation.** Plans and activities which are intended to eliminate unsafe and hazardous conditions and to render a site compatible with future land use.
- 4.23 **Sediment Basin.** A naturally occurring or constructed depression used for the sole purpose of capturing sediment during and after an earth change activity. This can be one or more basins to trap sediment and water quality contaminants in the runoff.
- 4.24 **Setback.** Distances from house sites, property boundaries, road right-of-ways, wetlands and streams, which are not to be excavated, in order to protect private and public properties as well as natural features of the Township.
- 4.25 **Site.** The entire real property or properties for which the extraction permit is issued, whether or not extraction is to occur on the entire real property(ies).
- 4.26 **Surface Runoff.** Water that does not infiltrate and then flows across the ground surface.
- 4.27 **Wetland.** Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh, and which is any of the following:
- A. Contiguous to the Great Lakes or Lake St. Clair, and inland lake or pond, or a river or stream.
  - B. Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and greater than 5 acres in size;
  - C. Not contiguous to the Great lakes, an inland lake or pond, or a river or stream, but within 500 feet of such water features, and 5 acres or less in size if the department (MDEQ) determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has so notified the owner.

## Section 5. License Required; Nature and Limitations of License

- 5.01 **License Required.** It shall be unlawful for an owner, leaseholder, operator or any other persons or entities that own, manage, or otherwise occupy the site to conduct any extraction operation without first having obtained a license as required by this ordinance.
- 5.02 **Liability for Compliance.** Any party having any interest in the land comprising the site, including the owner, leaseholder, and operator, or any other persons or entities who own, manage or otherwise occupy the site, shall be jointly and severally responsible for complying with the requirements of this ordinance and for any violation of this ordinance. Each party having any of the interest or interests mentioned above shall have the responsibility of taking all necessary precautions and actions to prevent any violation of this ordinance.
- 5.03 **Adherence to Terms of License.** No person or entity to whom a mineral extraction license has been issued pursuant to this ordinance shall engage in any activity on the site contrary to the terms of the license or contrary to the terms of this ordinance.

- 5.04 **Permits on File.** All required Federal, State, and County permits shall be approved and on file with Bridgewater Township prior to the commencement of any extraction activity on the site.
- 5.05 **Registration with State.** The applicant/operator/owner shall obtain all required licenses, and shall be registered to conduct business in the State of Michigan and provide proof thereof to the Township.
- 5.06 **No Other Uses Permitted.** A mineral extraction license does not permit other uses, including but not limited to on-site manufacturing operations of any nature, processing of material obtained from off-site, as well as asphalt, cement or other manufacturing operations of any nature.
- 5.07 **Transferability of License.** Any license for extraction operations issues pursuant to the ordinance shall be transferable by the Licensee with prior Township approval. Approval shall not be unreasonably withheld. Transfers include mergers, reorganization, or acquisition, and similar business actions.
- 5.08 **Below Ground Extraction.** Extraction of earth materials below the ground water elevation may be conducted if specifically approved by the Township Board and specified in the extraction license issued pursuant to this ordinance and subject to such other terms and conditions deemed appropriate by the Township Board.
- 5.09 **Dewatering Prohibited.** Mining methods shall not require permanent or on-going dewatering of the site.
- 5.10 **Term of License.** The term of the extraction license shall be five (5) years from the date of its issuance, and is renewable in accordance with provisions in this ordinance.
- 5.11 **Qualifications of Experts.** This ordinance references certain documents to be prepared by professionally qualified individuals such as geologists, engineers, architects, environmental scientists and surveyors. In all cases where such a professional is identified, that person shall hold all the necessary licenses, registrations, certificates, errors and omissions insurance and/or other such recordation necessary to practice in the State of Michigan.

## Section 6. Applicant Requirements

- 6.01 **Preliminary Presentation.** If applicant so desires, before making a formal application, applicants may appear before the Township Board at a regularly scheduled meeting to make a preliminary presentation on the conceptual nature of the proposed extraction activity. The Board will provide the applicant with a copy of this ordinance, outlining the application process and License requirements.
- 6.02 **Pre-Application Conference.** Prior to submission of an application, the applicant must request and attend a pre-application conference with Township officials to discuss licensing requirements and the application process and to pay a pre-application fee, as determined by resolution of the Township Board.
- 6.03 **Filing of Application.** An original signed application for an extraction license shall be filed

with the Township clerk together with two duplicate copies and a copy of the application in digital format.

## Section 7. Application Requirements

- 7.01 **Identification of Parties in Interest.** A separate list of names, addresses, telephone number, fax number, and e-mail address of any and all persons, firms or corporations having the following interests shall be provided to the Township:
- A. All applicants seeking a mineral extraction license and their interest in the property.
  - B. Anyone having a legal or equitable interest in the property where the extractive operation is proposed.
  - C. Anyone having an interest in the operation of the proposed extractive operation on the site and evidence of such interest.
  - D. If any of the parties identified in any or all of the lists are entities such as corporations, limited liability companies or partnerships, copies of documents evidencing the formation of the entity and proof that the entity is in good standing with the State of Michigan shall be submitted.
- 7.02 **Consent of Title Holder.** If the applicant is anyone other than the fee title holder of the property, a written consent for the proposed mineral extraction executed by the legal titleholder is also required.
- 7.03 **Form of Application and Signature of Applicant.** The applicant's signature and date shall appear on the first page of the application original and on all duplicates submitted to the Township for review. In addition, each page of the complete application submittal shall include the original application date in the lower right-hand corner. If the application is subsequently amended, each replacement page shall bear, in the lower right-hand corner, the original application date and the date of submittal of the page revision. All applications shall be made in a loose leaf, 3-ring binder in order to facilitate the replacement of pages.
- 7.04 **Application Fees and Escrow.** An application fee and an initial escrow deposit to cover the cost of processing the application, as determined by resolution of the Township Board, shall accompany each application.
- 7.05 **Licensing Fees.** The first annual license fee, as determined by resolution of the Township Board, shall accompany each application. If a license is approved, a subsequent fee is due on the anniversary date of the issuance of the license. The fee shall be held in escrow pending decision on granting the application. The annual fee shall remain payable on all acreage not yet restored.
- 7.06 **Costs.** In addition to the basic application fee, applicants for a mineral extraction license shall pay the actual reasonable expenses incurred by the Township in reviewing and/or relating to the application, including but not necessarily limited to the cost of:
- A. Planning Commission and Township Board meetings;

- B. Special meetings of either the Planning Commission and Township Board;
- C. Attorney fees;
- D. Reports and review by the Township's experts and/or consultants; and
- E. Additional notices of public hearing.

**7.07 Information and Data Required for an Extraction License.**

- A. *Survey.* A full legal description and drawing of the site, prepared by a licensed surveyor registered in the State of Michigan, showing:
  - 1. The number of acres on each portion of the site to be mined, and the location of all parcel boundaries on and within the extraction site.
  - 2. Existing site improvements including buildings and structures, drives, wells, and drain fields.
  - 3. All servient and beneficial easements, and all easements appurtenant to the property, if any. Indicate the identity by Liber and Page, if any, the origin (e.g., Deed from A to B), if applicable, and nature (e.g., ten foot sewer easement).
  - 4. The location, dimensions, and nature of all encroachments upon the property.
  - 5. Existing topography at contour intervals of five (5) feet, obtained from an actual on-site land survey, unless at the pre-application conference the Township engineer deems that a survey interval of less than five (5) feet is necessary for review.
  - 6. The location and dimensions of drives to and from the property, including abutting streets.
- B. *Site Inventory Map and Assessment* prepared by a licensed surveyor or professional engineer registered in the State of Michigan, clearly showing the locations and types of existing natural features both on the proposed property and areas within a region 100 feet beyond the site property lines. The requirement to provide off site information shall be subject to the right of surveyor to enter onto adjoining property unless the information can be obtained from another source. The drawing should delineate:
  - 1. Applicable setbacks for the site and from the extraction area.
  - 2. Tree fence rows, woodlands and wetlands and the extent of such lands, even if beyond the 100 foot margin above.
  - 3. Watercourse stream banks, pond ordinary highwater marks, flood ways, and flood plains, where determinable from public and private records and/or when accessible to applicant as through aerial photographic interpretation.

