# Staff Report for the McHenry County Zoning Board of Appeals

Application: #2023-051

PIN: 16-13-300-006

Address: Maple Street, Marengo

**Applicant:** Maple Valley Materials LLC

**Request:** Renewal of CUP 2014-004 to allow earth extraction and adding a Ready-Mix Batch Plant in the A1C

district

Elevation

(feet above sea level)

10-foot contours

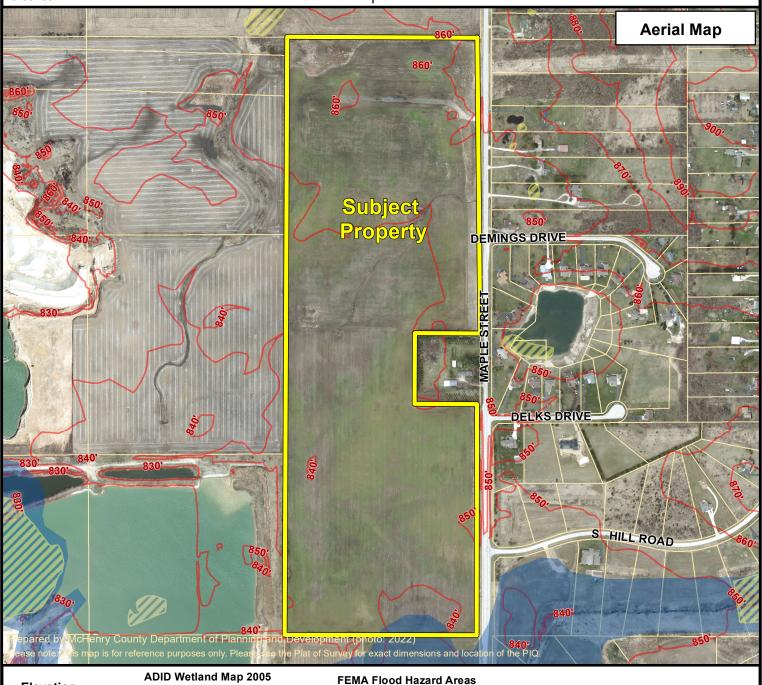
2-foot contours

Hearing: November 21, 2024

<u>Location</u>: The one hundred and eleven (111) acre tract is located on the West side of Maple Street, approximately one thousand four hundred seventy-five (1,475) feet south of the intersection of Maple Street and W Coral Road, in Riley Township.

640

1 inch equals 634.4 feet



High Functional Value Wetland (hfvw) 0.2 % Annual Chance of Flood

Floodway

1% Annual Chance of Flood

High Quality Wetland (hqw)

Farmed Wetland (fw)

Wetland (w)

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#### **STAFF COMMENTS**

The following comments and conclusions are based upon staff analysis and review prior to this hearing and are to be considered viable unless evidence is established to the contrary. Staff may have additional comments based upon the testimony presented during the public hearing.

#### **BACKGROUND & REQUEST SUMMARY**

The applicant is requesting a renewal of a Conditional Use Permit to allow earth extraction/mining (CUP 2013-046) on one hundred eleven (111 acres). The original CUP for earth extraction was granted in 2003 (2003-008). In addition to the renewal, the applicant is also seeking to have a ready-mix batch plant on the property.

This property is located on the west side of Maple Street, approximately one thousand four hundred seventy (1,475) south of West Coral Road. The plat of survey shows a gravel driveway and the presence of two (2) utility facilities —a Nicor gas line and ComEd transmission lines. All these improvements are located at the northern end of the property. The balance of the property has remained undeveloped.

#### MCHENRY COUNTY UNIFIED DEVELOPMENT ORDINANCE

• The Applicant must meet the Approval Standards for Conditional Use Permit, listed in County Code Section 16.20.040.E and the development standards for Earth Extraction/Mining found in County Code Section 16.56.030.P.

# **STAFF ANALYSIS**

#### Current Land Use & Zoning

The subject property is zoned A-1C Agriculture with a Conditional Use Permit for Earth Extraction, and, other than a gravel driveway and two (2) utility facilities (Nicor pipes and ComEd lines), has remained undeveloped. The properties to the north and south are zoned A-1 Agriculture and have been used for row crop production. Properties to the east are zoned A-1 Agriculture, R-1 Single-Family Residential and E-2 Estate. These properties are either undeveloped or have single-family residential houses on them. The properties to the west are zoned A-1C Agriculture with conditional use permits for earth extraction and have active mines on them.

#### 2030 Comprehensive Plan Future Land Use Map

The proposed conditional use permit is compatible with the map designation of Agriculture.

#### 2030 Comprehensive Plan & 2030 and Beyond Analysis

The 2030 Comprehensive Plan and 2030 and Beyond supports the mining of aggregate resources and encourages the continued enforcement of regulations regarding zoning, groundwater monitoring, traffic and safety, and noise emission related to the mining industry.

The earth extraction operation is subject to the Stormwater Management Ordinance. An application for a stormwater management permit will be required prior to commencing development of the site.

INDR has indicated that they have recorded nesting sites for the state endangered Swanson's Hawk in the vicinity, however, the mining at this site is not likely to adversity impact this species. (EcoCAT Review 2404958)

McHenry County 2030 and Beyond, Adopted October 18, 2016

#### Big Idea #1 Let's make our communities healthy, active, and green

"We can make it happen by preserving our groundwater aquifers, lakes, rivers, streams, and their natural functions." (p.11)

• The subject property is partially located within a Sensitive Aquifer Recharge Area (SARA) and the proposed development could have potential for contamination. The applicants are required to install monitoring wells on the site which will be actively monitored by McHenry County.

Big Idea #2 Let's build on our strengths

"We can make it happen by recognizing the importance of our aggregate mining industry, both economically and for its part in building our public infrastructure, business, and housing." (p. 16)

• The proposed use extracts aggregate materials to be used in products such as sand, gravel, asphalt, or concrete. The materials extracted from this site will contribute to development in the area as well as provide jobs within the earth extraction industry.

#### Big Idea #3 Let's grow smarter

"We can make it happen by supporting business development and commercial uses to reduce the property tax burden on residential homeowners." (p. 17)

• Approval of the renewal of this conditional use permit would allow future earth extraction, which, as noted above, will support several businesses in the area.

# Big Idea #4 Let's expand our economy

"We can make it happen by improving infrastructure, including freight and commuter rail, access to major regional and interstate roadways, and access to high-speed internet services." (p.22)

• This industry plays a role in the construction of new infrastructure (roadways and buildings) by providing important construction material.

McHenry County 2030 Comprehensive Plan, Adopted April 20, 2010

# Community Character & Housing

No applicable text.

## Agricultural Resources

"Maintain and protect the most productive agricultural lands, where appropriate, by discouraging nonagricultural growth in these areas." (p. 29)

• NRI report #23-092-4552 indicates that the soils in this area are among the most productive agricultural lands (having a LESA score over 76).

#### Greenways, Open Space & Natural Resources

"Promote the retention and management of open space for conservation, wildlife habitat, and recreation." (p.43)

• The reclamation plan indicates that at the conclusion of operations there will be a lake located on the property. Water features, such as this, are beneficial to wildlife habitat.

