

**SAND/GRAVEL MINING IN McHENRY COUNTY
SUPER AGGREGATES
CONDITIONAL USE SUPPLEMENT**



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2/01/25

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I. Preface

The concerns, issues and fears of a sand/gravel pit are not new and too often, these concerns are fueled by disinformation and magnified through the use of today's social media outlets. Many times, disinformation can be posted online very quickly and multiplied many times through social media outlets and soon, the information has the perception of factual information. Persistent online searching can ultimately yield any desired and preconceived beliefs and conclusions.

The sand/gravel aggregate industry has evolved over the decades. Equipment noise and exhaust emissions have been greatly improved, mining techniques and best management practices have also evolved and what was a concern to adjacent property owners yesterday has been mitigated today. Existing Local, State and Federal regulations have provided mitigation activities that have safeguarded the environment, public safety and public health near tens of thousands of sand/gravel pits across the US. This has been demonstrated by the coexistence of sand/gravel pits and residential communities for decades in McHenry County and the surrounding regional area.

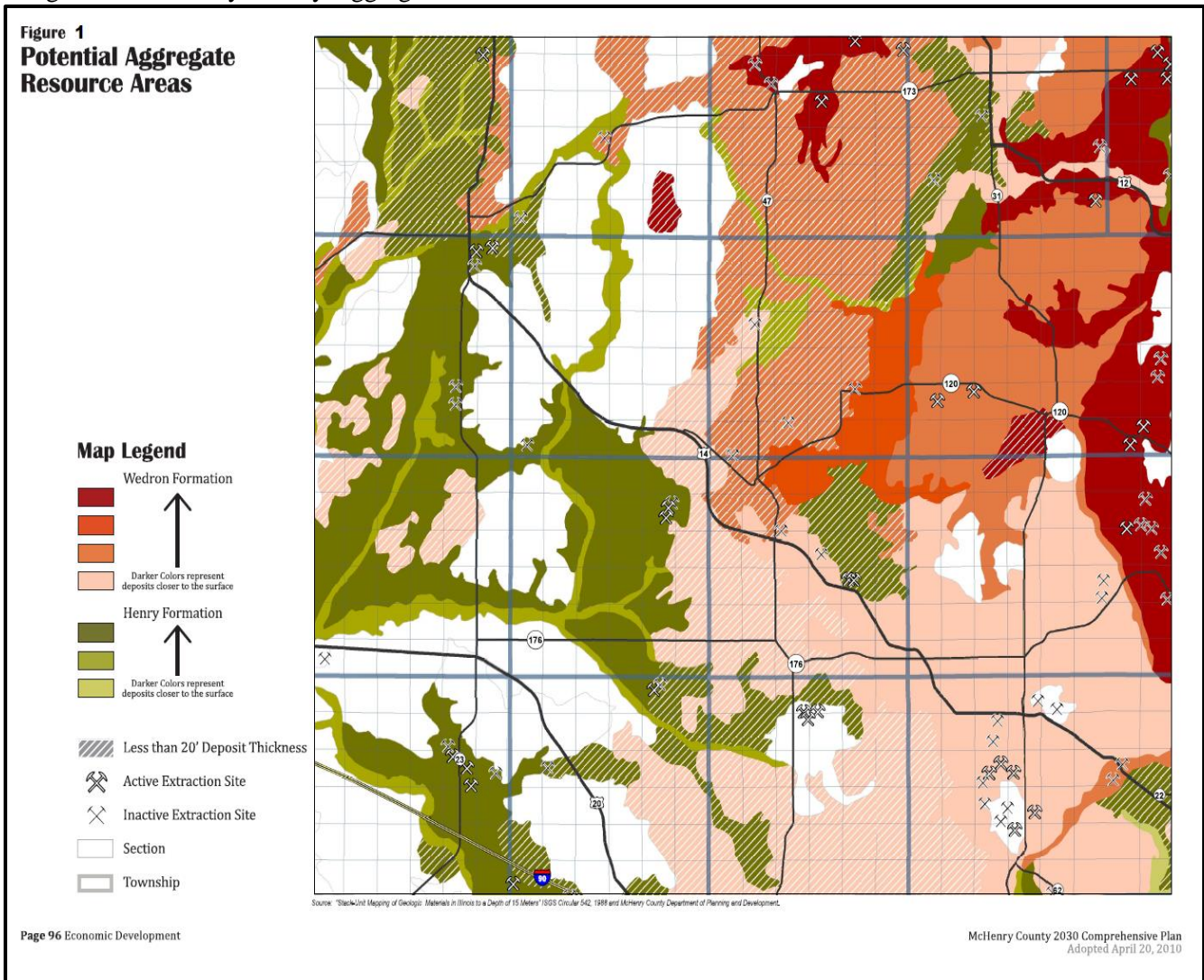
This Supplement provides additional education and information of why sand/gravel aggregates are a necessity in today's society, why sand/gravel aggregate sites are located in developed, populated & residential areas, the regulatory controls and oversight in sand/gravel aggregate operations, explains the relationship between sand/gravel sites and property values, differentiates why today's sand/gravel mining techniques are not the same of yesterday & additional best management practices for common cited concerns, reviews the economic benefits to local communities, depicts reclamation of former sand/gravel aggregate sites, discusses the future sand/gravel supply crisis and where the industry needs to be heading to avoid a sand/gravel supply crisis.

II. Why are Sand/Gravel Aggregates a Necessity in Today's Society?

a. What Are Sand/Gravel Aggregates and Where Are They Found?

Glaciers not only shaped the area's landscape but also left behind rich deposits of sand and gravel, collectively referred to as aggregates, which provide an economic resource for the regional construction industry. Counties surrounding McHenry County have not experienced shallow and expansive aggregate reserves. McHenry County has a generous natural aggregate reserve as indicated by Figure 1, which has led to continued County growth.

Figure 1 – McHenry County Aggregate Resource Areas



Very often, sand/gravel reserves, which are classified as unconsolidated natural reserves, are confused with consolidated natural reserves. The extraction of consolidated reserves is referred to as quarrying limestone bedrock. Mining techniques for each natural reserve classification are significantly different. McHenry County does not have the presence of consolidated or quarry limestone bedrock natural reserves. Therefore, no blasting, offsite water discharge operations and associated concerns exist. Sand/gravel unconsolidated reserves

can be mined above or below the water table at a maximum depth of 40'. The extraction and utilization of these precious resources can only occur where they are located and have become an important component in the regional economy. Figure 1 depicts the majority of both active/inactive sites have been located in Eastern portions of the County. Development of these areas occurred because of the sand/gravel reserve proximately. Sand/Gravel aggregates are the building blocks for every home, building and road construction project in the region. They're extracted from highly regulated pits, which are safe and reliable sources of these finite resources. Stated in the McHenry County 2030 Comprehensive Plan adopted April 20, 2010, the mining industry contributes substantially to the County's tax base and employs over 200 workers in 22 sand and gravel pits operating throughout McHenry County. The Illinois Department of Natural Resources (IDNR) estimates that the County's mining activity supports an additional 7,800 regional jobs in related industries.

b. What Are Aggregates Used For?

Sand and Gravel is used in an expansive industry ranging from direct consumer retail use to wholesale construction use.

Direct Consumer Retail Use found at home improvement centers:

1. Bag Products.
 - a. Sakrete
 - b. Mortar Mix
 - c. Asphalt Cold Patch
2. Brick Pavers, Outdoor Fireplaces, Fire Pits and Retaining Wall Products
3. Decorative Boulders
4. Fireplace Materials



Wholesale Construction Uses:

- 1. All Private and Public Building Construction Projects:
 - a. All Homes
 - b. All Buildings (Retail, Office, Healthcare, Municipal & Industry)
 - c. All Roads (Asphalt and Concrete)
 - d. All Sewer and Water Improvements

Companies and Municipalities that Require Sand and Gravel:

Ready Mix Concrete Plants:

Point Ready Mix
Ozinga

Schmitz
Super Mix

Stark
Reginal

Fischer Bros.
Otto Jacobs



Precast Products:

Unilock
Spancrete

Welch Brothers
Terrell

Bag Material Plants:

Quickrete

Menards

Asphalt Plants:

Geske

Curran

Arrow

Dunteman
Allied

Peter Baker
Payne & Dolan

Asphalt Contractors
Reliable

Municipalities:

State of Illinois
Most Local Townships

State of Wisconsin
Most Local Villages & Cities

Most Local Counties
Most Local Conservation Districts

General Contractors –

for All Roads, Bridges, Buildings, Public Utilities and any Construction Project:

Curran
Plote
Berger
Maneval
Lowe
Veit
And Many Others

Pirtano
J. Pease
Upland
Neslund
D.K. Contracting
A.W. Oakes

Wilson
Cunat
D.R. Horton
Lennar
Martam
Fisher

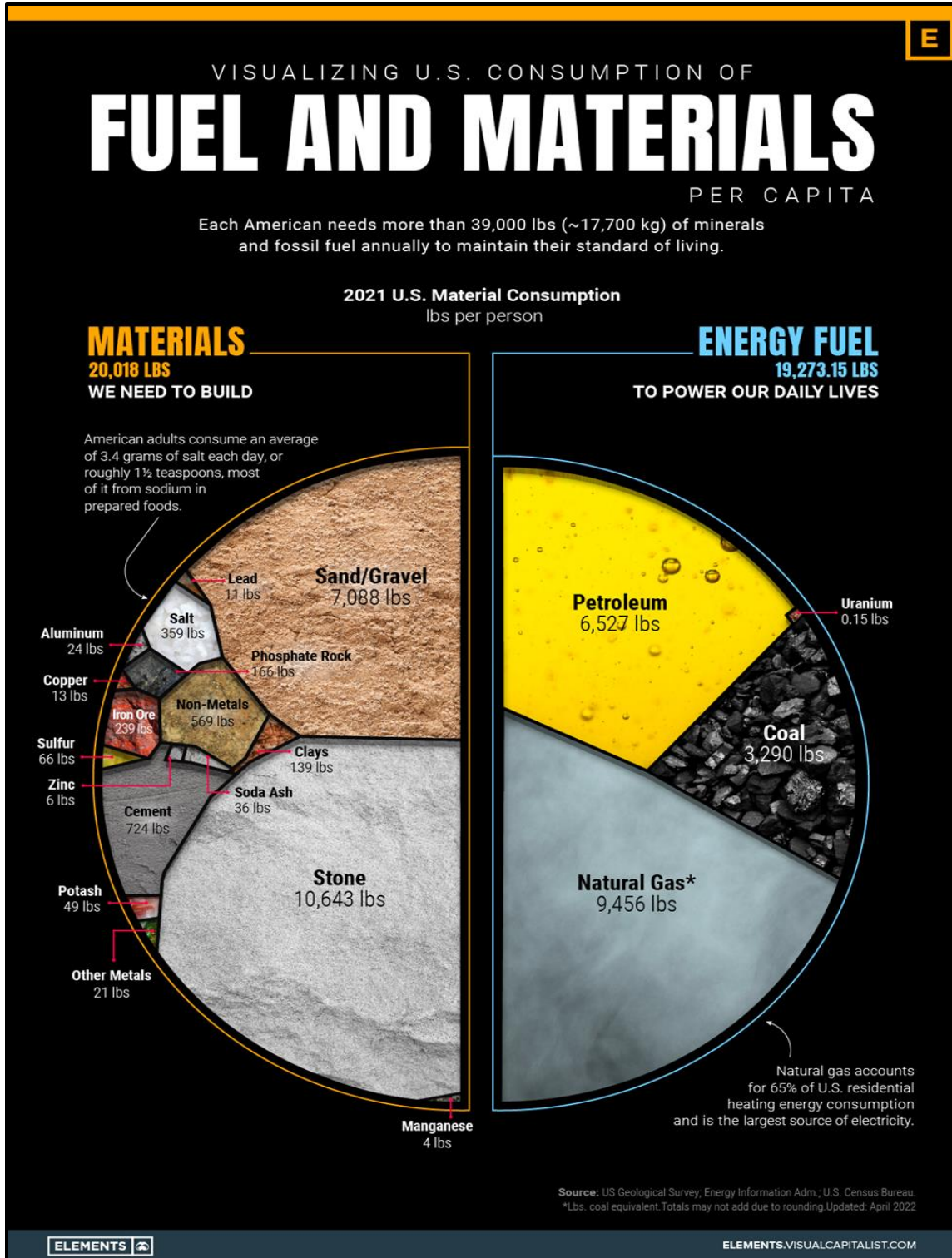
McShane
Michels
Walsh
Lorig
ALamp
Strenstrom



c. Annual U.S. Aggregate Consumption:

Sand/gravel aggregates are in the “Best Interest of the General Public” because they are the building blocks for **every** home, building and road construction project in the region. They’re extracted from highly regulated pits and quarries, which are safe and reliable sources of these finite resources.

Figure 2 – 2021 U.S. Material Consumption.



Every building around us, every road traveled and every sidewalk we walk on is made of sand/gravel aggregates. According to data from the National Mining Association, On average, each person in America drives the demand of over 10,000 lbs. of stone and around 7,000 lbs. of sand and gravel per year. Combined, each person requires 9 tons of sand/gravel per year. For a better understanding, every two years, each person demands a semi-truck load of stone, sand and gravel as depicted in Figure 2 – 2021 U.S. Material Consumption. Crushed stone, sand, gravel, and other construction aggregates represent half of the industrial minerals produced in the country, resulting in \$29 billion in revenue per year. Sand, gravel, and stone are not a luxury — they are a necessity.

SIMPLY STATED, UNLESS THE PUBLIC IS INTERESTED IN RETURNING TO A POINT IN HISTORY WHERE HORSES PROVIDED TRANSPORTATION ON A DIRT PATH TO A DIRT FLOOR LOG CABIN, WE ALL NEED SAND/GRAVEL AGGREGATES.

III. Why are Sand/Gravel Aggregate Sites Located in Developed, Populated and Residential Areas?

As McHenry County was settled in the 1800’s, development occurred in the Eastern portions of the County because of the presence of sand/gravel aggregates. The glaciers placed abundant sand/gravel reserves located along the Fox River Valley, providing the basic building blocks for the development and aggressive growth of the Eastern areas of the County. These areas are populated and also have the highest concentrations of residential developments, nearby schools, daycares and churches. All McHenry County mine sites have adjacent residences, some more than others. A statement used often at local planning and zoning hearings is *sand/gravel pits do not belong in residential neighborhoods, they belong in rural areas*. This statement misleads decision makers because the developed residential neighborhoods are a direct result from an adjacent sand/gravel site. By viewing any aerial mapping service, one can determine all past and present County sand/gravel sites have adjacent residences. A few of these examples are included in the table below and Figure 3 depicts an aerial portion of the County with sand/gravel locations and proximately to all types of development.

Location	Mine Site Identifier
Route 14, Crystal Lake	Vulcan
Route 31, Lake in the Hills	Material Service
Route 31, Algonquin/Cary	Meyer
Route 120, McHenry	Meyer
Route 120, Lakemoor	Peterson
Route 173, Fox Lake	Thelen
Route 12, Spring Grove	Tonyan
Route 120, Lakemoor	McHenry Sand & Gravel
River Road, Island Lake	Fram
River Road, Island Lake	Reliable
Route 176, Prairie Grove	Road Materials

The majority of remaining sand/gravel sites have less than 10 adjacent residences, but it is important to note, many sites have had significant residential development encroachment over the years. Residential developments that surround and encroach existing sand/gravel sites provide evidence of coexistence, that many people don’t realize. Stringent regulation, mitigation and best practices have provided the coexistence of sand/gravel sites and new adjacent residential developments. Super Aggregates is careful to select sites that hold quality sand/gravel reserves with less than 10 adjacent residential neighbors. Table 1 depicts active McHenry County sand/gravel sites that have adjacent residences and Super Aggregates propose future sites.