4. Areas of hydric soils, highly permeable soils, ground water recharge areas and topographic slopes.
  5. Landmark trees in the area(s) affected by mining should be located by numbered dots, with an accompanying database table of corresponding species and size listings. All trees 18 inches in diameter or larger will be considered landmark trees.
  6. An initial flora catalog, i.e. plants species, in the area(s) affected by mining
  7. The location of all archaeological, historical, or features of cultural significance.
  8. The site inventory should contain a written description of the quality, character, and health of the natural features, including but not limited to wetlands, surface waters, woodlands, historical features, and threatened and endangered species.
- C. *Environmental Impact Statement*, based upon the site inventory map and assessment, shall be prepared by a qualified professional, or professional engineer, addressing impacts the operation will have on natural features, and flora and fauna, both on the site and adjacent lands, as well as any mitigation measures needed to eliminate or minimize these impacts. The statement should also address the following:
1. Noise and dust.
  2. Drainage, erosion and sedimentation.
  3. Views of the mining site from adjacent roads and properties.
  4. Wetlands, flood ways, flood plains, and special habitats for fish and wildlife.
  5. Potential impacts on surface waters, on ground water, and on aquifers.
  6. Areas and features of historic, archeological and natural significance.
  7. Traffic study, including truck traffic and access to and from the site.
  8. Compatibility with adjacent land uses.
  9. Any additional items that the Township's engineering or environmental consultant reasonably deem significant.
- D. *Hydrogeological Analysis*, prepared by a professional engineer, registered in the State of Michigan, or professional geologist with experience in hydrogeological studies. The analysis shall:
1. Where practicable, identify and describe existing characteristics of the watershed within one-half ( $\frac{1}{2}$ ) mile of the boundaries of the tax parcel on which the permitted site exists. Characteristics include, but are not limited

to:

- a. Surface drainage patterns, groundwater conditions, including flow directions and depth of water tables.
  - b. Existing lakes and ponds, wetlands, rivers and streams including flood plains, flood ways and areas of seasonal water accumulation.
  - c. Aquifer information, including any discharge and/or recharge areas, and a description of the methodology or means by which identification and location were determined.
  - d. Establish the direction of groundwater movement by means of upgradient and downgradient monitoring wells, piezometers and as illustrated by cross sections.
  - e. Present the stratigraphy of the mining area using cross sections, with sediment data derived from soil borings advanced to the depths of disturbance, including grain size analysis and estimates of the hydrologic conducting of major sediment layers.
2. When the subject property contains any of the characteristics listed in Section 7.07.D.1.a-e, the following is required:
- a. A delineated boundary describing both size and location.
  - b. Assessment of the impact the proposed operation will have on said features.
  - c. A copy of all test results and other data, however embodied, used for preparation of said report.
  - d. Proposed monitoring devices, including types, locations, number, and specifications for said devices including current calibration requirements, to monitor impact of the proposed operation on said features, and quality thereof.
  - e. When an extraction lake or pond is proposed, the applicant shall establish the background or base line water quality of any aquifer being affected. Once the lake or pond is created, the water quality of the water body must also be determined and compared to the background water quality of the affected aquifers.
3. When mining below the water table is proposed, the applicant shall install one or more piezometers near the mining area in order to establish any vertical flow or piezometric pressure of the ground water. Piezometric pressures within the ground water may lead to changes in the levels of the extraction lakes.
4. Extraction lakes must not result in significant changes in the water quality and quantity. Hence, when mining results in the creation of one or more

extraction lakes or ponds, the applicant must demonstrate that the mining operation will not significantly affect upgradient groundwater levels or down gradient groundwater flows or the water supply to adjacent wetlands or surface waters. In addition, operations at the site must not significantly affect the capability of extraction lakes to prevent flow through of the ground water.

E. *Subsurface Information:*

1. *Physical Features Map*, prepared by a professional engineer registered in the State of Michigan or professional geologist. The extent, location and nature of all subsurface materials on the proposed extraction site are to be shown on a topological map including:
  - a. Estimated extent (outline) of deposit limits of extraction materials.
  - b. Location by GIS coordinates and identification number of all excavation drill holes and drill logs and all other data or reports however embodied or obtained from excavation drill holes.
  - c. Proposed location of observation wells, piezometers, flow meters, and any other monitoring stations.
2. Report to include information about:
  - a. Depth of excavation drill holes and the claimed deposit of materials to be extracted from the site.
  - b. Identification, location, and description of soil and mineral content, with soil boring logs representative of the site and an analysis of the subsurface materials. The Township engineer and applicant's engineer shall confer and jointly determine the number of borings required and boring depths at the pre-application conference. In the event of a dispute, the engineers shall agree upon a third engineer from a reputable engineering firm to resolve the dispute.
  - c. Ground water elevation, flow directions, and identification of aquifers.
  - d. Estimated quantity of reserves at the site, and projected years of operation.
  - e. Depth and estimated quantity of topsoil to be stripped.
  - f. Depth and estimated quantity of overburden to be stripped and location of storage sites, if any.
3. *Isopach Map* with five (5) foot contour intervals, indicating the deposit extent and depth below existing surface elevations.

F. *Monitoring Controls.*

1. *Monitoring Wells.* A minimum of three (3) monitoring wells shall be installed according to the 3-point method, constructed to requirements of the United States EPA, Michigan Department of Environmental Quality or Washtenaw County Environmental Health, and retained for future monitoring. The Township engineer and applicant's engineer shall confer and jointly determine the required number and/or locations of such monitoring wells. These monitoring wells must be capable of detecting any significant ground water change. In the event of a dispute, the engineers shall agree upon a third engineer from a reputable engineering firm to resolve the dispute.
2. *Domestic Wells.* Prior to the issuance of any extraction license, the applicant shall be required to conduct, at no cost to affected well owners, a pre-extraction survey of each domestic well located within two thousand (2,000) feet of the site property line.
  - a. The survey will consist of collecting baseline data from well logs, where available, measurement of water level and well depth and standard water quality testing measuring among other factors, including hardness, color, odor, pH, bacteria, nitrates, sulfates, petroleum, and total dissolved (tds).
  - b. The survey will be limited to those domestic well owners who provide consent to the survey within 30 days of receiving a certified letter request from the applicant.
  - c. Said tests shall determine the following baseline data for comparison with similar data to be monitored during extraction operations.
  - d. Copies of existing well logs for all wells located within two thousand (2,000) feet of the site.
3. *Groundwater Testing* of all monitoring wells shall take place prior to commencing extraction operations to establish background water quality levels. Testing shall include:
  - a. Static water level elevation, total dissolved solids (tds), water temperature, turbidity, specific conductance, pH, dissolved oxygen, redox potential, alkalinity, as well as the concentration level of the following: iron, manganese, magnesium, calcium, soluble phosphorus, nitrate nitrogen, ammonia, arsenic, lead, zinc, chloride, sodium, sulfate, phenols, and total petroleum hydrocarbons. If the total petroleum hydrocarbon levels exceed the detection (DL) limit, then VOC, SVOC, and MTBE must also be measured as well.
  - b. For each aquifer within the extraction zone, the applicant is to provide a measure of hydraulic conductivity, aquifer flow direction, probable drawdown (based on a slug test or other measure), and probable recharge area.

- c. All laboratory testing shall be conducted in conformance with current applicable U.S. Environmental Protection Agency (EPA) Test Methods, and data shall be compared to Maximum Contaminant Levels (MCL) as set by U.S. EPA.
- d. Operator could elect to install more groundwater monitoring wells in lieu of sampling the domestic wells annually. All of the above testing requirement will apply, if this alternative is chosen.

- 4. *Annual Testing* shall be performed on domestic and monitoring wells in accordance with standards jointly established by the Township's expert and the Operator's expert taking into consideration the type and level of extractive activities which have taken place on the site during the preceding year.

The results of such testing shall be filed with the Township supervisor within 60 days of date of testing. The parameters listed in 3a, above, must be tested annually, and a comparison made with the baseline water quality data.