#### Water Resources

"...land use and development should be carefully examined and regulated within sensitive groundwater recharge areas to ensure that the water quality, quantity, and natural recharge functions of the area are safely maintained." (p.67)

According to the NRI report over ninety-six (96) acres of the total one hundred eleven (111) are within a SARA area.
Staff is proposing conditions which are consistent with the UDO requirements which will monitor the water quality, quantity and recharge functions.

# **Economic Development**

"Continue to enforce current regulations regarding zoning, groundwater monitoring, traffic and safety, noise emissions related to the mining industry." (p.98)

"Preserve areas with important aggregate resources from encroachment from development uses." (p.87)

• Aggregates found in the county support several industries and contribute significantly to the local economy. The continued operation of these mines will support the future development of the county.

#### **STAFF ASSESSMENT -**

The requested conditional use is supported by the text of the 2030 Comprehensive Plan and the McHenry County 2030 and Beyond plans.

The following conditions are the ones already established for Conditional Use Permit #2013-046. Staff recommends that these same conditions be continued. Additional (new) recommended conditions start with number twenty-seven (27).

- 1. The time limit for the Conditional Use Permit shall be 10 years from the date of approval by the McHenry County Board.
- 2. Existing trees, shrubs and other types of woody vegetation along road frontages shall be protected and maintained. Weeds and other unsightly noxious vegetation shall be cut or trimmed as may be necessary to present a reasonably neat appearance, to prevent grass fires or the hazard of grass fires.
- 3. No earth extraction and/or mining operation(s) is permitted to operate in such a manner that the groundwater table of surrounding properties is adversely impacted. In the case of mining operations, water pumped from the site for the purpose of washing shall be retained in a pond until the silt and clay settles and then the water recycled in the area affected. Groundwater quality shall be monitored and maintained on a regular basis in accordance with monitoring practices. Groundwater monitoring parameters are established in § 16.56.030.P.8 (Groundwater Monitoring). Monitoring reports are to be conducted on January 30, April 30, July 30 and October 30 of each year that the operation continues and submitted to the Zoning Enforcement Officer.
- 4. The owner and/or operator shall repair any section of road damaged as a result of hauling operations but shall not be responsible for the normal wear and tear of the road. This provision shall not be construed to require the owner and/or operator to purchase additional right-of-way.
- 5. All operations shall be conducted in a safe manner, especially with respect to hazards to persons, damage to adjacent lands or improvements and wells, and damage to any street by slides, sinking or collapse of supporting soil adjacent to an excavation.
- 6. The following apply to earth extraction and/or mining conditions only **not** to reclamation conditions:
  - a. Earth extraction and/or mining operation(s) that remove and do not replace the lateral support shall be located a minimum of thirty (30) feet from property lines, established right-of-way lines of any public roads, streets, McHenry County, Illinois
  - b. The bottom of the slope of the excavated face shall be no closer to the point determined in §16.56.030.P.7.e.i, than a distance equal to one and one-half (1½) times the depth of the excavation.
  - c. If consolidated materials occur in the excavated face, the slope of the face may be steeper than one and one-half (1½) to one (1) slope per §16.56.030.P.7.e.ii for the depth(s) of those materials, however all other excavated slopes of unconsolidated materials are limited to one and one-half (1½) to one (1) slope.
  - d. In the case that the right-of-way has not been recently surveyed by a registered land surveyor and clearly marked, the right-of-way line is assumed to be, for the purpose of this section, a minimum of forty (40) feet from the centerline of the existing road.
- 7. All active operations shall be separated by an earthen berm no less than six (6) feet-in height and/or a farm fence of no less than fifty-four (54) inches in height and designed to allow the free flow of wild animals but discourage trespassing by humans and farm animals. Berms that remain in place for one (1) year or longer shall be planted with grass, shrubs, and trees, and maintained as a visual and acoustical screen. They shall be designed so that they do not erode into the road or highway right-of-way or onto a contiguous property. All berms located along roadways must comply with all applicable state regulations.
- 8. The processing and stockpiling of aggregate resources shall not be conducted within three hundred (300) feet of any adjoining residentially zoned property line.

- 9. The hours of operation for all activities, other than maintenance functions, are restricted to 7:00 a.m. to 7:00 p.m. on Mondays through Fridays and 7:00 a.m. to 3:00 p.m. on Saturdays and Sundays. In emergency situations, operations are permitted at times otherwise prohibited. (An emergency situation, for the purpose of this section, is any operation necessary to provide repairs to roadways or provide other materials and assistance that, if delayed until normally permitted hours, would cause injury or loss of life or property.) Any operation or activity under this section shall immediately be reported to the McHenry County Sheriff's Department and reported to the Zoning Enforcement Officer the next business day.
- 10. Operations shall be conducted so that noise levels and air and water standards comply with federal and State of Illinois requirements.
- 11. Access ways and on-site roads shall be maintained in a dust-free condition. A Dust Control Plan shall be submitted to the Zoning Enforcement Officer prior to the issuance of an *Annual Operations Permit*.
- 12. The premises shall be neat and orderly, free from junk, trash or unnecessary debris. Buildings shall be maintained in a sound condition, in good repair and appearance. Salvageable equipment stored in a non-operating condition shall be suitably screened or garaged.
- 13. Enough topsoil must be stockpiled to meet the finished conditions.
- 14. No operations may occur on the property pursuant to this ordinance without the issuance of an Annual Operations Permit issued by the Zoning Enforcement Officer. The operations permit may be for less than the total area proposed. The construction of access or haul roads, building and landscaping of required berms, and other site improvements required for site preparation shall **not** require the issuance of an Annual Operations Permit. The Zoning Enforcement Officer shall issue said Operations Permit upon receipt from the owner or operator of the following items:
  - a. An Operations Plan (Mine Plan and Mine Phasing Plan [Last Revision Date: June 25, 2024] by Patrick Engineering, as Exhibits 6 and 7) in compliance with this ordinance and other applicable County ordinances; and
  - b. A Reclamation Plan (Mine Reclamation Plan [Last Revision Date: June 25, 2024] by Patrick Engineering, as Exhibit 8) in compliance with this ordinance and other applicable County ordinances; and
  - c. A Groundwater Monitoring and Protection Plan in compliance with the County's Unified Development Ordinance, the adopted Ground Water Monitoring Ordinance, and other applicable County ordinances; and
  - d. A surety as provided by the County's Unified Development Ordinance based upon the Engineer's Opinion of Probable Reclamation Cost prepared by Patrick Engineering, dated June 26, 2024; and
  - e. A copy of all applicable County, State and Federal permits or statements of exemption therefrom; and
  - f. An approved McHenry County Stormwater Management permit; and
  - g. A Dust Control Plan; and
  - h. A Spill Prevention Containment and Control Plan.
- 15. At all times the Owner and/or Operator shall take adequate measures to insure that contaminated surface water runoff shall not enter ponds or other areas of open standing water. A spill Prevention Containment and Control Plan shall be submitted to the Zoning Enforcement Officer prior to the issuance of an *Annual Operations Permit*.
- 16. The Owner and/or Operator shall take adequate measures within the site to insure that trucks, exiting the site on roadways, do not discharge earth materials or debris on the roadway.
- 17. The Zoning Enforcement Officer, or a duly authorized representative, shall have the free right of access to the subject property for the purpose of inspections, making water level measurements, obtaining water or material samples and for gathering other information necessary for the proper discharge of his/her responsibilities.
- 18. The owner and/or operator shall be assessed an annual fee to pay for compliance monitoring based on costs.