Figure 3 – Aerial Depicting Sand/Gravel Site Proximity to Development

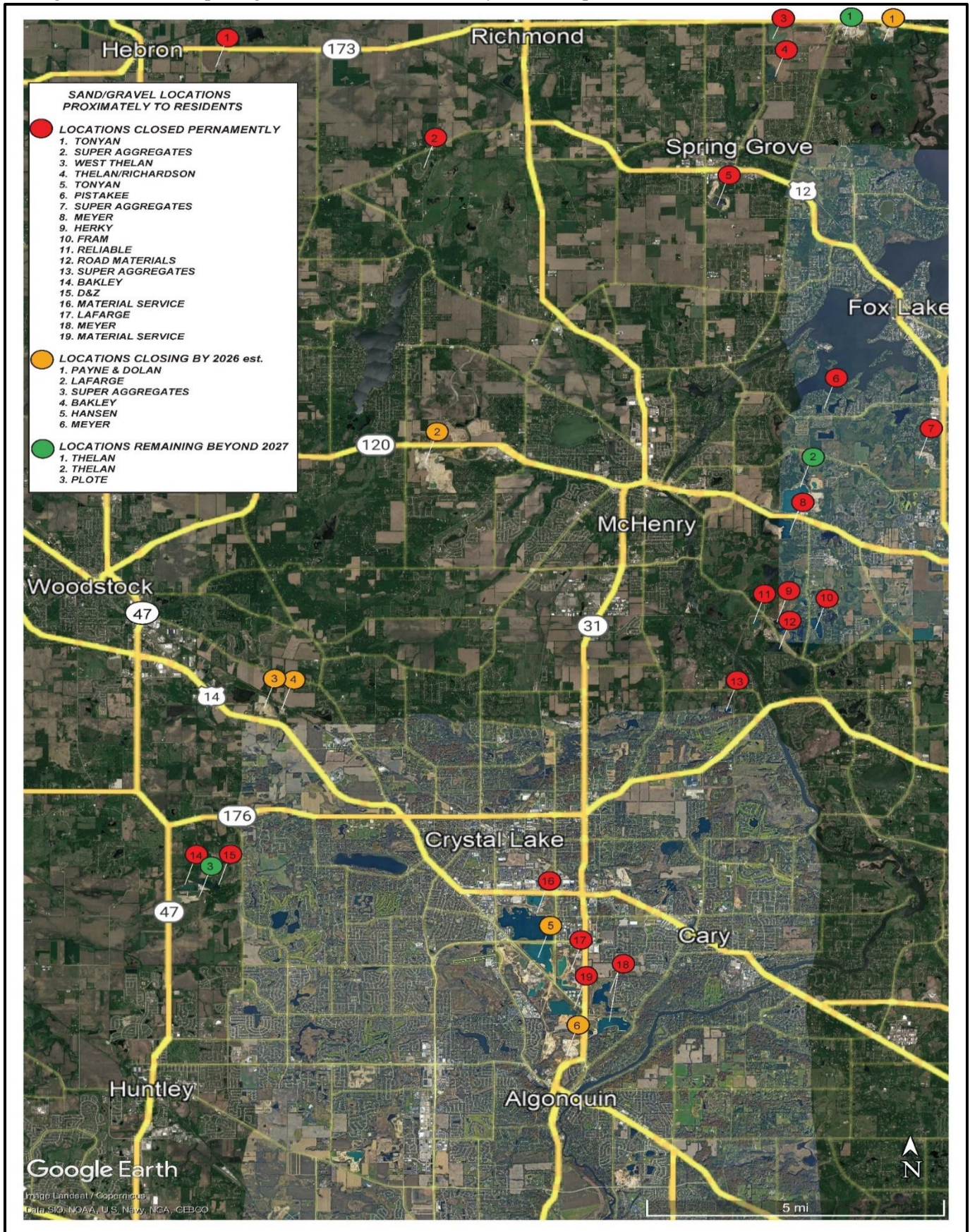


Table 1 - Active County sand/gravel locations with Adjacent Residences

McHenry County Active Gravel Extraction Sites with Adjacent Residences

Mining Company	Municipality	Street	Number of Adjacent Residences
Super Aggregates	Hebron Township	Burgett Rd.	4
Thelen Materials	Fox Lake	Route 173	55
Gavers Sand & Gravel	Seneca Township	Rose Farm Rd.	7
Super Aggregates	City of Woodstock	Lily Pond South	9
Holcim Aggregates	City of McHenry	Route 120	48
Thelen Materials	Lakemoor	Route 120	51
Berger Contractors	Lakemoor	Route 120	38
Consolidated Materials	Riley Township	Route 23	1
Holcim Aggregates	Riley Township	Route 23	5
Super Aggregates	City of Marengo	Route 23	5
Beverly Materials	Grafton Township	Foster Rd.	3

Proposed Extraction Sites

Mining Company	Municipality	Street	Number of Adjacent Residences
Super Aggregates	Burton Township	Main St.	8
Super Aggregates	City of McHenry	Route 120	8

Summary

4 Active Mining Sites with 38-55 adjacent Residences

7 Active Mining Sites with 1-9 adjacent Residences

2 Proposed Mining Sites with 8 adjacent Residences

All active McHenry County Mining Sites operate in a residential environment without complaint from and without harm to the neighbors or properties.

Not only do McHenry County mining sites operate in residential environments, all regional sand/gravel and limestone quarries located in the Chicagoland suburbs operate harmoniously with surrounding residential developments. Figure 4, is a map of the Chicagoland suburbs depicting where sand/gravel mine sites and limestone quarry proximity to incorporated city or village and unincorporated areas. Figure 5, nine (9) aerial photos of just a few sand/gravel and limestone quarries, depicts high density residential areas surrounding mine sites. These aerial photos provide additional visual evidence that mine sites do coexist with residential areas and refutes statements used often at local planning and zoning hearings - *sand/gravel pits do not belong in residential neighborhoods, they belong in rural areas*. All types of development, including residential development, always occurs near a local aggregate source.