- 5. *Additional Testing* may be required by the Township to better assess any potential risks if concerns regarding water quality or quantity are raised by or uncovered in the annual testing.

- G. *A Well Complaint Resolution Program* shall be prepared and submitted to the Township, which specifies the procedures the applicant is committed to follow in resolving any domestic water well complaints, including:

- 1. Multiple points of contact, response times and methods.
- 2. Complaint evaluation and mitigation procedures, including reports to both the domestic well owner and the Township.
- 3. The well complaint resolution program shall be applicable to properties that provide consent for the pre-extraction well survey.
- 4. If an analysis and evaluation of well complaints leads to the determination that an adverse impact is caused by the applicant's extraction operation, the applicant will replace the domestic water supply at the subject residence by the following, but not limited to, methods, at no cost to the homeowner:
  - a. Repair or replace well components damaged by the extraction operation.
  - b. Deepen the existing well or drill a replacement well.
  - c. Provide another source of potable water for the residence.

- H. *Operations Plan*. An applicant prepared report describing the following:

- 1. Earth handling equipment to be used on-site.

2. Excavation equipment.
  3. Methods of excavating.
  4. Methods of transporting material from extraction site to processing plant and/or offsite.
  5. Processing plant height and area requirements.
  6. Types of processing activities, such as screening, washing, crushing, settling of fines and blending.
  7. Estimated quantity, use and disposal of fines.
  8. Estimated number and size of settling ponds and sediment basins.
  9. Estimated annual production of sand, gravel, and other minerals in cubic yards.
  10. Estimated type, size and number of trucks hauling material from the site daily, during peak season and annually.
  11. Fuel storage area requirements, if any.
  12. Maintenance and storage area requirements.
  13. Other structures and facilities to be constructed on-site.
  14. Procedures for recording and handling complaints.
  15. Dust control plan.
  16. Roadway mud control plan.
  17. Proposed hours and days of operation.
  18. Perimeter security plan.
- I. *Mining Plans* shall be prepared by a licensed geologist, architect or professional engineer, registered in the State of Michigan, and shall illustrate the pattern, direction and phasing of earth moving, excavation, land shaping and reclamation activities. The plans shall be of sufficient detail so they can be used to assess the performance of the mine operation during any site inspection, including the following:
1. Location and description of entrance area, processing plant and support areas, and structures, including any weigh stations
  2. Lane widenings on public roads at intersections with drives. activities.
  3. Division of the site into a series of cells that illustrate the sequence of the

proposed extraction activities.

4. Indicate the size of each cell and estimated dates each cell will be operative.
  5. Sequence of clearing and grubbing, including a description of the disposal methods.
  6. Sequence of construction and installation of facilities.
  7. Sequence of stripping, placement and/or stockpiling of topsoil, including the area to be stripped.
  8. Sequence of stripping, placement and/or stockpiling of overburden including the area to be stripped.
  9. Sequence of extraction.
  10. Property boundaries.
  11. Set back lines and placement of berms, if any.
  12. Location and type of materials for sound and visual screening of the site.
  13. Location and operation of any check station or weigh stations.
  14. Fence locations.
- J. *Detailed 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, and shall include the following elements:
1. Proposed topography at contour intervals to provide adequate grading information, subject to the Township engineers recommendation at the pre-application meeting, with five (5) feet being the minimum.
  2. Schedule of progressive rehabilitation.
    - a. After mining is completed on one specified area, quadrant, or cell, reclamation shall follow progressively in reasonable stages set forth in the plan before mining continues on other areas of the site. Extraction areas which are inactive for over one year must be stabilized and slopes reduced to 1: 4, if feasible.
    - b. All rehabilitation activity shall be in compliance with soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined.
  3. 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.

4. Concept plan(s) for the proposed end use of the site when restored including a plan for residential use, drawn to scale, and prepared by a professional engineer, licensed architect, or licensed landscape architect, registered in the State of Michigan. The concept plan shall include:
  - a. The proposed circulation system, including the location of internal roads and connection to the external road network.
  - b. Delineation of drainage patterns, identification of lakes, flood plains, wetlands, and conceptual layout of lots (if residential is proposed).
  - c. The 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. A description of the provisions for obtaining necessary permits and approvals for the future use(s).
  - e. A landfill or other disposal or refuse site will not be considered a suitable or satisfactory use.
5. When the proposed future use includes residential units or other uses requiring the use of septic fields, the applicant shall provide a description of the construction and rehabilitation techniques that will be met, including:
  - a. A description of methods and materials to be used in restoring the site.
  - b. The proposed date for completing all extraction operations and handling of all spoils and extraneous materials.
  - c. The date for completing the final restoration.
  - d. A list of all seeding and planting materials, which must be of native stock.

#### 7.08 **Supporting Documentation.**

- A. *Haul Route Map.* An area map delineating the haul route to be used for the proposed operation, accompanied by a letter of preliminary comments from the Road Commission(s) impacted by the proposed haul routes. Any subsequent changes in haul routes be approved by the mineral board.
- B. *Dust Control Plan.* A control plan to alleviate dust resulting from the mining operation, which may include sweeping, paving, spraying water or calcium chloride, or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of Road Commission(s), and will be part of the soil erosion plan. This plan is to be reviewed annually by the Township engineer or environmental consultant.
- C. *Mud Control Plan.* A control plan to alleviate mud resulting from the mining

operation, which may include sweeping, paving, spraying water or calcium chloride, or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of Road Commission(s), and will be part of the soil erosion plan.

- D. *Noise Control Plan.* A study and report prepared by a qualified professional estimating the noise levels at the property boundaries containing the extraction operation and at successive stages of the operation. This plan must contain mitigation measures to be implemented when noise levels exceed acceptable standards.
- E. *Soil Erosion Plan.* A site specific plan that will provide a complete description of all soil erosion measures, including but not limited to:
  - 1. All erosion control strategies and control measures including but not limited to silt fences, vegetation screens, sediment basins, and settling ponds.
  - 2. Locations of control measures particularly on all bare surfaces including steep slopes.
  - 3. Time schedule and installation description for each control measure.
  - 4. All temporary and permanent measures and maintenance to each, to maintain adequate control.
  - 5. The plan is to conform to any and all requirements of the soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., and/or Part 91 as defined. control measures showing adequacy of on-site secondary containment of hazardous
- F. *Pollution Prevention Plan.* A complete description of proposed pollution prevention materials, based on National Fire Protection Association, State of Michigan or Washtenaw County Pollution Prevention laws. This plan must address all sediment, storm water and settling, basins as well as any probable impacts from processors activities or on-site fuel or chemical storage.
- G. *Impact Mitigation Plan* to mitigate impacts resulting from mineral extraction, and the method by which complaints about any aspect of the facility operation or off-site transportation are to be received and resolved. This plan must set forth the procedures to address complaints regarding adverse impacts, including noise, fugitive dust, ground water changes, wetland loss.
- H. *Permits.* A comprehensive list of all permits required for the proposed operation, copies of the application documents, and a schedule showing when they are to be renewed, including, but not limited to;
  - 1. A copy of permit from the Michigan Department of Environmental Quality (DEQ), or written communication addressed to the Township from the DEQ indicating that a permit is not required for the proposed extraction or reclamation by any applicable statute granting the DEQ jurisdiction over such activity.

2. A Michigan State Fire Marshall permit for the on-site storage or transfer of fuels; or a written indication from the applicable agency that a permit is not required.
3. A copy of a storm water control permit from the United States Environmental Protection Agency (EPA) and any NPDES or wetland permit from the Michigan Department of Environmental Quality, PA 451 of 1994, Part 31.

**7.09 Indemnities.**

- A. A proposed surety bond, irrevocable bank letter of credit in satisfactory form, or security deposit in an amount sufficient to guarantee restoration of the site. In fixing the amount of such surety bond, the following factors shall be taken into account:
  1. The size and scope of the proposed excavation.
  2. The probable cost of rehabilitating the premises upon default of the operator, as recommended by the Township engineer and/or consultant designated by the Township.
  3. Estimated expenses to compel operator to comply by court decree.
  4. Other factors and conditions as might be relevant in determining the sum reasonable in the light of all facts and circumstances surrounding each application.
- B. A proposed liability insurance policy of not less than \$5,000,000 per incident for all liability claims arising out of the site. The certificate of insurance shall provide that the Township must be given thirty (30) days prior written notice of cancellation of insurance. In case of cancellation, the license shall be suspended.