- 19. Prior to the termination of this Conditional Use, the Owner shall cause to be filed with the McHenry County Recorder of Deeds an easement approved by the Zoning Enforcement Officer, after review by the McHenry County's State's Attorney's Office, which shall provide access to the real estate for the purpose of monitoring and sampling of the then existing wells.
- 20. The Owner and/or Operator shall provide groundwater level and quality reports using data from monitoring wells and staff gauges. These reports shall meet the requirements of the §16.56.030.P.8 of the McHenry County Unified Development Ordinance.
- 21. To the extent lawfully permitted by the Illinois Department of Revenue, the point of sale of excavated materials from the site shall be deemed to originate in Unincorporated McHenry County.
- 22. Alf operations, reclamation and on-going uses shall comply with the terms and conditions of the McHenry County Unified Development Ordinance, the McHenry County Stormwater Management Ordinance, and the McHenry County Stormwater Management Permit. The requirements of these items shall supersede the Operations Plan and Reclamation Plan approved by this ordinance.
- 23. Decisions of the Zoning Enforcement Officer subsequent to the adoption of this Ordinance are subject to the normal appeals procedure set forth in the Zoning ordinance and/or State Statute.
- 24. The Owner and/or Operator shall provide proof of petition to Mine Safety and Health Administration (MSHA) for the use of alternative safety warning mechanisms, other than back-up beepers. If approved, the alternative method must be used when vehicles are on the subject property, as it applies to the MSHA approval.
- 25. Before the site is reclaimed, a vegetative buffer strip shall be installed along the slope around the mined area in order to reduce the potential of surface water pollutants from entering the mined area by providing an area for filtration and infiltration of water. Said buffer shall be vegetated using the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois (NRCS, et al, as amended) as a minimum standard.
- 26. The Owner and/or Operator shall not mine into the clay barrier above the Glasford Aguifer.
- 27. All other federal, state, and local laws shall be met.
- 28. The Owner and/or Operator shall erect a sign at the exit of the property reminding truck operators to adhere to designated truck routes. Said sign shall be erected within three (3) months of issuance of an Operations Permit and shall remain clearly visible during the duration of this Conditional Use Permit.

# **Approval Standards for Conditional Use Permits**

(Section 16.20.040 E of the Unified Development Ordinance)

- E. Approval Standards for Conditional Use Permits. No conditional use permit may be granted unless the Zoning Board of Appeals and County Board makes specific written findings that the request meets each of the standards imposed by this section. These standards are as follows:
  - 1. That the petitioner has demonstrated the ability to meet any applicable standards contained in <u>Chapters 16.56</u> (Use Standards) and <u>16.60</u> (Site Development Standards).
  - 2. That the site shall be so situated that the proposed use is compatible with the existing or planned future development of the area.
  - 3. That the establishment, maintenance, or operation of the conditional use shall not be detrimental to or endanger the public health, safety, morals, comfort or general welfare of the neighboring vicinity.
  - 4. That the conditional use shall not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted.
  - 5. That the conditional use shall not substantially diminish and impair property value within the neighborhood.
  - 6. That adequate utilities, access roads, drainage, and other necessary facilities have been or are being provided.
  - 7. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion and hazard on public streets.
  - 8. That the conditional use shall, in all other respects, conform to the applicable regulations of the zoning district in which it is located.
  - 9. That the conditional use is reasonably in the interest of the public welfare.
  - 10. That adequate measures will be taken to provide protection to groundwater recharge and groundwater quality.

# **Approval Standards for Earth Extraction and Mining**

(Section 16.56.030 P of the Unified Development Ordinance)

- P. Earth Extraction and Mining.
- 1. Earth Extraction Activities Exempt from Conditional Use Permit. An owner is exempt from the requirements of conditional use permit approval pursuant to this section provided each of the following conditions are satisfied:
  - a. Earth extraction operations are conducted upon a recorded lot of record no more than two (2) acres in size.
  - b. Less than ten (10) feet of overburden is removed for the single purpose of improving the agricultural use of that parcel or another parcel in his/her ownership or of his/her spouse or children. Earth extraction and/or mining operation(s) do not constitute an agricultural use.
  - c. The owner files an affidavit with the Zoning Enforcement Officer that the above conditions have been met. Such earth extraction or mining operation(s) may be conducted without a hearing before the Zoning Board of Appeals and without approval of the County Board. The Zoning Enforcement Officer will provide the necessary form of application and affidavit and issue a certificate of exemption if warranted to the owner. However, this certificate does not eliminate the need for any other required permits.
- 2. Compliance with State and Federal Regulations.
  - a. It is unlawful for any owner/operator to engage in earth extraction or mining in an area where the overburden exceeds ten (10) feet in depth or where the operation will affect more than ten (10) acres during the permit year without first obtaining a permit from the Illinois Department of Mines and Minerals to do so, pursuant to the Surface-Mined Land Conservation and Reclamation Act (225 ILCS 715/1 et seq.), as amended.
  - b. All owner/operators shall comply with the regulations of the United States Environmental Protection Agency and all State of Illinois and federal regulatory agencies for occupational health and safety, and shall obtain any necessary permits prior to conditional use permit approval. Before the onset of any operations, the Zoning Enforcement Officer shall be provided with copies of all necessary permits.
- 3. Earth Extraction Report and Plan. The applicant must submit the following information no less than thirty (30) calendar days prior to the opening of the public hearing for the conditional use permit:
  - a. Ownership of land.
  - b. Minerals to be extracted or mined.
  - c. Character and composition of vegetation and wildlife on land to be affected.
  - d. Current assessed valuation of lands to be affected.
  - e. Assessed valuation shown by two (2) quadrennial assessments next preceding the currently effective assessment.
  - f. The nature, depth, and proposed disposition of the overburden.
  - g. The estimated depth to which the mineral or aggregate resource will be extracted or mined.
  - h. The technique to be used in the extracting and/or mining operation.
  - i. Estimated type and volume of excavation.
  - j. The equipment proposed to be used.
  - k. Practices and methods proposed to be used to minimize noise, dust, air contaminants, and vibration and to prevent pollution of surface or ground water.
  - I. If applicable, the recycling of water used for washing and grading.
  - m. If applicable, the proposed usage or drainage of excess water.
  - n. The simultaneous reclamation plan including methods of accomplishment, phasing, and timing.
  - o. Current and past uses of the land.
  - p. Location of existing roads, and anticipated access and haulage roads planned to be used or constructed in conducting earth extraction and/or mining operation(s).
  - q. Location and names of all streams, creeks, wetlands and bodies of water within lands to be affected.
  - r. Drainage on and away from affected land, including directional flow of water, natural and artificial drainage ways and waterways, and streams or tributaries receiving the discharge.
  - s. A topographic survey with two-foot (2') contours, at the same scale as the aerial photo showing the existing conditions on the subject site.
  - t. A traffic study showing the impacts of increased truck traffic from the location of the earth extraction or mining site to the nearest County or State highway that will be used for transport.
  - u. A current Illinois Department of Natural Resources Endangered Species Consultation (EcoCAT) Report.