Figure 4 - Map of the Chicagoland Suburbs

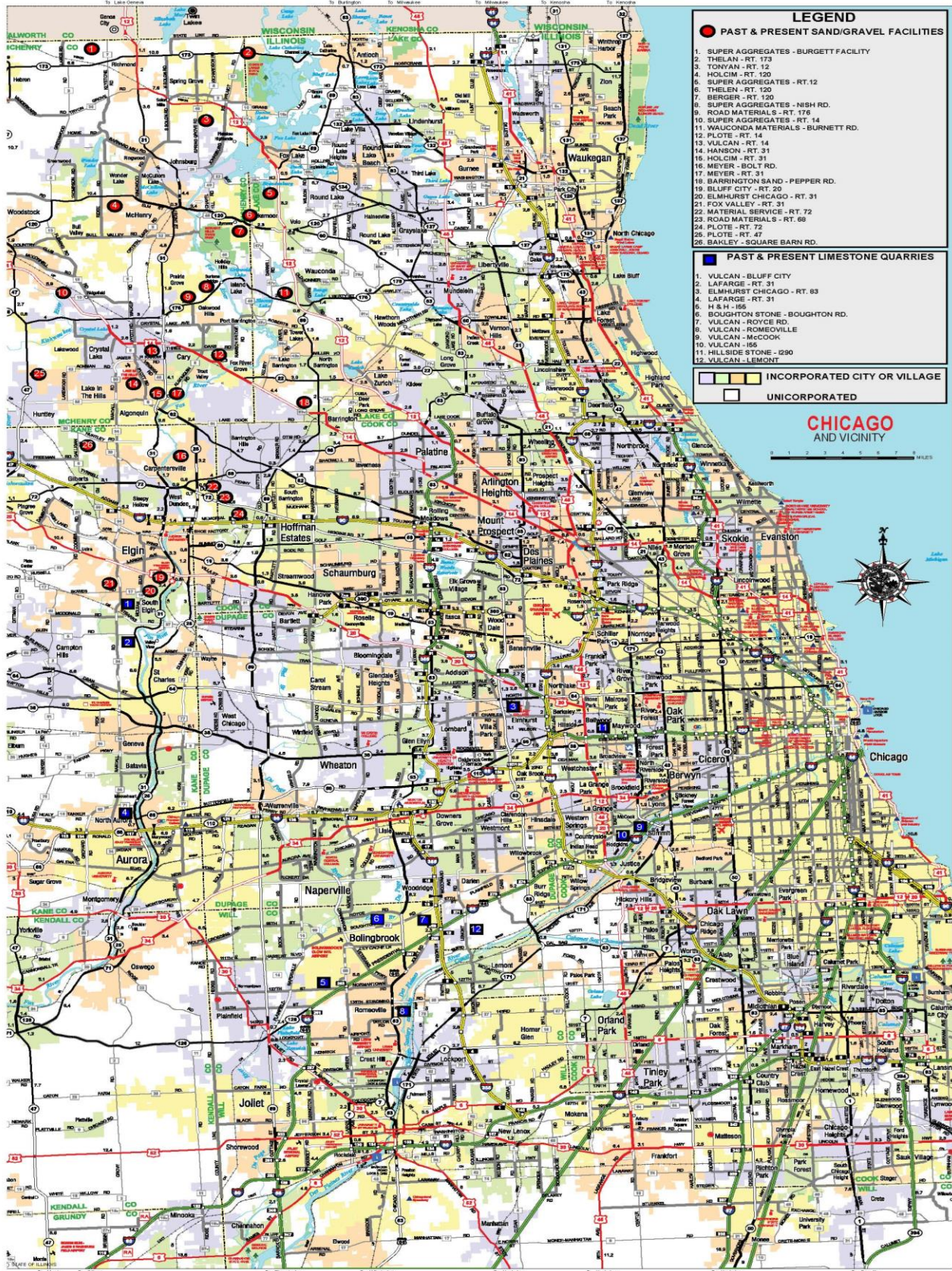
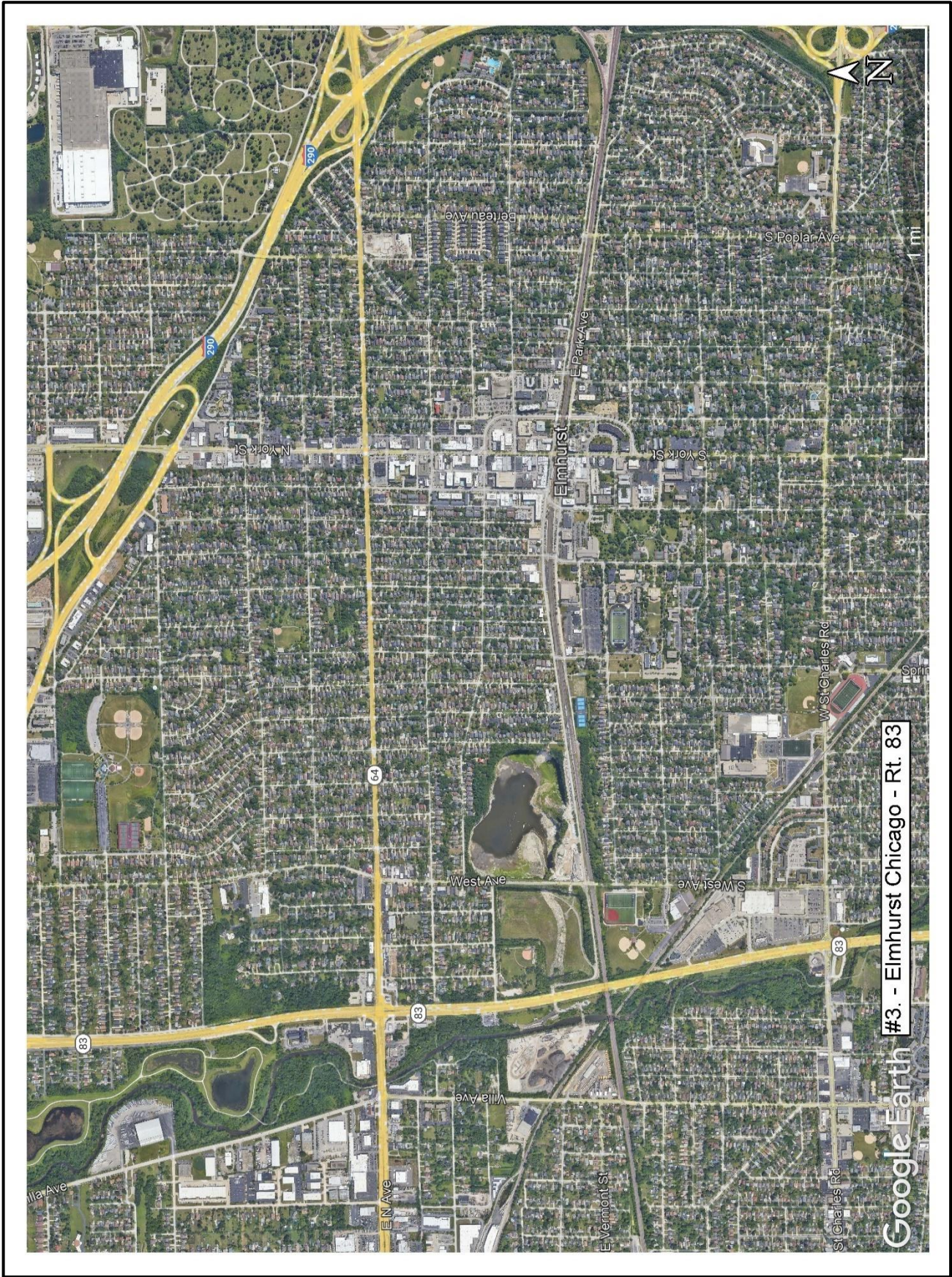


Figure 5, Nine (9) Aerial Photos of Chicagoland Suburbs









#3. - Elmhurst Chicago - Rt. 83

Google Earth











IV. Regulatory Control of Sand/Gravel Pits that Protect the Public & the Environment from Noise/Dust Emissions and Impacts on Groundwater

Sand/Gravel sites are governed by Federal, State and County statutes and laws, rules and regulations and local ordinances. The regulatory control of nearly every aspect of sand/gravel site operations includes: (i) Land use, (ii) Environmental protection and (iii) Public safety. This control provides the backbone of the aggregate industry's coexistence with all types of surrounding land use. These regulations are based on sound science and have been developed over decades to prevent widespread negative effects to adjacent owners. Planning and zoning officials and public opposition must recognize the regulation of sand/gravel sites already exists to protect land use, the environment, and the public. Please see Appendix A, McHenry County Unified Development Ordinance outlining local regulation. The aggregate industry is one of the most highly regulated industries in the U.S.

a. Federal Regulation:

- Environmental Protection Agency (USEPA) – The USEPA is responsible for maintaining and enforcing national standards through a variety of environmental laws and delegates some permitting, monitoring and enforcement to the states.
- US Fish and Wildlife Service (USFWS) – the USFWS is dedicated to the management of fish, wildlife, and natural habitats. USFWS administers the provisions of the Endangered Species Act. All sand/gravel pits operations must consider the effects on endangered or threatened species.
- Mine Safety and Health Administration (MSHA) – A branch of the Department of Labor that administers and enforces mandatory mine workers safety and health standards as a means to eliminate fatal accidents, reduce frequency and severity of nonfatal accidents and to promote improved safety and health conditions in the nation's mines.
- US Department of Transportation (USDOT) – Is responsible for the regulation of transportation. All aggregate transportation must comply with USDOT regulations.

b. State Regulation:

- Illinois Environmental Protection Agency (IEPA) – Illinois has developed agencies to protect, manage and maintain the natural resources of the state.
 - Clean Air Act – Aggregate operations that meet the criteria for low particulate emissions are required to register with the IEPA under the Registration of Smaller Sources (ROSS) Program. Our wet mining operations and dust control plans meet the criteria for the ROSS program.
 - Clean Water Act - Illinois in conjunction with the federal clean water act regulate discharges to Illinois lakes and streams. Aggregate operations that have offsite discharge or discharge processing water must comply and be permitted by National Pollutant Discharge Elimination System (NPDES). Our operations are internally drained and do not discharge water. Operations that do not discharge water but use water for processing are also required to hold an IEPA Water Pollution Control Permit. This permit provides an overlap with local groundwater monitoring ordinances. Super Aggregates Illinois facilities hold a Water Pollution Control permit. Wetland, waterway and surface water permitting is complicated by the overlapping regulatory control by the USEPA, US Army Core of Engineers, state regulatory agencies and local ordinances. A wetland delineation is necessary to determine jurisdictional control of these sensitive areas.
- Illinois Department of Natural Resources (IDNR) - IDNR requires all mine sites to be registered. If less than 10' of overburden is present and less than 10 acres affected per year, a general permit is not required. The registered site is subject to annual inspections and reporting. Facilities that do not meet the permit criteria threshold are subject to annual compliance inspections/reporting are ongoing.

- Illinois Endangered Species and Illinois Natural Area Preservation conduct consultation of proposed aggregate operations to determine its effects on endangered or threatened species. All McHenry County mine sites are required to complete this study and is submitted in the application process.
- Illinois Historical Preservation must review and assess the project's impact on cultural resources. All McHenry County mine sites are required to complete this study and is submitted in the application process.

c. Local Ordinance:

- All McHenry County sand and gravel natural resources are overlaid with shallow sandy loam soil types. Inherently, these soil types are porous and provide rapid permeability and leachability, allowing water to move through the soil profile quickly. Because of the rapid water movement through the soil profile, these areas are often sensitive aquifer recharge areas and have a higher aquifer contamination potential. McHenry County has developed ground water standards and mining regulations found in the County's Unified Development Ordinance (UDO) and its subsequent Article 16.56.030 (P), Earth Extraction and Mining Use Standards, Appendix A. These standards may duplicate state requirements for environmental and public safety conditions. In some instances, municipalities adopt the County's use standards and develop more restrictive ordinances from them.
- Groundwater Monitoring: Sand/gravel pits are required to install one up-gradient and 2 down-gradient wells. These wells are sampled quarterly for seasonal groundwater fluctuations and groundwater quality and contamination indicators listed in table 14-1 of the UDO. This monitoring requirement captures groundwater quality and quantity information before the groundwater enters the sand/gravel site and after it passes through the sand/gravel site. Reports are submitted and recorded to the municipality.