**7.10 Aerial Photograph.** An aerial photograph of the entire site of oblique prospective, with a scale of not more than one (1) inch equals two hundred (200) feet, is to be submitted to the Township each year as part of the annual report by the Township engineer or by the environmental consultant.

**7.11 Extraction of Samples.** At the time of any inspections, the Township agents, representatives, independent consultants, and engineers are authorized to enter upon the property and may extract from the property such small samples of water, soil and other materials as may be necessary to perform the evaluation.

**7.12 Correlation to Ordinance.** Drawings, aerial photographs and plans submitted with an application shall be correlated by transparent overlays, combined maps or other means that clearly set forth site features and proposed features and requirements of this ordinance including setbacks.

## Section 8. Review of Application by Planning Commission and Final Decision by the Township Board

8.01 **Review of Application by the Planning Commission.** Once a complete application is submitted, the Planning Commission shall, within 180 days:

- A. Conduct a detailed review of the application.
- B. Conduct a public hearing.
  - 1. The Township clerk shall give notice of the hearing to the owners of all property to each such party by first class mail, or hand delivered. within two thousand (2,000) feet of the subject property. The notice shall be mailed not later than ten (10) days prior to the hearing.
  - 2. The notice shall be published in a newspaper(s) of general circulation in the Township.
  - 3. Any party may appear and comment at the hearing in person, by agent, or by attorney.
  - 4. The Township shall keep a record of said hearing.
- C. The Planning Commission shall review the application to determine whether the applicant has demonstrated the ability to meeting the following standards:
  - 1. The applicant can comply with this ordinance.
  - 2. The proposed operation will not adversely affect the health, safety, and welfare of the residents of the Township.
  - 3. The proposed operation will not cause traffic hazards.
  - 4. The proposed operation will not adversely affect the water table, water quality, or water supply of any surrounding land.
  - 5. The site will be restored so it is safe and harmonious with the surrounding land uses.
  - 6. The end use proposed in the reclamation plan is acceptable to the Planning Commission, based upon the Commission's review of the Township zoning ordinance, Township master plan, surrounding land uses and site characteristics.
- D. If following the public hearing and its review of the application and all supporting documents the Planning Commission determines additional review and/or data are needed, it may extend the period of review for an additional 30 days or to the next regularly scheduled monthly Planning Commission meeting.
- E. If following the public hearing and after it has completed its review of the application

and all supporting documents, the Planning Commission determines that the applicant has demonstrated the ability to comply with the standards set forth in Section 8.01(C), it shall recommend approval or approval with conditions of the license.

- F. If following the public hearing and after it has completed its review of the application and all supporting documents, the Planning Commission determines that the applicant has not demonstrated the ability to comply with the standards set forth in Section 8.01(C), it shall recommend denial of the license.

**8.02 Final decision by the Township Board.** Following the vote of the Planning Commission recommending approval, approval with conditions or denial of a mineral extraction license the Planning Commission's findings and all supporting documents in its possession shall be transmitted to the Bridgewater Township Clerk within fourteen (14) days of its decision.

**8.03 Process for Decision by the Township Board.** Within sixty (60) days after receipt of the findings and supporting documents from the Planning Commission, the Township Board of Bridgewater Township shall:

- A. Conduct a detailed review of the application, all supporting documents and the recommendation of the Planning Commission.
- B. Conduct a public hearing.
  - 1. The Township clerk shall give notice of the hearing to the owners of all property to each such party by first class mail, or hand delivered. within two thousand (2,000) feet of the subject property. The notice shall be mailed not later than ten (10) days prior to the hearing.
  - 2. The notice shall be published in a newspaper(s) of general circulation in the Township
  - 3. Any party may appear and comment at the hearing in person, by agent, or by attorney.
  - 4. The Township shall keep a record of said hearing.
- C. Approve the license, if after the public hearing the Township Board determines that the applicant can comply with the standards set forth in Section 8.01(C).
- D. Deny the license, if after the public hearing the Township Board determines that the applicant cannot comply with the standards set forth in Section 8.01(C).

## Section 9. Issuance of License

**9.01 Issuance.** If an application is approved by the Township Board, the Township Board shall issue a mineral extraction license in duplicate upon receipt of the required fees, bond, irrevocable bank letter of credit, or security deposit, and proof of insurance from the applicant, in form approved by the Township attorney.

- 9.02 **Distribution of Copies.** One duplicate original license will be provided to the applicant, and the other copy shall be attached to a copy of the approved application and accepted amendments and retained by the Township clerk.

## Section 10. Form of License

- 10.01 **License Contents.** The extraction license shall be prepared in duplicate originals and signed by the Township supervisor and Township clerk and shall contain the following:

- A. A full description of the operation, including all conditions and restrictions permitted by the license based on approved plans and drawings.
- B. A full description of the restored site based on the approved plans and drawings.
- C. The scheduled dates for the completion of the operations, each restoration stage, and completion of the restoration plans.
- D. The dates for which the license is valid based on the continual restoration schedule approved by the Township Board.
- E. An extraction license agreement signed by all parties having an interest in the land and/or operation, that they will comply with this ordinance and the License, and that such parties will reimburse the Township for all legal, engineering, consulting, and investigative costs incurred by the Township in establishing any violations and for any enforcement action taken by the Township.
- F. That Township agents, representatives, independent consultants, and engineers are authorized to enter upon the property at any time for the purpose of inspection and may extract from the property such small samples of water, soil and other materials as may be necessary to assure compliance.
- G. That the operation remains subject to:
  - 1. Required inspections by the Township engineer and/or other designated agents or officials of the Township.
  - 2. Payment of annual license fees.
  - 3. Reimbursement for all Township costs for monitoring to determine compliance with the license.
  - 4. Renewal of the mineral extraction license every five (5) years.
- H. All required attachments to the application.

## Section 11. Compliance by Licensee

All persons or firms engaged in the activity of mineral extraction shall comply with the following standards:

- 11.01 **License Required.** Operate only with a license issued under this ordinance and only in compliance with the terms of the license and this ordinance.
- 11.02 **Annual Fee.** Make payment to the Township clerk for the annual license fee, as determined by resolution of the Township Board, on each anniversary date of the license.
- 11.03 **Escrow Account.**
- A. An escrow account shall be established on each anniversary date of the license. The amount to be deposited into this account shall be determined by resolution of the Township Board. This escrow account shall be used for all reasonable costs and expenses incurred by the Township or Township consultants for inspections and/or monitoring and review to determine compliance, and enforcement.
  - B. Within 30 days of the anniversary date of the license, the Township shall provide the licensee an itemized statement of expenses paid for out of the escrow account during the preceding year.
  - C. In the event that the funds in the escrow account have not been exhausted at each anniversary date, the applicant shall re-establish the amount to the originally determined amount.
  - D. In the event that the funds in the escrow account are not sufficient to pay the costs and deficiency, within ten (10) calendar days of the date written notice is made by the expenses incurred by the Township, the applicant shall reimburse the Township for such costs, and if not so paid, the extraction license shall be deemed automatically suspended until such time as the deficiency is paid to the Township. Further, at such time the escrow is depleted to less than \$1,000, applicant shall replenish the escrow to the original amount.
- 11.04 **Pollution Protection.** The applicant shall comply with the requirements of the Washtenaw County Pollution Protection Community Right-to Know Regulation of 1986, as evidenced by copies of documentation and notices produced pursuant to said Act.
- 11.05 **Hours of Operation.**
- A. *Extractive and Processing Activities.* Extractive and processing activities shall be permitted only between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 7:00 a.m. and 12:00 noon on Saturday.
  - B. *Maintenance Activities.* Maintenance activities shall be permitted only between the hours of 7:00 a.m. and 9:00 p.m., Monday through Friday, and between 7:00 a.m. and 6:00 p.m. on Saturday.
  - C. *Transporting.* No transporting of aggregates or any materials from the site shall be permitted prior to 7:00 a.m. and after 6:00 p.m., Monday through Friday, and prior to 7:00 a.m. and after 12:00 p.m. on Saturday.
  - D. *Sunday Operations.* There shall be no extractive or processing or maintenance activities or transporting of aggregates permitted on Sundays or legal holidays. The holidays are New Year's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving,

and Christmas.