# 4. Expiration and Renewal of Conditional Use Permit.

- a. All earth extraction or mining conditional use permits expire ten (10) years from the date of approval, unless a lesser time is approved. At the Zoning Board of Appeals public hearing, a time limit will be established in which the operator will complete earth extraction and/or mining operation(s) on the parcel. If operation(s) are not completed during the imposed time, the operator is required to request a renewal of the conditional use permit or cease operation.
- b. The renewal of a conditional use permit under this section is valid for a maximum of ten (10) years.
- c. A request to renew a conditional use permit that involves additional acreage or equipment above that allowed in the original conditional use permit is treated as a new conditional use permit.
- d. The following describes the process to renew a conditional use permit:
  - (1) If an owner is not able to finish earth extraction and/or mining operation(s) on the acreage described in the conditional use permit in the time specified, the owner shall apply to the Zoning Board of Appeals for a renewal of the permit.
  - (2) The Zoning Board of Appeals will hold a public hearing. All maps required by this ordinance for the initial hearing shall be revised, updated, and resubmitted along with a statement of the current status of the reclamation. A new map describing conditions present on the site shall be furnished as described in "Existing Conditions" section of the Standards.
  - (3) The applicant shall furnish the Department of Planning and Development with a copy of the required maps, plans, and other related exhibits for review of the revised or extended reclamation plan no less than thirty (30) days before the Zoning Board of Appeals hearing.
  - (4) The Department of Planning and Development will prepare a report on the revised or extended reclamation plan and enter it into evidence at the Zoning Board of Appeals hearing.
  - (5) Any application for a renewal of a conditional use permit shall be filed with the Zoning Board of Appeals a minimum of one hundred twenty (120) days before the expiration date of the original conditional use permit or any renewal. Failure to file a request for renewal within the required time results in a required cessation of operations and, if applicable, the sale of product upon the expiration of the conditional use permit.

#### 5. Required Bonds.

- a. An owner is required to obtain the proper permits and submit a bond or other acceptable form of surety. If a bond is required by the State of Illinois, the owner is only required to provide the Department of Planning and Development with a photocopy. A bond of no less than two thousand five hundred dollars (\$2,500.00) for each acre affected is required. The actual dollar amount will be established during the hearing process with the Zoning Board of Appeals, based upon one hundred fifty percent (150%) of the engineer's estimate of the cost of reclamation per acre average at the time earth extraction and/or mining operation(s) are to be performed. This estimate shall take into consideration inflation of costs in future years. The actual operation will be monitored by the Zoning Enforcement Officer, who will prepare a written report on the progress before partial or full release of the surety.
- b. The surety will be held by the Department of Planning and Development. The bond will remain in effect until the affected lands have been reclaimed in accordance with the reclamation plan and the work is approved by the Department of Planning and Development and the Zoning Enforcement Officer at the annual review of the operation.
- c. Earth extraction and/or mining operation(s) are not allowed unless a bond has been posted with the Department of Planning and Development. The form and type of surety shall be approved by the Office of the State's Attorney of McHenry County. The surety will be for assurance of completion of reclamation and the initial surety amount set on an anticipated three (3) years working basis with reasonable allowance for inflation of costs. Before the end of each one-year (1-year) period, the Zoning Enforcement Officer's evaluation and the approval of the past years work will be required for release of or reduction of the bond amount and at that time, re-bonding established for the next one-year (1-year) period or fraction thereof.

# 6. Reclamation Plan.

- a. Reclamation Regulations. The applicant must submit a reclamation plan map and statement of sequential operation and reclamation as a condition of approval. The reclamation plan shall be submitted no less than thirty (30) calendar days prior to the opening of the public hearing. The Department of Planning and Development shall prepare a report on the reclamation plan and enter it into evidence at the public hearing. The reclamation plan map shall produce a finished condition that provides for the return of the affected land to a useful purpose.
- b. Changes to the Reclamation Plan. In the event that a change in the reclamation plan is necessary due to the unanticipated characteristics of the area concerned, the Department of Planning and Development shall be provided with appropriate documentation, and will study the proposed change and give the report to the Zoning Enforcement Officer and the Planning and Development Committee for their review. Changes may be made in the reclamation plan upon the request of the owner and require approval from the Zoning Enforcement Officer and the Planning and Development Committee. The change(s) shall preserve, as substantially as possible, the original reclamation plan, but may provide for previously unknown variables.
- c. Finished Conditions. The finished conditions of all land affected by earth extraction and/or mining operation(s) shall:

- (1) Be graded to a rolling topography traversable by machines necessary for maintenance in accordance with planned use, with slopes of no more than a fifteen percent (15%) grade. In the case of those lands to be reclaimed in accordance with the filed plan for forest plantations, recreation or wildlife, the final cut spoil, the outside slope of the box cut spoil, the outside slopes of all overburden deposition areas, and the side slopes of haulage road inclines are limited to a maximum thirty percent (30%) grade, but such slopes need not be reduced to less than the original grade of the overburden of the area prior to earth extraction and/or mining operation(s).
- (2) Be designed to control conditions that could cause erosion on site or on surrounding properties.
- (3) Be designed so that any surface drainage from the property leaves the property at the original, natural drainage points. If this is not possible, the drainage plans shall be reviewed by the Department of Planning and Development as part of the overall submission. Drainage volume shall not be increased over what it would have been if the site remained in its former use. The finished condition shall meet McHenry County Stormwater Management Ordinance standards.
- (4) Be covered with arable topsoil to a minimum depth of six (6) inches and have a minimum of ten percent (10%) organic material. However, no greater depth of topsoil or percentage of organic material is required than that originally existing on the property prior to commencement of operations.
- (5) After replacement of the topsoil, be successfully planted with native vegetation (trees, shrubs, legumes, grasses, or groundcover) or agricultural crops in accordance with the reclamation plan in order to avoid erosion in the numbers and sizes of plantings described in the plan.
- (6) Whenever earth extraction and/or mining on any property is complete, all processing plants, structures other than those shown to remain on the reclamation plan, fences, and equipment shall be entirely removed from the property within one (1) year from the expiration date of the conditional use permit.
- (7) If applicable, prior to the termination of the conditional use permit, the owner shall file with the McHenry County Recorder, a permanent easement, approved by the Zoning Enforcement Officer after review by the McHenry County's State's Attorney's Office, that provides access to the real estate for the purpose of monitoring and sampling of the then existing wells.