Groundwater Quality - There has not been a report or documented issues with any McHenry County mining site relating to water quality or water quantity. Most groundwater contamination has been a result of leaking underground storage tanks and leaking chemical plant ponds. Processing water rinses the fine soil particles off the aggregates and in a closed-circuit system. The fine particles settle in a series of settlement ponds and are provided as baseball mix and horse track products. No flocculants are introduced or used in this rinsing process. Groundwater quality is not affected by removing sand/gravel found in the water table.

Groundwater Quantity - Below-water sand/gravel pits that do not dewater offsite, remove only sand and gravel materials from the shallow or upper aquifer using excavator, dragline, or hydraulic dredge to excavate below the water table level. The excavation occurs very slowly, over many years resulting in a very minimal impact on groundwater levels (imagine removing a rock from a bucket of water). Groundwater remains in the excavation and drains back into the lake from dug materials without dewatering operations. The groundwater elevations in below-water excavations stabilize at the same uniform level as prior to the excavation.

This type of operation also captures precipitation events and surface water run-off and promotes additional groundwater recharge. This is highly dependent on fluctuations in seasonal precipitation events and from year-to-year.

When these factors are combined, the net effects of below-water extraction are normally minor and groundwater elevations remain unchanged. To maintain and document State and County groundwater elevation standards, the operator shall install a staff gauge in the lake and elevations shall be recorded annually.

- Prior to any County development, McHenry-Lake Soil & Water Conservation District is required to review the proposed development and prepare a Natural Resource Information Report. This report is to inform officials and other decision makers with natural resource information of the present site, and the potential impact that the proposed change may have on the site and its resources.
- Stormwater Permitting: Sand/gravel pits are required to have stormwater permits through the County stormwater ordinance or municipal stormwater ordinance.
- Reclamation and Required Bonds: Sand/gravel pits must have an approved reclamation plan that provides for the return of the affected land to a useful purpose. An approved reclamation bond of no less than \$2,500 for each acre affected is required.
- Restrictive Conditions: In many instances, additional conditions are placed on sand/gravel pits to limit hours of operations, berm standards, setback distances, noise and dust standards, public utility improvements and host/royalty fees. Local ordinance always places a restrictive condition that requires all federal, state, and local laws be met.

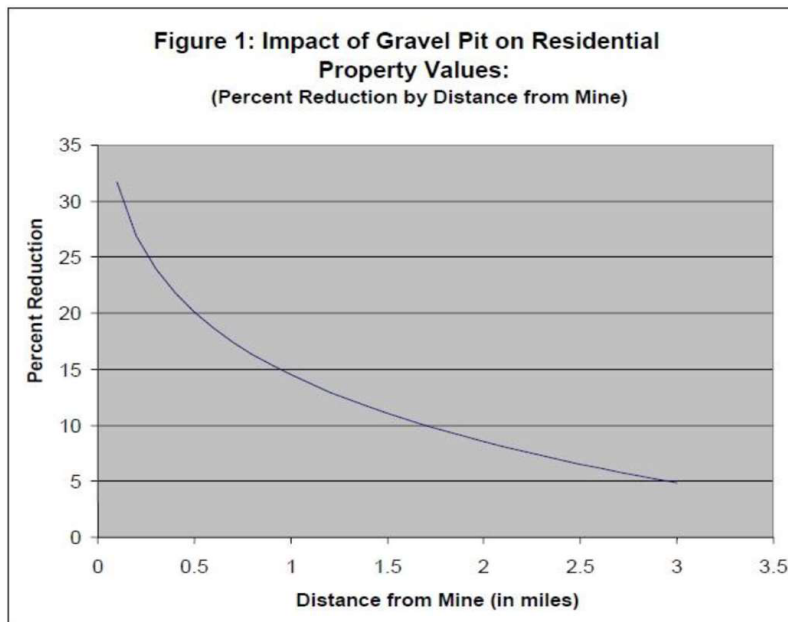
V. The Relationship Between Sand/Gravel Aggregate Sites and Adjacent Property Values

a. Erickcek and Hite:

Although every sand/gravel site and community are unique, there is no evidence of widespread and predictable property value declines associated with sand/gravel sites. A typical result from internet research on the effects of sand/gravel sites and property values is a document published in 2006 by a Senior Regional Analyst for W.E. Upjohn Institute for Employment Research, named George Erickcek. Erickcek's document, which was not a study but a theoretical model based on a working paper by Professor Diane Hite, Auburn University. Hite has stated her working paper is an unpublished document and nonpeer-reviewed. Erickcek misused Hite's information to create simplistic tables and curve graphs. Analysts of Erickcek's work have claimed it to be "unprofessional at best and likely misleading and reckless". Erickcek's work, is in violation of three basic valuation requirements: lack of creditable results, unsupported data, and an unsubstantiated conclusion.

Hite's initial concept gets exaggerated, manipulated, and repackaged with each subsequent valuation report and internet blog post. From Hite's paper, Erickcek, extrapolated, manipulated, and created a simple curve graph depicted in Figure 7, showing a reduction in property value plotted against the distance from a mine. This curve graph is very simplistic and is very appealing for an easy and quick internet search result. Erickcek's curve graph is often used as an irrefutable fact and subsequent spreadsheets have been created to quickly calculate the unsubstantiated property value loss of nearby residences within certain distances from a sand/gravel mine. Certified appraisers find Erickcek's curve graph erroneous, deceptive, and misleading. How can a simplistic curve graph determine value impact while omitting all the necessary information a certified appraiser compiles to determine value? The data and curve graph appear to originate from scientific studies and actual sales data but it is falsely used in many local planning and zoning hearings.

Figure 6 – Erickcek's Curve Graph



Hite's paper was actually titled "*Residential Location Impacts of Environmental Disamenity: The Case of Gravel Pits Operation and Landfills*". Hite's paper is based on the impacts of a consolidated limestone

quarry and the impact of landfills on property values in Delaware County, Ohio. A quarry and a landfill are not applicable in this development proposal.

b. Multiple Listing Service (MLS):

Between 1981 and 2011, several other studies examined the relationship between mining operations and property values. All examinations conclude there is no consistent relationship between mining operations and property values. For more current and local information, one can engage a licensed real estate broker to examine sales and property values through the Multiple Listing Service (MLS), or County sales information. Figure 7 depicts 7/11/23 MLS data and Opinion of Value from ILrealty for properties located in McHenry adjacent to a sand/gravel aggregate site.

Figure 7 depicts MLS data and Opinion of Value from ILrealty.



The undersigned was engaged, to provide an Opinion of Value for the properties located within the subdivisions that are adjacent to current gravel pits to determine if the gravel pit affects the market time or price of the homes. I referenced the following subdivisions that have properties adjacent to a gravel pit in the area.

Burning Tree, Glacier Ridge, Woodcreek

While reviewing the sales information from the past 18 months within the Multiple Listing Service (MLS) database, below are my findings are:

- The properties that have sold directly adjacent to the gravel pit, sold as quickly as the other homes in the neighborhood.
- The properties directly adjacent to the gravel pit sold at or above the list price.
- The properties directly adjacent to the gravel pit sold for more than the average price in the subdivision.
- Few homes have been marketed for sale adjacent to the gravel pit leading me to believe homeowners are happy with their gravel pit neighbor.

I have concluded that the homes adjacent to the gravel pit have Not been negatively affected by the gravel pit.

Please be advised that this report represents only the opinion of the author based upon her 15 years of experience in the marketplace, along with an assessment of sold comparable properties in the marketplace. This report is not an appraisal. I appreciate the opportunity to provide my services and to render an opinion regarding the value of these properties.

Jill Glaves



Broker
ILrealty Inc.