- E. *Emergency Hours.* Permission for emergency hours of operation shall be granted only upon written request from the operator and by written agreement of the Township supervisor. Details of the need for emergency hours shall be within the written agreement.
- 11.06 **Truck Staging.** Truck staging may be permitted on site as part of the license plan. Trucks shall be turned off until thirty minutes prior to the start of operation hours.
- 11.07 **No Processing.** Other than as specified in the application and license, no processing of any nature, shall be conducted at any time on site.
- 11.08 **Machinery and Building Setbacks.** All machinery, equipment, and buildings and structures shall be located at least 250 feet from any road right of way or lot line, and 500 feet from any stream, waterway, or wetland, or from any existing residence. The greater setback distance as described shall apply. The Township Board may approve the continued maintenance and use of facilities within the prescribed setback if they were installed and used at the proposed location prior to January 1, 1993.
- 11.09 **Mining and Stockpiling Setbacks.** No extraction, processing, loading, weighing, stockpiling or other operations or equipment storage or repair shall take place closer than
- A. 250 feet from any road right of way or the outer boundaries line of the permitted site(s),
  - B. 500 feet from any existing residence, unless the owner of the residential property requests a shorter setback, and
  - C. 500 feet from any stream, waterway, or wetland, unless otherwise permitted by the MDEQ or other state or federal regulatory agency.
- The greatest setback required by this Section shall apply when there is a conflict on the size of the required setback. If reasonably necessary to protect the health, safety, and welfare of adjoining property owners and other residents of the Township, the Mineral Extraction Board may establish greater setbacks. Hardship exceptions may be applied for, and will be reviewed by the Mineral Extraction Board.
- 11.10 **Lateral Support.** There shall be no extraction unless there is adequate lateral support for adjoining land, not subject to the permit, as determined by the Township engineer.
- 11.11 **Stabilization of Soil.** Stockpiles of soil to be used for the reclamation shall be stabilized by temporary or permanent measures or otherwise maintained as specified in approved soil erosion plan and/or soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined.
- 11.12 **Natural Drainage and Ground Water Recharge.** The extraction operations and related activities shall not adversely affect the natural drainage of the other properties in the area nor shall there be a net loss of regulated wetlands or recharge area.
- 11.13 **Impact on Water.** The operation shall be conducted so it will not cause any contamination

or change in the quality or quantity of ground or surface water outside the site and shall be monitored by adequate monitoring wells and techniques for surface water (i.e. flow flume or equivalent method) as determined by the Township.

- 11.14 **Noise, Odors, Smoke, Fumes, or Dust.** Any noise, odors, smoke, fumes, or dust generated on said site by any digging, excavating, loading or processing operation and borne, or apt to be borne by the wind, shall be confined so as not to cause a nuisance or hazard on any adjoining property or public road. The noise generated by the operation shall not at any one time exceed 75 decibels ('a' scale) for a period longer than one (1) minute. (Equivalent noise).
- 11.15 **Landscaping.** Berms and landscaping shall be installed at all locations around the site that lack natural screening, and shall consist of the following:
- A. Earth berms constructed to a height of 8 to 11 feet above the mean elevation of the centerline of the adjacent public highway or the general level of the terrain along the interior property lines, whichever is higher. Such berms shall have slopes that are not in excess of 1 foot vertical to 3 feet horizontal and shall be planted with grass, trees or shrubs.
  - B. Plantings or evergreen trees or shrubbery in parallel rows, not less than 4 feet in height at the time of planting and which grow to not less than 6 feet in height at maturity and sufficiently spaced to provide effective sight barriers when 6 feet in height. Every effort will be extended to use species that are native to the surrounding area; invasive species are to be avoided.
  - C. Berms installed for noise control or for sight screening shall be exempt from the stockpile restrictions in setback areas.
- 11.16 **Fencing.** The applicant shall erect a six (6) feet chain link fence, or equivalent fencing, with gates, completely surrounding the permitted site, including haul routes from the extraction area. Gates shall be kept locked during non operation hours. The integrity of the fence shall be verified not less than weekly. Any repairs shall be made immediately.
- 11.17 **Posting of Signs.** Where mineral extraction results in a body of water, the owner or operator shall place appropriate "Danger Keep-Out" signs around said premises not more than two hundred (200) feet apart.
- 11.18 **Grading of Non-mined Areas.** All portions of the site not currently being actively mined shall be graded so that the slopes are not steeper than one (1) foot vertical for each two (2) feet horizontal and protected with temporary control measures per the approved Soil erosion plan and/or soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined. Should additional measures be required to provide proper control of erosion and sedimentation, they will be installed.
- 11.19 **Storage of Hazardous Materials.** All fuels, chemicals and other hazardous materials to be contained on-site shall be noted in the application, including material, quantity, use, and method of primary and secondary containment.
- A. All containment structures or devices shall be designed and operated to prevent ground water pollution. Secondary containment facilities for fuels, waste oil,

explosives or dust control chemicals are to have roofs.

- B. The applicant shall also provide a written spill response plan and reports procedure, in the event a hazardous materials spill occurs on-site. Said plan shall indicate how any and all contaminated material will be collected and disposed.
  - C. The operations shall minimize on-site storage of such materials.
- 11.20 **Equipment Storage.** Only equipment or vehicles owned or leased by the operator shall be stored on the site overnight.
- 11.21 **Washing Vehicles.** The license plates, brake lights, turn signals and wheels of each truck and trailer shall be washed or wiped clean before leaving the site on each trip.
- 11.22 **Truck Routes.** The applicant/owner/operator shall notify all trucks entering the permitted site on the appropriate truck routes specified on the license and will use best efforts to obtain compliance with this provision.
- 11.23 **Mud and Dust Control.** Be responsible for adequately treating against dust/mud, and improving and maintaining, beyond Washtenaw County Road Commission responsibility, the public roads, bridges and culverts directly servicing the site, as necessitated by the truck traffic over the haul route to or from the site.
- 11.24 **Public Roads.** Public roads regularly used for hauling shall be maintained in a reasonably dust free manner either by a regular application of a dust suppressant or if hard surface, by sweeper collector unit.
- 11.25 **Ingress and Egress Roads.** Roads used for ingress and egress for the extraction operation that are located within three hundred (300) feet of occupied residences shall be kept dust free by:
- A. Hardtopping with a concrete or bituminous substance.
  - B. The regular spraying of water and/or calcium chloride.
  - C. If a concrete or bituminous surface is created, a street sweeper must be on-site and used as often as necessary to control dust and debris.
- 11.26 **Access to Site.**
- A. There shall not be more than one entranceway from a public road, except for emergency access provisions.
  - B. The entranceway shall be located in an area designed to minimize traffic congestion and shall be approved by the Washtenaw County Road Commission.
  - C. Any mineral extraction operation site which permits the removal of more than 50,000 tons of material per year shall have truck access directly onto a County designated route/all season roadway, as designated by the Washtenaw County Road Commission, that connects to a State roadway.

- 11.27 **Load Tickets.** Maintain a record or copy of the load ticket for each truck departing with extracted minerals from the site. These records must include driver and truck/trailer identification, date, time, the type and weight of the load. These records must be maintained by the operator and the township shall be provided with monthly and annual summary reports. The summary reports shall state the gross tonnage being hauled from the site and the number of vehicles per day visiting the site. Load tickets must be made available to the Township's attorney upon demand for inspection. All proprietary information provided to the Township attorney in connection with such disclosure shall be considered confidential and shall not be disseminated to the general public, but may only be used for purposes of enforcement of this ordinance.
- 11.28 **Outside Materials.** No material from outside the site shall be brought in for processing or storage.
- 11.29 **Water and Sewage.** Washtenaw County Environmental Health shall approve potable water supply and sanitary sewage disposal systems for the site.
- 11.30 **Liability Insurance.** The operators must maintain the liability insurance approved with the license and provide proof of that insurance to the Township annually.
- 11.31 **Explosives.** No explosives shall be used on the site.
- 11.32 **Burning.** No on-site burning shall be permitted, unless the licensee has first obtained a burn permit. Tree and woody plant debris shall be ground or chipped, and retained for landscaping use on-site.