#### e. Reclamation Plan Requirements.

- (1) General. A reclamation plan shall consist of a combination of graphic representation and written or printed text, the proportions of which may vary, but together they shall be sufficient to result in comprehensive and understandable documents showing the intent, methods, and processes of reclamation of the land as well as the extent of the site, the initial conditions, intermediate stages, and ultimate arrangement of land forms. The reclamation plan shall describe these conditions and procedures completely and clearly so that the plans may become regulatory documents to be used or referred to in the implementation of its intent.
- (2) Plan Element. The following four (4) elements are required for the reclamation plan, and for each element certain standards are cited. Due to natural differences at each earth extraction site, each element may vary in the preparation of plans for different sites, however, each element must be addressed as appropriate for each site.
  - (a) Common Mapping Standards. Each plan element shall depict the following information:
    - i. *Site Mapping:* One inch to one hundred feet (1"=100') preferable, or one inch to two hundred feet (1"=200') alternative acceptable.
    - ii. Contour Interval: Two (2) feet for slopes thirty percent (30%) or less; ten (10) feet for greater slopes when map scale is one inch to one hundred feet (1"=100) feet. All contours shall be in terms of elevations above mean sea level (USGS MSL or MGVD).
    - iii. Contour Interval: Two (2) feet for slopes twenty percent (20%) or less; ten (10) feet for greater slopes when map scale is one inch to two hundred feet (1"=200') feet. All contours shall be in terms of elevations above mean sea level (USGS MSL or MGVD).
    - iv. Roads or Streets: Name, right-of-way width, and road within right-of-way, and centerline elevations at fifty-foot (50') intervals for three hundred (300) feet beyond the site.
    - v. Easements: Widths and identification of utility or other purpose.
  - (b) Element 1: Existing Conditions. The purpose of Element 1 is to provide sufficient information to describe the existing conditions at the site including topographic, hydrologic, and other data relating to the property to be mined and the area immediately adjacent to the perimeter of that property, and to establish a beginning point for measurement of mining and reclamation progress. Element 1 shall include the following information:
    - i. Common mapping standards as listed above.
    - ii. *Natural Land Features:* Locations of watercourses and drainageways, floods of record, sinks, basins, wooded areas, and wetlands as identified on National Wetlands Inventory quadrangle maps.

- iii. Man-Made Features: All buildings and other structures, dams, dikes, and impoundments of water.
- iv. Adjacent Land Features: All of the standards above shall apply to delineation of the area within three hundred (300) feet of the perimeter of the mined area. In addition, all platted subdivision lots and metes and bounds parcels must be shown.
- v. *Groundwater:* Locations of at least five (5) borings which show depths to groundwater, date of observed water levels twenty-four (24) hours after drilling and surface elevations of borings shall be noted.
- vi. Cross-Sections (as required) to Illustrate Conditions: Vertical scale equal to, or in exaggeration of, horizontal scale.
- (c) Element 2: Mining Operations, Procedures, and Phases. The purpose of Element 2 is to provide sufficient information in the form of a map, diagrams, or other graphics accompanied by descriptive text to show the extent of the area to be mined, define the limits of the area where processing will take place, where process water will be ponded, and how processed material will be transported, and to illustrate the sequences of the reclamation process and describe the time relationship of the phases. The document produced should be sufficiently specific to aid in administration of monitoring the progress of mining and reclamation. Element 2 shall include the following information:
  - i. Common mapping standards as listed above.
  - ii. Processing areas shall be identified and boundaries shown to scale.
  - iii. Access road to processing and mining areas shown to scale.
  - iv. Sequences of operation showing approximate areas involved shall be shown to scale and serially numbered with a description of relation of mining to reclamation follow-up activity and timing.
  - v. Locations of screening berms shall be shown to scale and notes shall be provided indicating when they will be used as reclamation material. In the same manner, overburden storage areas shall be identified and noted.
  - vi. Fences and gates shall be shown on the site map and their type or construction shall be described. Any fencing related specifically to certain phases of mining or reclamation shall be identified and noted.
  - vii. Proposed locations of principal service or processing buildings or enclosures shall be shown as well as locations of settling basins and process water ponds.
  - viii. Site drainage features shall al so be shown and flow directions indicated.
  - ix. A Spill Prevention Containment and Control Plan for asphalt batching, concrete mixing, petroleum products, or other hazardous chemical storage.
- (d) Element 3: Reclamation Plan (Final Land Form). The purpose of Element 3 is to give a reasonably accurate description of the final form of the reclaimed land after all mining has been completed and processing equipment, settling basins, process water sources etc., have been removed or eliminated. The solution of the problem of endmatch of new contours to old contours of peripheral land should be evident as should all problems of compatibility of physical characteristics of new land forms to surrounding land, land use, and drainage. Element 3 shall include the following information:
  - i. Common mapping standards as listed above.
  - ii. Locations of any proposed roads within the reclaimed area and their connection to present public roads beyond.
  - iii. Locations of any lakes, ponds, or streams proposed within the reclaimed area and their connections to streams or drainageways beyond.
  - iv. Locations of any proposed man-made structures within the reclaimed area (dams, buildings, etc.).
  - v. Locations of all buildings within three hundred (300) feet of the perimeter of the mining site.
  - vi. Area where vegetation is to be established and indicate types of vegetative cover.
  - vii. Describe the degree of flexibility considered to be needed in execution of the plan.
- (e) Element 4: Use of Reclaimed Land. The purpose of Element 4 is to show that the final land form portrayed in the drawings for Element 3 has a viable land use compatible with land use trends of the surrounding area. The base map for this element should be the final land form map upon which shall be shown, by overlays or separate drawings and notes, one or more developed schemes for end land use or uses, each demonstrating that developed areas are accessible by roads and that physical attributes of the final land form are compatible with the proposed use or uses. It is understood that this is a hypothetical exercise and will be evaluated as such. It should not be considered a commitment to the use portrayed by either the applicant or the County as such end use or uses may require additional zoning and review for approval. Element 4 shall include the all the information required in Element 3: Reclamation Plan (Final Land Form).