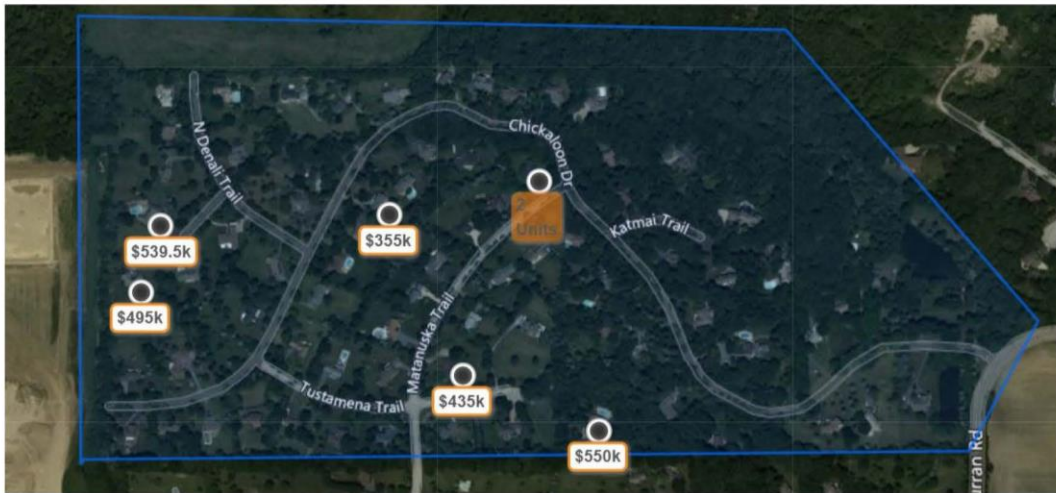
5306 W. Elm St. • McHenry, Illinois 60050 • Phone: (815) 344-8900 • Fax: (815) 344-8989 • www.ILrealtyinc.com

Burning Tree



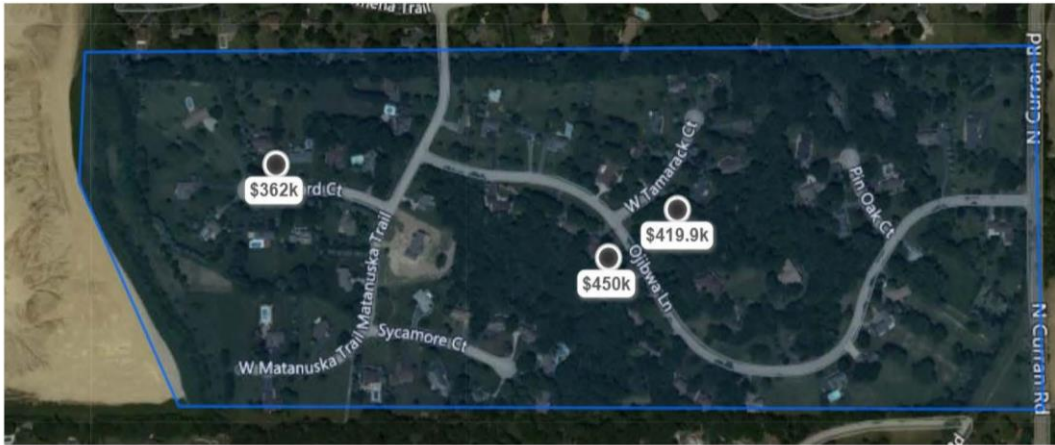
Stat	Street #	CP	Str Name	Sfx	List Price	Sold Pr	LMT	ASF	Type	# Rms	All Beds	# Full Baths	# Half Baths	Bsmt	# Garage Spaces
CLSD	6507		Burning Tree Circle	Circle	\$399,900	\$422,000	2	2659	2 Stories	10	4	2	1	Full, English	2
CLSD	7115		Burning Tree Drive	Drive	\$399,900	\$426,000	17	2568	1 Story	10	3	2	1	Full	3
CLSD	7501		Burning Tree Drive	Drive	\$499,999	\$510,000	5	2684	1 Story, Hillside	13	4	3	1	Full, Walkout	3
CLSD	6906		Burning Tree Circle	Circle	\$489,000	\$560,000	3	2549	2 Stories	8	4	2	1	Full	3
CLSD	6718		Burning Tree Circle	Circle	\$659,900	\$659,900	11	4096	2 Stories	11	4+1+	5	0	Full	3

Glacier Ridge



Stat	Street #	CP	Str Name	Sfx	List Price	Sold Pr	LMT	ASF	Type	# Rms	All Beds	# Full Baths	# Half Baths	Bsmt	# Garage Spaces
CLSD	6431		Chickaloon Drive	Drive	\$365,000	\$355,000	6	2580	2 Stories	9	4	2	1	Full	3
CLSD	1308		Matanuska Trail	Trail	\$425,000	\$435,000	5	6394	1 Story	12	4	3	1	Full, English	3
CLSD	6615		Illiamna Trail	Trail	\$495,000	\$495,000	64	2700	2 Stories	8	4	3	0	Full	2.5
CLSD	6610		Illiamna Trail	Trail	\$575,000	\$539,500	16	5669	2 Stories	15	4	3	1	Partial	3
CLSD	6309		Tustumena Trail	Trail	\$550,000	\$550,000	9	3783	2 Stories	11	5	3	1	Full	3

Wood Creek

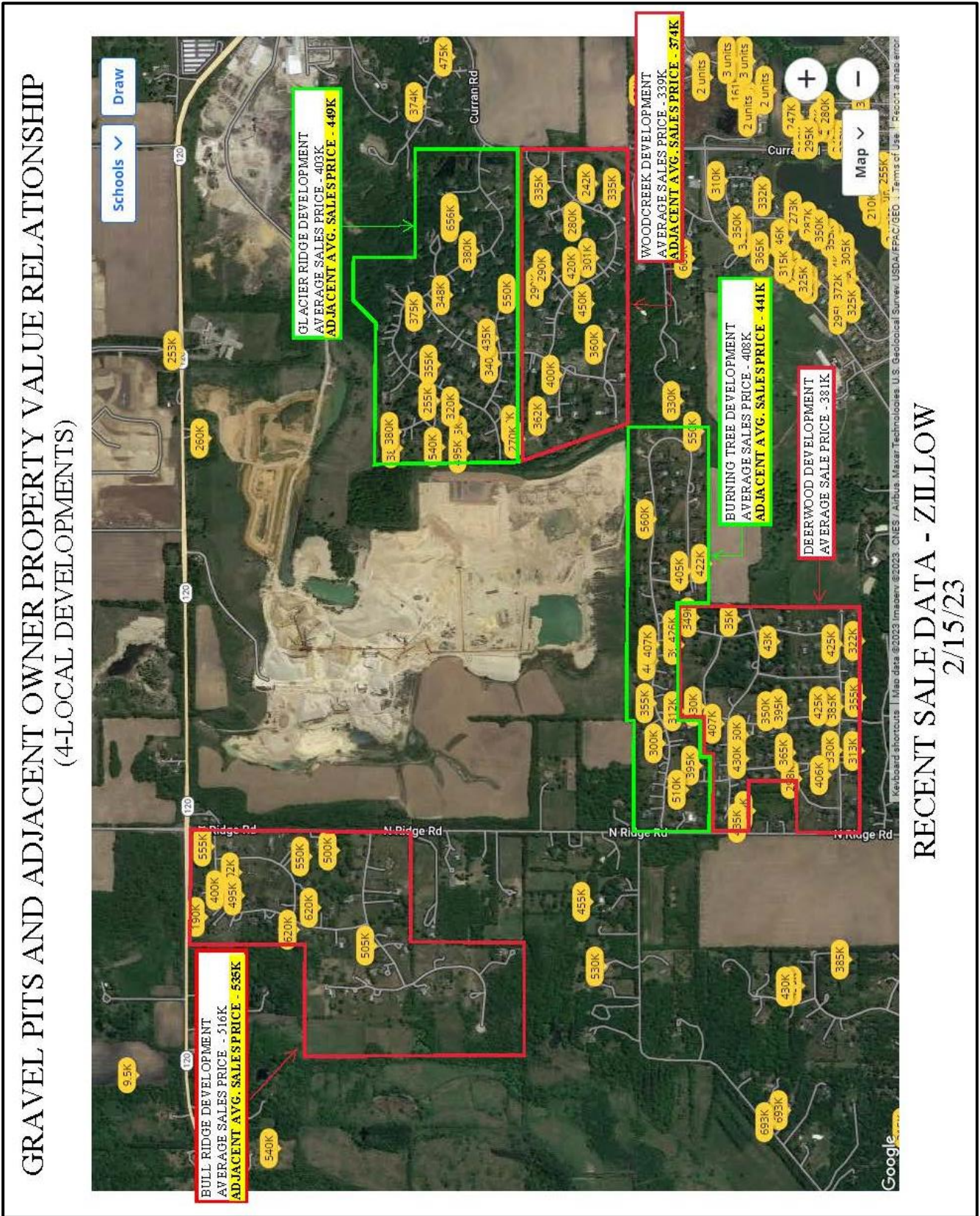


Stat	Street #	CP	Str Name	Sfx	List Price	Sold Pr	LMT	ASF	Type	# Rms	All Beds	# Full Baths	# Half Baths	Bsmt	# Garage Spaces
CLSD	6622		Hayward	Court	\$329,900	\$362,000	3	2560	2 Stories	9	4	2	1	Full	3
CLSD	1218	West	Tamarack	Court	\$419,900	\$419,900	5	2815	2 Stories	9	4	3	1	Full, Walkout	3
CLSD	6403		Ojibwa	Lane	\$474,900	\$450,000	28	3893	Hillside	14	4	3	1	English	3

c. Zillow:

In fact, some homeowners have reported an increase in property value because of the setbacks, open space, lakefront views and wooded areas used to buffer mining operations. Figure 8, Zillow Recent Sales surrounding the McHenry West Pit, show that average property values adjacent to mining operations were higher than average property values farther from the mining operation.