## Section 12. Reclamation

- 12.01 **Time for Reclamation.** Reclamation in accordance with the following restoration standards must begin as soon as the mining of any area of the site is completed or mined to the limits shown on the application (whichever comes first).
- 12.02 **Compliance with Plan.** The reclamation shall be in accordance with the extraction license and the approved reclamation plans.
- 12.03 **Ponding.** Ponding shall be avoided in all areas except designated lake areas or in settling ponds.
- 12.04 **Backfilling.** In the event filling of the mined area is necessary in the course of reclamation, these areas are to be backfilled and compacted with soils of similar types to the existing strata and graded to match the existing contours and elevations and that these soils, which are brought onto the site, are under compliance with the following:
- A. A detailed statement indicating the arrangement and nature of all operations, including the quantity of each type of material to be deposited, and the exact locations from which the material will be brought.
  - B. A qualified testing laboratory will test fill material, if fill material is brought in from off-site to determine its suitability for use as fill material. A report specifying in detail the testing to be undertaken by the applicant at each off-site source location to ensure

that the material being brought on-site is not contaminated. The report shall include a certification by a qualified independent soil scientist, soils engineer, hydrogeologist or geologist, confirming that the material from each source location is not contaminated. The levels of acceptance are to conform to the most stringent proposed land use per the zoning ordinance. Supply the township with all copies of the test results.

- C. Set forth a detailed explanation as to the routing of all vehicles bringing off-site fill material to the site, and their size, weight and frequency of trips.
- D. All reclamation activities shall comply with the Soil Erosion Plan and the soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined.
- E. Set forth in detail the contingency cleanup procedures to be utilized in the event of any contamination of the underlying groundwater or surface water

12.05 **Grades.** In general, grades of areas that are not permanently submerged will be gently rolling and shall be blended into existing grades in a harmonious manner similar to the surrounding area.

- A. No unsubmerged grade shall exceed one (1) foot vertical to four (4) feet horizontal, unless an unmodified area remains on-site that has a natural grade in excess of 1:4, and the Township Board finds that modification of this area is not necessary.
- B. In addition to the above, the reclamation plan shall show an internal future development area of 200 feet from the site property lines. Within this area, site grades shall be reduced to a sufficient slope to support an internal road on residential lots fronting on at least one side of the road. This area may be reduced to 100 feet where the Township Board finds that residential development is not a feasible future land use for the site and the use proposed does not require a 200 foot area with less steep grades.

12.06 **Submerged Grades.** Grades of all areas that are permanently submerged shall not exceed one (1) foot vertical to five (5) feet horizontal from the shore to the depth of five (5) feet below the annual low water elevation.

12.07 **Topsoil.** Topsoil is to be reused from the existing topsoil material stockpiled previously. All additional topsoil needed to meet the depth required if stocks of stripped topsoil do not fulfill the requirements shall be provided. Imported topsoil shall meet or exceed the values no more than six (6) inches in depth, in the areas where seeding and plantings are to be of the analysis of the existing topsoil. Topsoil shall be placed, not less than four (4) inches performed.

12.08 **Planting.** Seeding and planting shall be performed to provide a permanent vegetative cover in the areas shown on the Reclamation plan.

- A. Every effort will be extended to use species that are native to the surrounding area; invasive species are to be avoided.
- B. Seed mix shall be a minimum of MDOT roadside mix, applied at a rate of four (4)

lbs. per 1000 sq. ft. Mulch shall be applied within 24 hours after seeding has occurred. If straw mulch is utilized, it shall be anchored.

- C. All work shall conform to the requirements of the soil erosion plan and/or soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined. Temporary measures will be in place with thirty (30) days if no work is taking place. Permanent measures will be in place within five (5) days after final grading.

12.09 **Time for Completion.** Reclamation must be completed within nine (9) months of cessation of mining operations. All plant structures, buildings, stockpiles and equipment shall be removed within the time limit; provided, however, that buildings and structures which have a function under the All plant structures, buildings, stockpiles and equipment shall be removed within the time limit; provided, however, that buildings and structures which have a function under the limit; provided, however, that buildings and structures which have a function under the reclamation plan and which can be lawfully used under the requirements of the zoning district in which the property is located may be retained. This does not relieve the requirements of the soil erosion plan and/or soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., Part 91 as defined.

12.10 **Mining Prohibited.** No further mining shall be permitted on a site when an area within the site subject to reclamation has not been restored within the required time limit.

12.11 **Disposal of Materials.** As part of the reclamation process:

- A. All site debris shall be removed from the site and properly disposed of. No burying of debris is allowed.
- B. Tree and woody plant debris shall be ground or chipped, and retained for landscaping use on-site. Burning of such material is not allowed.
- C. No foreign or deleterious material will be buried.

## Section 13. Annual Report and Inspection

13.01 **Annual Report.** Each year at the anniversary date of the license the operator shall submit a report to the Township supervisor. The report shall include the following information:

- A. Tonnage of sand, gravel, and other materials removed from the extraction site during that year.
- B. Description of restoration activities undertaken during the year.
- C. Description of landscaping activities undertaken during the year.
- D. Acres of land restored during the year, including a map of restored areas.
- E. Total acres of disturbed land (not restored) at the end of the year, including processing plant area, unseeded berms and slopes, unrestored areas, unrestored

shorelines, areas stripped of topsoil, and water areas where active extraction is occurring.

- F. Monitoring well records and any domestic well records, certified by a registered engineer, geologist, or hydrogeologist, regarding ground water elevations and chemical analysis of the water.
- G. A lake bottom contour map.
- H. A statement regarding planned extraction and restoration activities for the next year.
- I. A statement regarding conformance to the approved extraction operations and reclamation plans, and compliance with required Federal, State, and County regulations including, but not limited to:
  - 1. The volumes of restoration material stockpiled on-site.
  - 2. The sufficiency of the stockpiled material to restore the then excavated site pursuant to the approved restoration plan.
  - 3. Copies of all permits and required inspections during the year.
- J. A list of all equipment that is located on and used at the site, whether temporary or permanent, together with a statement of the dollar value of each piece of said equipment.
- K. An aerial photograph of the entire site of oblique prospective, with a scale of not more than one (1) inch equals two hundred (200) feet, taken after extraction operations for the year have ceased and prior to the date of the Annual Report required under this license.
- L. 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.
- M. Applicable permits and/or reports that may be required from other governmental agencies including, but not limited to, information required within the Washtenaw County Pollution Prevention Regulation Act of 1992.
- N. Provide an annual statement regarding conformance to the approved extraction operations and reclamation plans, as well as compliance with all required federal, state, and county regulations. Copies of all current and renewed permits, including required inspection reports and any violations and the resolution thereof, during the prior year shall be provided.
- O. Provide a description of any complaints received during the prior calendar year and the procedures used to resolve the complaints.
- P. Failure to provide the required annual reports shall result in a temporary suspension of the mineral extraction license.