- a. Existing trees, shrubs, and other types of woody vegetation along road frontages shall be protected and maintained. Weeds and other unsightly noxious vegetation shall be cut or trimmed as necessary to present a neat appearance and prevent the hazard of grass fires.
- b. No earth extraction and/or mining operation(s) is permitted to operate in such a manner that the groundwater table of surrounding properties is adversely impacted. In the case of mining operations, water pumped from the site for the purpose of washing shall be retained in a pond until the silt and clay settles and then the water recycled in the area affected. Groundwater quality shall be monitored and maintained on a regular basis in accordance with monitoring practices. Groundwater monitoring parameters are established in subsection P.8. below (Groundwater Monitoring). Monitoring reports are to be conducted on January 30, April 30, July 30 and October 30 of each year that the operation continues and submitted to the Zoning Enforcement Officer.
- c. If the subject areas front on a township road used for site access, the owner, at commencement of operations, shall bring that township road up to the paving standards required by this Ordinance from the entrance of the subject area to the nearest federal, state, or County road used by the operator. The owner shall repair any section of road damaged as a result of hauling operations, but is not responsible for the normal wear and tear of the road. This provision does not require the operator to purchase additional right-of-way.
- d. All operations shall be conducted in a safe manner, especially with respect to hazards to persons, damage to adjacent lands or improvements and wells, and damage to any street by slides, sinking, or collapse of supporting soil adjacent to an excavation.
- e. The following apply to earth extraction and/or mining conditions only:
  - (1) Earth extraction and/or mining operation(s) that remove and do not replace the lateral support shall be located a minimum of thirty (30) feet from property lines, established right-of-way lines of any public roads, streets, or highways unless a lesser distance is mutually agreed to by the owner and adjacent property owner and submitted in writing.
  - (2) The bottom of the slope of the excavated face shall be no closer to the point determined in subsection P.7.e.(1) above, than a distance equal to one and one-half (1½) times the depth of the excavation.
  - (3) If consolidated materials occur in the excavated face, the slope of the face may be steeper than one and one-half (1½) to one (1) slope per subsection P.7.e.(2) above for the depth(s) of those materials, however all other excavated slopes of unconsolidated materials are limited to one and one-half (1½) to one (1) slope.
  - (4) In the case that the right-of-way has not been recently surveyed by a registered land surveyor and clearly marked, the right-of-way line is assumed to be, for the purpose of this section, a minimum of forty (40) feet from the centerline of the existing road.
- f. All active operations shall be separated by an earthen berm no less than six (6) feet in height and/or a farm fence of no less than fifty-four (54) inches in height, and designed to allow the free flow of wild animals, but discourage trespassing by humans and farm animals. Berms that remain in place for one (1) year or longer shall be planted with grass, shrubs, and trees, and maintained as a visual and acoustical screen. They shall be designed so that they do not erode into the road or highway right-of-way or onto a contiguous property. All berms located along roadways must comply with all applicable state regulations.
- g. The processing and stockpiling of aggregate resources is prohibited within three hundred (300) feet of the property line of any contiguous property in a residential zoning district.
- h. The hours of operation for all activities, other than maintenance functions, are restricted to 5 a.m. to 9 p.m. from April 1 until October 31. The remainder of the year, the hours of operation are restricted to 6 a.m. to 6 p.m. In emergency situations, operations are permitted at times otherwise prohibited. An emergency situation, for the purpose of this section, is any operation necessary to provide repairs to roadways or provide other materials and assistance that, if delayed until normally permitted hours, would cause injury or loss of life or property. Any emergency operation or activity under this section shall be immediately reported to the McHenry County Sheriff's Department and reported to the Zoning Enforcement Officer the next business day.
- i. Operations shall be conducted so that noise levels and air and water standards comply with federal and State of Illinois requirements.
- j. Access ways and on-site roads shall be maintained in a dust-free condition.
- k. The premises shall be neat and orderly, free from junk, trash, or unnecessary debris. Buildings shall be maintained in a sound condition and in good repair and appearance. Salvageable equipment stored in a non-operating condition shall be suitably screened or garaged.
- I. Enough topsoil shall be stockpiled to meet the required finished conditions.
- m. No operations may occur on the property without an Annual Operations Permit issued by the Zoning Enforcement Officer. The operations permit may be for less than the total area proposed. The construction of access or haul roads, building and landscape of required berms, and other site improvements required for site preparation do not require an Annual Operations Permit.
- n. At all times, the owner shall take adequate measures to insure that contaminated surface water run-off does not enter ponds, streams, wetlands, or other areas of open standing water.

- o. The owner shall take adequate measures within the site to insure that trucks, exiting the site on roadways, do not discharge earth materials or debris on the roadway.
- p. The Zoning Enforcement Officer, or a duly authorized representative, has the free right of access to the subject property for the purpose of inspections, making water level measurements, obtaining water or material samples, and for gathering other information necessary for the proper discharge of responsibilities.
- q. The owner is assessed an annual fee to pay for compliance monitoring based on costs.

#### Groundwater Monitoring.

#### a. General Requirements.

- (1) The cost of setting up a groundwater monitoring network, monitoring and any remedial action to remedy contamination caused by the earth material extraction site is the responsibility of the owner.
- (2) The owner shall notify the Zoning Enforcement Officer at least twenty-four (24) hours prior to sampling of the time and day that groundwater samples will be taken.
- (3) The Zoning Enforcement Officer, in conjunction with the Department of Health, reserves the right to enter the earth materials extraction site at all reasonable hours to collect samples or to co-sample any monitoring well.
- (4) Upon renewal of a conditional use permit for an existing earth extraction operation or upon approval of a conditional use permit for a new earth extraction operation a baseline PNA (Polynuclear Aromatics) shall be conducted.

#### b. Monitoring Well Requirements.

- (1) For operations that currently exist pursuant to a previously issued conditional use permit by the County Board, the current groundwater wells will be used to meet the groundwater monitoring requirements.
- (2) Those earth extraction operations that are not required to conduct groundwater monitoring as of the date of adoption of this Ordinance shall establish site specific geology, aquifers and groundwater flows by a qualified professional hydrogeologist. Monitoring well locations shall be representative of the aquifer(s) impacted by the earth material extraction operation. There shall be a minimum of one (1) up-gradient and two (2) down-gradient wells established. The location, number of wells, and depth(s) shall be contingent on the hydrogeological evaluation. Construction techniques and materials used shall be those consistent with acceptable standards for groundwater monitoring wells. Plans for placement, materials and construction details shall be submitted in writing by the hydrogeologist to the Zoning Enforcement Officer prior to construction. Monitoring wells shall not be modified, deepened, or relocated without the prior approval of the Zoning Enforcement Officer.
- (3) Monitoring wells shall not be obstructed and shall remain accessible at all times for sampling.
- (4) Monitoring wells shall be maintained in good condition as designed and constructed and shall be protected from vehicular traffic.
- (5) Monitoring wells that have an insufficient quantity of water to conduct sampling for two (2) consecutive sampling events shall be deepened or relocated as approved by the Zoning Enforcement Officer to yield groundwater samples.

## c. Sampling Frequency and Parameters.

- (1) Quarterly sampling shall be for those parameters listed in the general groundwater quality and contamination indicators in <u>Table 16.56-1</u>: <u>General Groundwater Quality Indicators</u>. Results shall be provided in an electronic format to the Zoning Enforcement Officer within forty-five (45) days of the sampling.
- (2) When sample results confirm an exceedance of chloride, nitrate or ammonium nitrogen, or a detection of benzene, toluene, ethylbenzene or xylene, the monitoring well shall be re-sampled for that parameter within thirty (30) calendar days with a copy of the results provided in an electronic format to the Zoning Enforcement Officer within fourteen (14) calendar days of the sampling.
- (3) Sampling of chloride, nitrate, pH, ammonium nitrogen, and specific conductance, may be reduced to annual subsequent to establishment of the background groundwater quality if there have been no exceedances of chloride, nitrate, or ammonium nitrogen for the most recent full year of sampling.
- (4) Sampling of benzene, toluene, ethylbenzene and xylene may be reduced to annual subsequent to establishment of the background groundwater quality if there have been no detections of benzene, toluene, ethylbenzene, and xylene for the most recent full year of sampling.
- (5) In the event of an exceedance of chloride, nitrate, or ammonium nitrogen, the sampling frequency for that parameter shall return to quarterly.
- (6) In the event of a detection of benzene, toluene, ethylbenzene, or xylene, the sampling frequency for that parameter shall return to quarterly.
- (7) Where asphalt batching, concrete mixing, or where petroleum products or other hazardous chemical storage takes place, the Zoning Enforcement Officer reserves the right to request additional parameters to be tested.

- (8) Additional water sampling parameters or frequency may be required if water contamination is indicated. This will be determined by the Zoning Enforcement Officer in conjunction with the Department of Health and the owner. The Zoning Enforcement Officer will notify the owner of the modified sampling parameters required.
- (9) Water samples are to be taken and tested by Illinois Environmental Protection Agency approved methods and procedures and protocol. The test wells shall be purged two (2) times the volume of the well before the sample is drawn.
- (10) In the event that an exceedance of chloride, nitrate, or ammonium nitrogen is due to natural background, resulted from an error in sampling, analysis, or evaluation, or does not exceed the MCLs (maximum contaminant levels) set forth in <a href="Table 16.56-1">Table 16.56-1</a> and does not cause adverse health effects, the Zoning Enforcement Officer may, after consultation with the Department of Health, allow the sampling frequency to be reduced to annual.
- (11) In the event that an exceedance of chloride, nitrate, or ammonium nitrogen is due to natural background or does not exceed the MCLs set forth in <a href="Table 16.56-1">Table 16.56-1</a> and does not cause adverse health effects, the Zoning Enforcement Officer may, after consultation with the Department of Health, waive the requirement to resample the monitoring well within thirty (30) calendar days.