Figure 8 – Zillow Recent Sales Map – McHenry West Pit



VI. Today's Sand/Gravel Mining Techniques & Super Aggregates Best Management Practices for Common Concerns

Mining techniques and Best Management Practices (BMP's) have evolved over many years in an effort to effectively mitigate negative effects and many of the common concerns relating to sand/gravel pit operations. Mining equipment has been greatly improved to emit less noise and exhaust. Today, electric powered, wet mining dredges have been manufactured and their use has eliminated many common concerns.

- a. Air Quality/Dust: In addition to regulatory control, our mitigation efforts to control offsite dust emissions include:
- i. Primarily wet dredge extraction and wet processing of aggregate materials, thereby eliminating the presence of dust.
 - ii. Trucks routes are asphalt paved and swept regularly, thereby eliminating the presence of or dust emission beyond the property line.
 - iii. All materials are stockpiled containing 3-5% moisture by conveyors, no interior traffic generating dust.
 - iv. Silica sand and degradation into silica dust is not present and has never become an issue at any McHenry County sand/gravel sites. The sand produced on site is the same sand found in sand boxes, sand volleyball courts and all local waterfront sand beaches.

A common fear tactic often used at planning and zoning hearings is silica dust and silicosis. It is often implied the proposed sand/gravel site will emit enough silica dust to kill everything in a 5-mile radius. Concerns over silica dust and silicosis is not a new or lightly considered issue by the industry and it has been studied for almost 100 years. Air monitoring data at all sand/gravel sites in McHenry County does not support the fear of a public silicosis outbreak. **There have not been any reports or documented cases of silicosis related to sand/gravel sites in McHenry County.** The concentrations of dust controlled by BMP's are lower than the federal occupational exposure limits set by MSHA.

- b. Groundwater Quantity and Quality: Unlike consolidated limestone quarries which need to pump water off site, sand/gravel sites can be extracted below the water table by a floating hydraulic dredge. Once the material is rinsed, water returns to the lake and lake levels are not affected. No flocculants or other materials are introduced to alter the groundwater quality. The groundwater is of the same quantity and quality as before the sand/gravel was removed. All sand/gravel sites submit report analysis, and often, more than one report providing evidence groundwater quantity and quality are not affected by sand/gravel sites. Reports are submitted to local municipalities and are made available to public. **There are no reported or documented cases of groundwater quality or quantity reductions related to sand/gravel sites in McHenry County.**
- c. Noise: Noise emissions have been greatly reduced primarily by the use of an electric powered hydraulic dredge and processing plant. This eliminates the noise and exhaust emissions of diesel-powered equipment. The electric powered processing plant is also located 500' from the nearest residence, approximately 25' below grade and surrounded by screening berms. Noise emissions at 500' are less than the noise emission of a car traveling on a road. Sand/gravel pits located in the County are unconsolidated aggregate reserves which never use blasting methods.
- d. Traffic: Proposed new aggregate sites will not add significant traffic to McHenry County as many County aggregate sites have closed or soon will. Proposed new aggregate sites will tend to be much smaller in size averaging 5 loads per hour or 50 trucks per day, a negligible increase in traffic. A greater number of sand/gravel sites in the County decreases truck numbers, cartage distances, exhaust emissions and overall road deterioration.

- e. Visual Impact to Adjacent Owners: Super Aggregates good neighbor policy provides coexistence with adjacent residences by a collaborative approach:
- i. Landscaped perimeter undulating screening berms with trees, maintained weekly provides above average screening.
 - ii. Landscaped screening berms that are high enough that will not allow a line of site into the proposed extraction or processing areas, please see Figure 9.
 - iii. Super Aggregates offers the removal of these screening berms per reclamation and phasing plans. Adjacent owners are screened during the operations but can enjoy open space advantages upon operation cessation.

Figure 9 - Landscaped Screening Berm Photo



VI. Super Aggregates Reference

Super Aggregates Neighbor List

Sugar Creek – Walworth County, WI

<u>Name</u>	<u>Address</u>	<u>Phone</u>	<u>Email</u>
Ben DeLong	W6406 County A, Elkhorn, WI 53121	<u>262-206-6786</u>	
Donna Emelity	W7124 Territorial Rd., Elkhorn, WI 53121	<u>262-475-4881</u>	

Waterford Lakes – Racine County, WI

Dennis Witte	32409 High Dr., Burlington, WI 53105	262-206-6786	denniswitte@wittesupply.com
Larry Ketterhagen	32106 High Dr., Burlington, WI 53105	262-492-3767	
Joe Raguse	32010 High Dr. Burlington, WI 53105	262-994-2099	

Burgett Lakes – McHenry County, IL

Marv Miller	8404 Burgett Rd., Richmond, IL 60071	262-620-8259	
Rick Schoenbeck	8803 Burgett Rd., Richmond, IL 60071	<u>262-909-5023</u>	<u>rschoenbeck@reproductionprovis ions.com</u>
Ed Van Krumpen	W1342 County Rd. B, Genoa City, WI 53128	262-237-0545	
Brad Polterman	W1274 County Rd., B, Genoa City, WI 53128	<u>262-206-0311</u>	bradpoltermann@gmail.com
Curt Miller	8410 Burgett Rd., Richmond, IL 60071	815-482-2587	Crazymiller57@yahoo.com
Addison Pease	8500 Burgett Rd., Richmond, IL 60071	<u>262-233-3705</u>	Addisonpease143@gmail.com

Lily Pond – City of Woodstock

Bill Martenson	3221 Lily Pond Rd., Woodstock, IL 60098	815-337-3514	
John Merryman	3509 Lily Pond Rd., Woodstock, IL 60098	815-482-3345	lpsutilities@gmail.com
Sharon Salas	3206 Lily Pond Rd., Woodstock, IL 60098		
Brandon Teresi	2122 Serenity Ln., Woodstock, IL 60098	815-575-4876	
Nick Behrens	3510 Lily Pond Rd., Woodstock, IL 60098	815-739-1852	Nbehrens71@outlook.com
John Fuller – Dorr Twp.	12322 Davis Rd ., Woodstock, IL 60098	815-790-2921	highway@dorrtownship.com

Marengo Lakes – City of Marengo

Randy Griebel	7515 S. Rt. 23, Marengo, IL 60152	815-568-7204	griebeltrucking@aol.com
Jeff Majewski	8017 S. Rt. 23, Marengo, IL 60152		
Philip Preston	8303 S. Rt. 23, Marengo, IL 60152		
Kathy Meyer	22200 Pleasant Grove Rd., Marengo, IL 60152	815-382-1887	
Karen Schnable – Riley Twp.	8910 S. Rt. 23, Marengo, IL 60152	815-568-7001	Supervisor@rileytwp.com

Municipal Officials

Facility	Name & Title	Address	Phone	Email
Sugar Creek	Dave Woodhouse – Walworth County Highway Superintendent	W4097 County Road NN Elkhorn, WI 53121	262-741-3112	dwoodhouse@co.walworth.wi.us
Waterford Lakes	Brian Jensen – Racine County Development Services Superintendent	14200 Washington Avenue Sturtevant, WI 53177	262-866-8440	brian.jensen@racinecounty.com
Waterford Lakes	Chad Sampson – Racine County Conservationist	14200 Washington Avenue Sturtevant, WI 53177	262-886-8440	chad.sampson@goracine.org
Burgett Lakes	Renee Hanlon – Deputy Director McHenry County Planning & Development	667 Ware Rd. Woodstock, IL 60098	815-334-4555	rwhanlon@mchenrycountyil.gov
Burgett Lakes	Paul Hain – Richmond Township Supervisor	7812 S. Route 31 Richmond, IL 60071	815-678-0077	richmondtownship.org
Lily Pond	Joe Napolitano – Director of Building & Zoning City of Woodstock	121 W. Calhoun St. Woodstock, IL 60098	815-338-4305	jnapolitano@woodstockil.gov
Lily Pond	John Fuller – Dorr Township Highway Commissioner	12322 Davis Rd. Woodstock, IL 60098	815-338-1060	highway@dorrtownship.com
Marengo Lakes	Laura Williamson – City Administrator City of Marengo	132 E. Prairie St. Marengo, IL 60152	815-568-7112	lwilliamson@cityofmarengo.com
Marengo Lakes	Karen Schnable – Riley Township Supervisor	8910 S. Route 23 Marengo, IL 60152	815-568-7001	supervisor@rileytpw.com

IX. Reclamation of Former Sand/Gravel Sites

McHenry County has developed and many surrounding municipalities have adopted mining regulations outlined in the County's UDO, this proactive approach to sand/gravel regulation has led to some beautiful reclaimed former sand/gravel sites. All inactive/closed County sites have been reclaimed. Many reclaimed sites have natural appearing rolling topography and lakes. Some former sand/gravel sites have been developed into beautiful parks and residential developments. They provide open space, recreational uses, wildlife refuge and enhance surrounding property in otherwise densely populated areas. The following photos are a few examples of interim sand/gravel mining land use followed by reclamation.