- 13.02 **Additional Meetings.** Following receipt of the annual report, the Township may require meetings with representatives of the licensee to review the annual report and to discuss any existing or anticipated issues associated with the extraction operation and may, if reasonably necessary, require that additional information, testing or reports be submitted to the Township in order that the Township may address those issues.
- 13.03 **Inspections.** Appointed representatives of the Township, including, but not limited to the Township engineer and/or consultants, shall conduct not less than one inspection of the site each year. A representative of the operator shall accompany the inspectors. The purpose of the inspection is to evaluate the operations in terms of the annual report and compliance with the approved license conditions. At the time of any inspections, the Township representatives may extract from the property samples of water, soil, and/or other material as may be necessary to perform the evaluation. A series of photographs will be taken to establish a historic record of activities and site changes over the life of the extraction operation. An inspection report shall be submitted to the Township and shall include:
- A. An evaluation of the annual report submitted by the extraction operator.
  - B. An evaluation of the site and operations in terms of performance and compliance with the extraction license.
  - C. Review of all monitoring well data in relation to the baseline water quality data and in regard to the general operation of the site.
  - D. A determination of the amount of the reclamation security, based upon the amount of land disturbed and reclaimed.
  - E. Photographs of the site.
  - F. Recommendations, including a modified monitoring plan, reclamation plan, and/or inspections schedule.
  - G. A request for such additional data as Township's representative reasonably deems necessary as the extraction area is increased or if the extraction lake is increased in depth.
- 13.04 **Township Board Inspection.** Inspection date(s) for Township officials to visit the extraction site shall be determined when the annual report is received.
- 13.05 **Costs.** In addition to the Annual Fee, a licensee shall pay the cost of reviewing the annual inspection and review for compliance. Such costs shall be in an amount equal to the Township's actual reasonable expenses incurred in reviewing the annual report and any inspection reports including but not necessarily limited to the cost of:
- A. Township Board meetings.
  - B. Special meetings.
  - C. Attorney fees.
  - D. Consultants and experts fees and expenses.

- E. Additional notices of public hearing.

## Section 14. Renewal of License

14.01 **Renewal Period.** An extraction license may be renewed every five (5) years, for an additional five (5) year period commencing upon expiration of the previous extraction license. The applicant shall submit a renewal application to the Planning Commission not less than six (6) months nor more than one (1) year before the end of the then current five (5) year license together with a renewal fee and an escrow deposit as determined by the Township Board to reimburse the Township for costs and expenses incurred in processing and reviewing the Renewal Application.

### 14.02 **Renewal of License Application Requirements.**

- A. A current environmental impact study, prepared by a qualified professional or professional engineer, submitted to the Township, addressing impacts the operation has had on natural features, and flora and fauna, both on the site and adjacent lands, as well as any mitigation measures taken to eliminate or minimize these impacts.
- B. Updates to the information and plans contained in the last extraction license Application. The plans must include mining, reclamation, and erosion control drawings.
- C. Report on the proposed extraction and reclamation activity for the next five (5) years, including any requested modifications to the original plans.
- D. In instances where the applicant has failed to perform the necessary monitoring or the required reclamation, the Township Board shall suspend the license renewal process.

### 14.03 **Review Process.**

- A. The Planning Commission shall undertake the following activities to determine whether or not to recommend renewal the extraction license:
  - 1. Conduct a public hearing to hear public comments on the past performance and continuation of the extraction operation.
  - 2. Review the operator's annual reports and the inspection reports received during the term.
  - 3. Review the application for renewal of license.
  - 4. Recommend to the Township Board renewal of the license, adopt additional conditions for the renewal of the license, or denial of renewal. Tipping fees may also be discussed.
- B. Following the vote of the Planning Commission recommending approval, approval with conditions or denial of a mineral extraction license the Planning Commission's

findings and all supporting documents in its possession shall be transmitted to the Bridgewater Township Clerk within fourteen (14) days of its decision and within sixty (60) days after receipt of the findings and supporting documents from the Planning Commission, the Township Board of Bridgewater Township shall:

1. Conduct a detailed review of the application, all supporting documents and the recommendation of the Planning Commission.
2. Conduct a public hearing.
  - a. The Township clerk shall give notice of the hearing to the owners of all property to each such party by first class mail, or hand delivered. within two thousand (2,000) feet of the subject property. The notice shall be mailed not later than ten (10) days prior to the hearing.
  - b. The notice shall be published in a newspaper(s) of general circulation in the Township.
  - c. Any party may appear and comment at the hearing in person, by agent, or by attorney.

#### 14.04 **Standards for Renewal.**

- A. The standards applied with an original license application review, as outlined in Section 8.
- B. Documented negative impacts of the extraction operation on the environment and in relation to the health, safety, and welfare of the community.
- C. Substantial non-compliance with the previous approved extraction license particularly in regard to required environmental monitoring or the required reclamation.

14.05 **Costs.** In addition to the basic application fee, applicants for a mineral extraction license renewal shall pay the costs of review of the application. Such costs shall be in an amount equal to the Township's actual expenses incurred for reviewing and/or relating to the application, including but not necessarily limited to the cost of:

- A. Planning Commission and Township Board meetings;
- B. Special meetings;
- C. Attorney fees;
- D. Reports and review by the Township's experts and/or consultants; and
- E. Additional notices of public hearing.

## Section 15. Variance

- 15.01 **Authority to Grant Variance.** When there are practical difficulties in the way of carrying out the strict letter of the ordinance, the Township Board shall have the power to vary or modify the provisions of this ordinance, in accordance with this section. The intent and purpose of the ordinance shall be observed, public safety secured, and substantial justice done.
- 15.02 **Application for Variance.** Any applicant may apply for a variance from any provision of the ordinance by filing an application for variance with the Township clerk and paying a variance application review fee as determined by resolution of the Township Board.
- 15.03 **Costs.** In addition to the variance review fee, the applicants shall pay the costs of reviewing the variance. Such costs shall be in an amount equal to the Township's actual expenses incurred for reviewing, including but not necessarily limited to the cost of:
- A. Township Board meetings;
  - B. Special meetings;
  - C. Attorney fees;
  - D. Reports and review by the Township's experts and/or consultants; and
  - E. Additional notices of public hearing.
- 15.04 **Hearing on Variance.** The Township shall hold a public hearing upon such variance application within forty-five (45) days from its filing.
- A. The Township clerk shall give notice of the hearing to the owners of all property within two thousand (2,000) feet of the subject property. The notice shall be mailed to each such party by first class mail, or hand delivered.
  - B. The notice shall be published in a newspaper(s) of general circulation in the Township not later than ten (10) days prior to the hearing.
  - C. Any party may appear and comment at the hearing in person, by agent, or by attorney.
  - D. The Township shall keep a record of said hearing and shall render a written decision not later than the next regular Township Board meeting, or 30 days after the hearing date, whichever is greater.
  - E. The Township Board may attach reasonable conditions in granting the variance from any provision of the ordinance to insure that the standards and intent of the ordinance are met.
  - F. Violation of conditions shall be considered a violation of this ordinance and shall be subject to the penalties stated in Sections 18 and 19.

## Section 16. Compliance with Future Amendments to Ordinance

Any applicant/owner/operator shall be required to comply with the provisions of any future amendments to this ordinance and the extraction license agreement shall contain a provision to that effect.

## Section 17. Amendment to License

17.01 **License Amendments.** Bridgewater Township recognizes that changes or variations from a mineral extraction license may be needed once a licensed project begins due to the nature of the materials, unexpected variations in the topographical features, equipment restraints or other physical considerations. The applicant may present proposed changes to the mining plan and/or reclamation plan to the Township Board for approval without applying for a new license. Amendments to a license shall not be a substitute for a valid and well thought out original plan.

17.02 **Submission on Proposed Amendments.** The proposal for amending a license requires the submission of the proposed changes to the Township clerk two weeks prior to a scheduled meeting of the Township Board, and shall include the following:

- A. The existing license and supporting documents.
- B. The nature and reasons for the change including any supporting documents that justify the changes.
- C. A set of amended plans from those originally approved with the mineral extraction license.
- D. An amendment fee and escrow amount, as determined by resolution of the Township Board, to cover costs incurred by the Township for such review.

17.03 **Hearing on Proposed Amendments.** The Township shall hold a public hearing upon such amendment application within forty-five (45) days from its filing.

- A. The Township clerk shall give notice of the hearing to the owners of all property within two thousand (2,000) feet of the subject property. The notice shall be mailed to each such party by first class mail, or hand delivered.
- B. The notice shall be published in a newspaper(s) of general circulation in the Township not later than ten (10) days prior to the hearing.
- C. Any party may appear and comment at the hearing in person, by agent, or by attorney.
- D. The Township shall keep a record of said hearing and shall render a written decision not later than the next regular Township Board meeting, or 30 days after the hearing date, whichever is greater.
- E. The Township Board may attach reasonable conditions in granting the variance

from any provision of the ordinance to insure that the standards and intent of the ordinance are met.