# d. Corrective (Remedial) Action.

- (1) Corrective action shall take place if a constituent is detected at or above the groundwater quality standard level contained in <u>Table 16.56-1</u> or the background water quality is exceeded by three (3) standard deviations. Corrective action shall include an inspection of the site by a qualified professional hydrogeologist to evaluate and identify any potential up-gradient, on-site, and down-gradient sources of contamination.
- (2) Background water quality shall be established by sampling one or more monitoring points at depths and locations sufficient to yield groundwater samples that are representative of background water quality. Background groundwater quality for indicator parameters shall be determined by averaging a minimum of eight (8) sample results (over the normal two-year (2-year) sample period) for each well. The Zoning Enforcement Officer, in conjunction with the Department of Health, may exclude any sample result that is non-representative of background water quality.
- (3) Standard deviation for a group of samples is equal to the square root of: the value of the sum of the squares of the difference between each sample in the sample group and the mean for that sample group divided by the number of samples in the sample group.
- (4) Investigative and corrective action shall begin to take place immediately upon receipt of reports which indicate contamination unless the Zoning Enforcement Officer specifies in writing upon application of the owner or operator wherein the owner or operator has demonstrated clearly to the Zoning Enforcement Officer in conjunction with the Department of Health that one of the following has occurred:
  - (a) The source of contamination is due to natural background.
  - (b) The detection resulted from error in sampling, analysis, or evaluation.
  - (c) The contamination will not exceed the MCLs set forth in <u>Table 16.56-1</u>, the contaminants do not cause adverse health effects, and all actions have been undertaken to ensure the degree and extent of contamination is reduced.
  - (d) The contamination is a result of contaminants remaining in groundwater from a prior release for which corrective action was undertaken in accordance with instructions from the appropriate agency.
  - (e) The contamination is from a release up-gradient of the monitoring wells and is clearly not from any activities on the site.
- (5) Corrective action shall be to remediate the contamination to below the action levels established herein and to strive to re-establish groundwater quality levels similar to up-gradient groundwater quality. The cost of this remediation shall be borne by the party that caused the contamination to be introduced. If it is determined that the contamination is a result of the owner's operation, the owner shall be responsible for the cost.

TABLE 16.56-1: GENERAL GROUNDWATER QUALITY INDICATORS		
General Indicators	Primary Standards	Secondary Standards
TABLE 16	.56-1: GENERAL GROUNDWATER QUALITY INDICA	TORS
General Indicators	Primary Standards	Secondary Standards
Chloride	250 mg/l	
Nitrate (As N)	10 mg/l	
Ph		< 6.5—8.5 >
Ammonium Nitrogen		< 1.5
Specific Conductance		850 umhos/cm
Benzene	0.005 mg/l	

Toluene	1.0 mg/l
Ethylbenzene	0.7 mg/l
Xylene (Total)	10.0 mg/l
Polynuclear Aromatics (PNA)Chemical Compound	Primary Standards
Acenaphthene	0.42 mg/L
Acenephthylene*	0.023 mg/L
Anthracene	2.1 mg/L
Benzo (a) anthracene	0.00013 mg/L
Benzo (b) fluoranthene	0.00018 mg/L
Benzo (k) fluoranthene	0.00017 mg/L
Benzo (a) pyrene	0.0002 mg/L
Benzo (g,h,i) perylene*	0.0076 mg/L
Chrysene	0.0015 mg/L
Dibenzo (a,h) anthracene	0.0003 mg/L
Fluoranthene	0.28 mg/L
Fluorene	0.28 mg/L
Indeno (1,2,3-c,d) pyrene	0.00043 mg/L
Naphthalene	0.025 mg/L
Phenanthrene*	0.0064 mg/L
Pyrene	0.21 mg/L

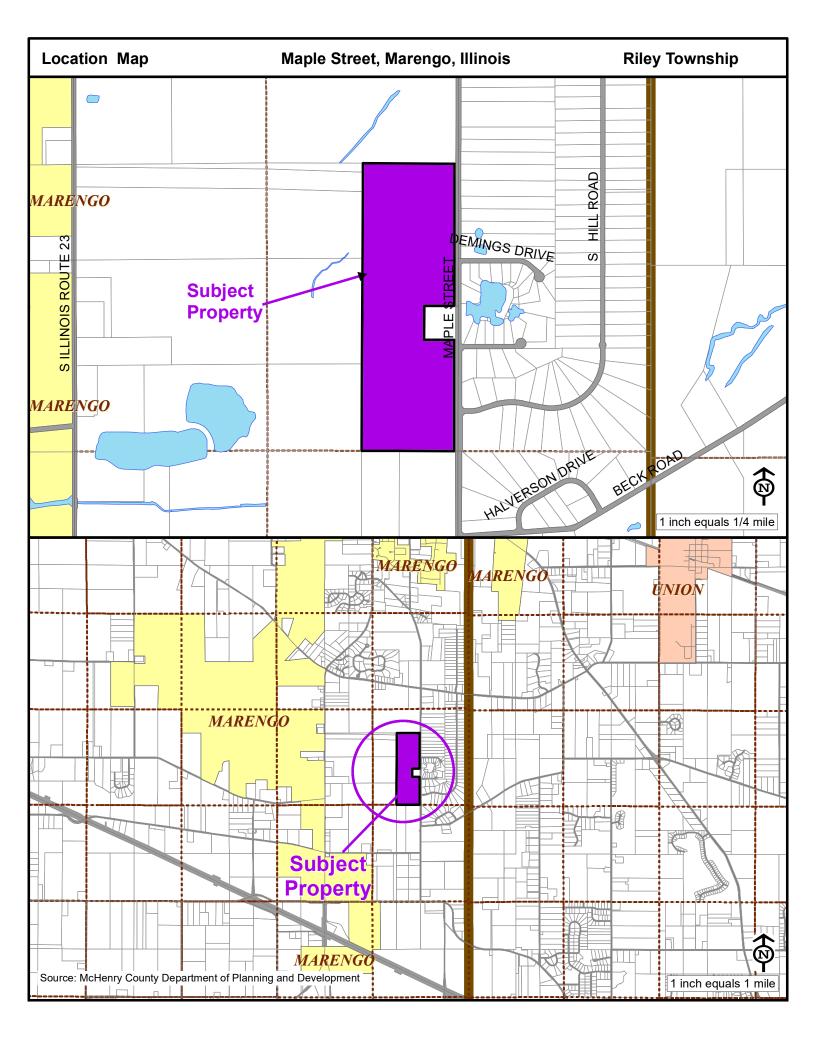
Groundwater levels shall be measured in feet to one decimal place each time a sample is taken. The Standards will be updated based on USEPA recommendations.

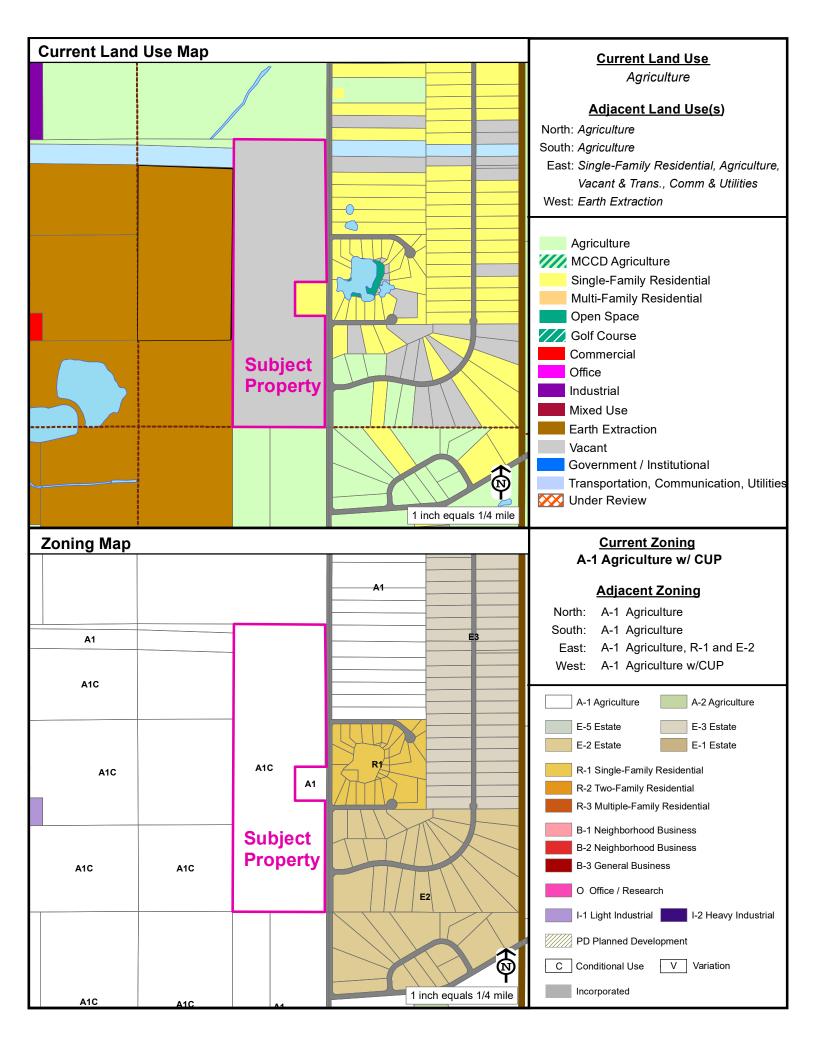
#### e. Cessation of Monitoring.

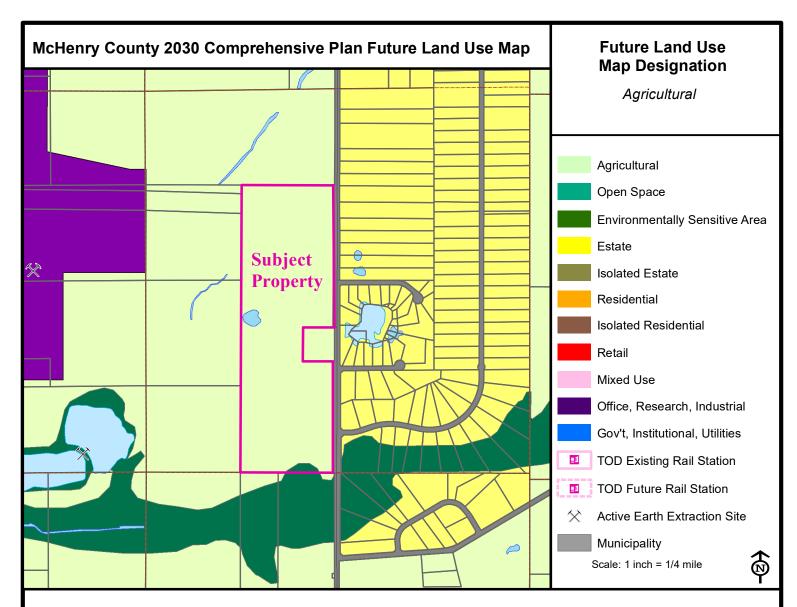
- (1) Upon completion of extraction and reclamation and acceptance of the completion of these items by the Zoning Enforcement Officer, the owner/operator shall be responsible for ground water testing for one year. Remediation shall be the responsibility of the owner. The County shall continue to hold the letter of credit/bond for reclamation until one (1) year has expired.
- (2) After the one-year (1-year) monitoring period has been completed monitoring wells must be sealed per the requirements of the McHenry County Public Health Ordinance under a permit issued by the Department of Health at a cost to be borne by the operator.

## 9. Enforcement.

- a. The Zoning Enforcement Officer, in conjunction with other appropriate departments, will review annually each earth extraction and/or mining conditional use permit. In addition to the reclamation plan and map, the owner shall provide the Department of Planning and Development with an annual aerial photo of the total operation, enlarged to a scale of one inch to one hundred feet (1"=100') or other scale that would adequately display the property affected on a thirty-inch (30") square format. All aerial photos shall meet Department of Planning and Development standards. The first photo shall be taken during the first year in operation and subsequent photos taken in the same month of the following years. Each year's photo shall be presented at the same scale for the purpose of comparison. Photos or contracts for photos shall be submitted prior to the issuance of the Annual Operating Permit.
- b. If it is determined that the operator is not in substantial compliance with this Ordinance, the bonding requirements, the simultaneous reclamation and operation statement, or the reclamation plan/map, the Zoning Enforcement Officer will issue a stop work order on all operations other than reclamation work needed to bring the operation into compliance.
- c. Every five (5) years, at the time of the annual review, bonding, release of bond, and re-bonding will be checked as specified in this section. In addition, the owner shall provide the Zoning Enforcement Officer with a topographic survey with two-foot (2') contours, at the same scale as the aerial photo. The topographic survey shall show the status of existing conditions on the subject site. The Zoning Enforcement Officer, in conjunction with the Department of Planning and Development, will prepare a report and submit it to the Planning and Development Committee for their review.
- d. Before release of a bond, an on-site inspection of the acreage reclaimed shall be made by the Zoning Enforcement Officer in conjunction with other appropriate departments to check for compliance with the reclamation plan and any additional conditions of the conditional use permit. A random count procedure will be used to check seeding, plantings, and depth of topsoil.







# **Municipal / Township Plan Designations**

Riley Township: Commercial

Marengo: Low Density Residential, Park

# McHenry County 2030 Comprehensive Plan — Text Analysis Land Use

AGRICULTURAL – represents existing agricultural acres, including cropland, pastureland, farm yards, and farmsteads, that should remain in agricultural use through the 2030 planning horizon. Development in the Agricultural District should be strictly limited to agriculture, agricultural residences, and agricultural support uses. (p. 134)

## Sensitive Aquifer Recharge Areas

A portion of the site  $\underline{\mbox{IS}}$  located in a zone with high aquifer contamination potential.

# Sensitive Aquifer Recharge Areas (SARA)



Sensitive Recharge Area