- F. Violation of conditions shall be considered a violation of this ordinance and shall be subject to the penalties stated in Sections 18 and 19.

17.04 **Authority of Township Board.** Once an amendment submission is made to the Township Board and determined to be complete, the Township Board shall, within 90 days:

- A. Approve the amendment based on the following findings:
  - 1. The applicant can comply with this ordinance.
  - 2. The operation will not adversely affect the health, safety, and welfare of the residents of the Township.
  - 3. The site will be restored so it is safe and harmonious with the surrounding land uses.
  - 4. The proposed operation will not adversely affect the water table, water quality, or water supply of any surrounding land.
  - 5. The use proposed in the reclamation plan is acceptable to the Township Board, based upon the Board's review of the Township zoning ordinance, Township master plan, surrounding land uses and site characteristics.
- B. Disapprove the amendment based on one or more of the following findings that the applicant has failed to demonstrate:
  - 1. The applicant can comply with this ordinance.
  - 2. The operation will not adversely affect the health, safety, and welfare of the residents of the Township.
  - 3. The site will be restored so it is safe and harmonious with the surrounding land uses.
  - 4. The proposed operation will not adversely affect the water table, water quality, or water supply of any surrounding land.
  - 5. The use proposed in the reclamation plan is acceptable based upon the Board's review of the Township zoning ordinance, Township Master Plan, surrounding land uses and site characteristics.
- C. Extend the period of review for an additional 30 days or to the next scheduled Township Board meeting based on a written determination that additional review is needed. Any revised documents must be submitted two weeks prior to any meeting for review.
- D. A license amendment proposal denied by the Township Board may not be reapplied for, whether the same or modified, for a period of 12 (twelve) months from the date

of denial.

## Section 18. Revocation

18.01 **Justification for Revocation.** Any violation of this ordinance or a license given pursuant to it, shall justify revocation of the license, provided that the Township gives the licensee seven (7) days to correct the violation, (unless the violation is of such nature that it cannot be cured within seven (7) days in which event the licensee shall be given a reasonable period of time to cure). Failure on the part of the licensee to correct the reported violation within seven (7) days (or within the time otherwise permitted) after such demand is made shall entitle the Township to:

- A. Revoke the license and demand that all activities cease.
- B. Require the restoration to be done and completed as provided for in this ordinance.

18.02 **Appeal of License Action.** A cancellation or suspension of license may be appealed to the Washtenaw County Circuit Court if a hearing is requested within 30 days of the issuance of a notice of revocation or suspension. That Circuit Court shall have authority to affirm or reverse the cancellation or suspension. It may also order a temporary suspension until violations are corrected.

18.03 **Temporary Revocation.** The Township supervisor, in the case of a violation of this ordinance, may temporarily revoke a license issued under this ordinance for up to 30 days where the public health, safety, or welfare may be affected.

## Section 19. Violations and Penalties

19.01 **Civil Infraction.** Any person violating any provision of this ordinance shall be deemed responsible for a civil infraction. Each day an operation is carried on in violation of the ordinance shall be considered a separate infraction. The civil fines payable upon an admission of liability or a determination of liability by a court of competent jurisdiction as follows:

- 1. First violation \$50
- 2. Second violation within a 4-year period \$125
- 3. Third violation within a 4-year period \$250
- 4. Fourth or subsequent violation within a 4 year period \$400

In addition to the above prescribed civil fines, costs in the amount of \$10 shall be assessed if the fine and costs are paid within 10 days of the date of service of the municipal ordinance violation notice. Otherwise, costs of \$20 shall be assessed.

19.02 **Nuisance Per Se.** In addition to the foregoing, any violation of this ordinance shall be deemed a nuisance per se, permitting the Township Board, its officers, agents or any private citizen to take such action in any Court of competent jurisdiction to cause the

abatement of such nuisance, including injunctive relief.

- 19.03 **Discretion of Township.** The penalties provided for in this section are cumulative and the Township may, in its sole discretion, elect to charge an alleged violator with a misdemeanor and/or issue a civil infraction violation and/or seek such equitable relief to abate a nuisance resulting from a violation of this ordinance.

## Section 20. Appeal

- 20.01 **Right to Appeal.** Any applicant or affected property owner may appeal a decision of the Township Board under this ordinance to the Circuit Court for Washtenaw County.
- 20.02 **Time for Appeal.** The time for taking an appeal from any decision of the Township Board shall be within 21 days of the date of the decision which is being appealed.
- 20.03 **Permissible Findings.** Based on facts presented at an appeal, the Circuit Court may make findings regarding the decision which is the subject of appeal;
- A. Affirm the decision of the Township Board.
  - B. Reverse the decision of the Township Board.
  - C. Remand the matter to the Township Board for additional findings and/or redetermination.

## Section 21. Financial Guaranty and Liability Insurance

- 21.01 **Surety Bond, Irrevocable Letter of Credit, or Security Deposit.** The operator must provide and maintain a surety bond, irrevocable letter of credit in satisfactory form approved by the Township attorney, or security deposit, in an amount as determined by the Township Board.
- 21.02 **Liability Insurance.** The operator shall at all times procure and maintain at the operator's expense a liability insurance policy of not less than \$5,000,000 per incident for all liability claims arising out of the site. The certificate of insurance shall provide that the Township must be given thirty (30) days prior written notice of cancellation of insurance. In case of cancellation, the license shall be suspended.
- 21.03 **Indemnification.** The operator shall hold the Township harmless against all claims by third parties for damage or costs arising out of, resulting from, or related to mineral extraction, processing and reclamation on the site property or incurred in the development of the site property. The operator shall indemnify the Township for all costs, damages, or expenses incurred by the Township arising from such claims, including attorneys' fees.

## Section 22. Severability

It is the intention that if any portion of this ordinance is found, for any reason, to be invalid, the remainder of the ordinance shall remain in effect.

## Section 23. Relationship to Other Laws

- 23.01 **More Restrictive Provisions Apply.** Whenever regulations or restrictions imposed by this ordinance are either more or less restrictive than regulations or restrictions imposed by this or any other governmental authority through legislation, rule or regulation, the regulations, rules or restrictions which are more restrictive or which impose higher standards or requirements shall govern.
- 23.02 **Resolution of Conflict.** Wherever there is a conflict in determining which is the more restrictive or imposes the higher standard, the standards of this regulatory ordinance shall govern.
- 23.03 **No Violation of Other Laws.** Regardless of any other provision of this ordinance, no land shall be used and no structure erected or maintained in violation of any federal, state, or county environmental protection laws or regulations.

## Section 24. Repealer

Ordinance #47 is repealed and replaced in its entirety by this ordinance, however, nothing contained in this ordinance shall be deemed to alter appointments, decisions or applications made under ordinance #47. When this ordinance takes effect, all pending applications will be reviewed under the terms of this ordinance.

## Section 25. Adoption

This ordinance was adopted by the Bridgewater Township Board at a regular meeting held on \_\_\_\_\_, 2011. This ordinance, or a summary of it together with a location in the Township where a true copy of the ordinance can be inspected or obtained, shall be published in the newspaper of record within 30 days of adoption. The ordinance shall take effect 30 days after the date of publication of the notice of adoption.

YEAS: (5) Mull, Fromhart, Riley, Faust and Oliver  
NAYS: (0) None  
ABSENT: (0) None

**Ordinance Declared Adopted on February 3, 2011.**

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Jolea Mull, Supervisor  
Township of Bridgewater

### **CERTIFICATE OF ADOPTION AND PUBLICATION**

I, Laurie Fromhart, the duly elected Clerk of the Township of Bridgewater certify that the foregoing

ordinance is a true and correct copy of the ordinance enacted by the Township Board of the Township of Bridgewater on February 3, 2011 and published in the Manchester Enterprise, a newspaper, circulated in the Township of Bridgewater on March 17, 2011.

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Laurie Fromhart, Clerk  
Township of Bridgewater