As mining progresses, reclamation follows. Super Aggregates, Waterford, WI Facility





**Reclaimed site seeded with prairie grass and planted evergreens.
Super Aggregates, Waterford, WI. Facility**







June 2020 Photo from Super Aggregates – Waterford, WI Facility



Super Aggregates, Volo Facility, Volo, Illinois



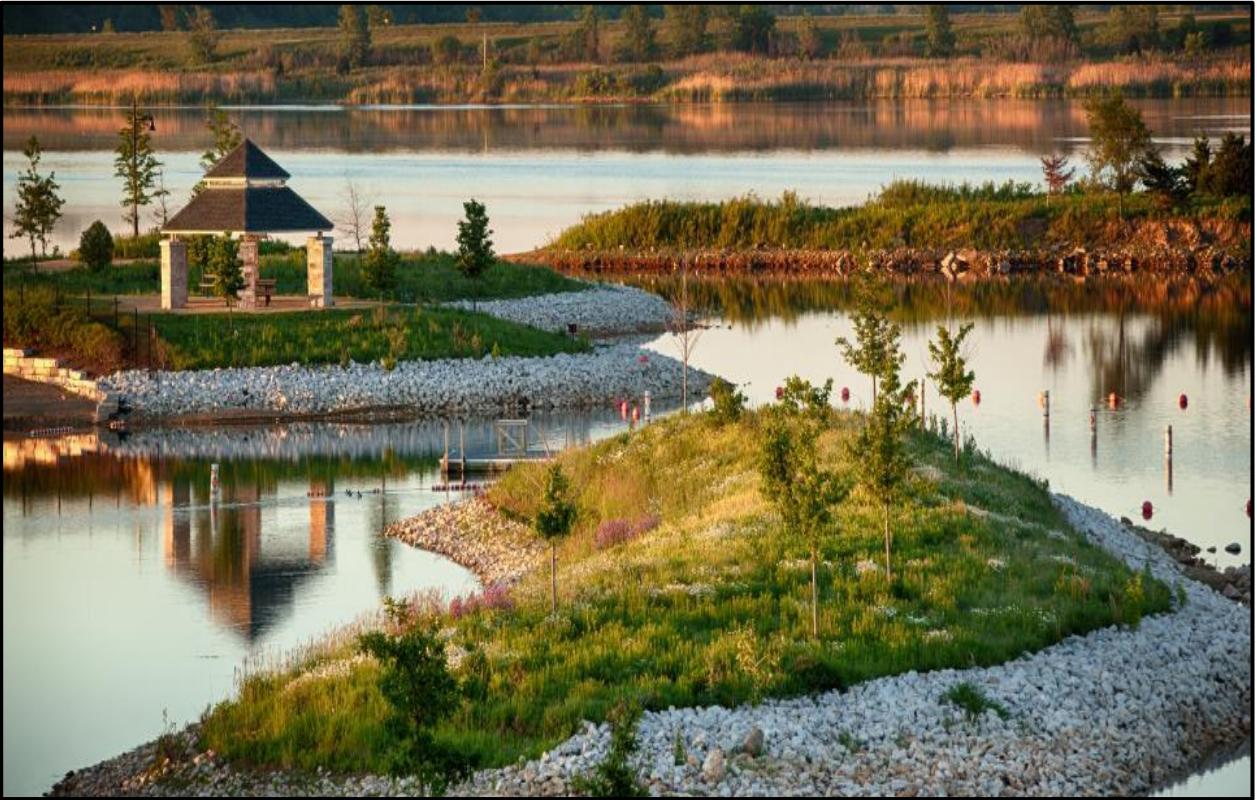
Former Super Aggregates, Nish Rd. Facility, Prairie Grove, Illinois





Lake Formation – Burgett Rd., Richmond, Illinois





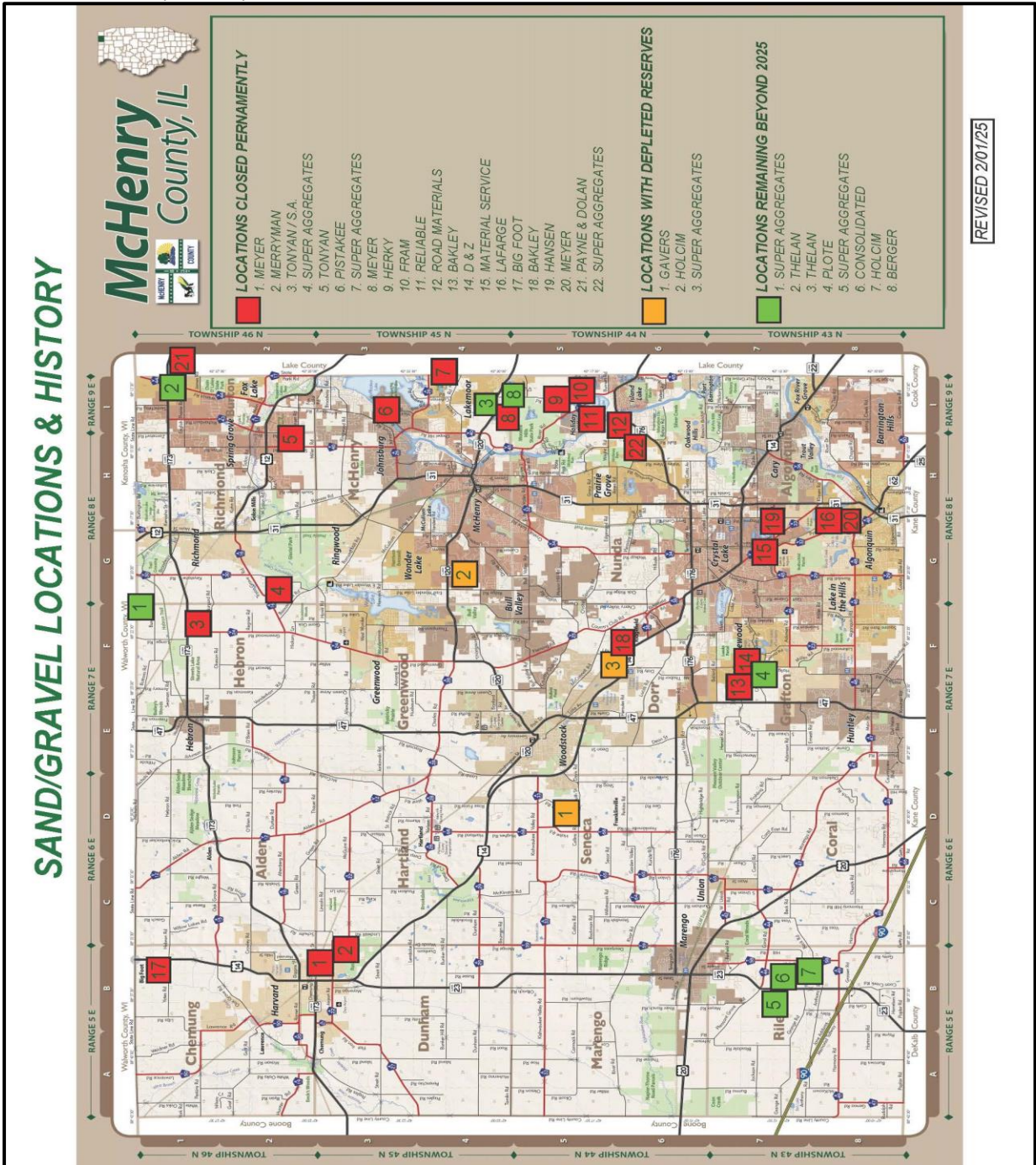
Three Oaks Recreation, Crystal Lake, Illinois



X. The Emerging Sand/Gravel Supply Crisis

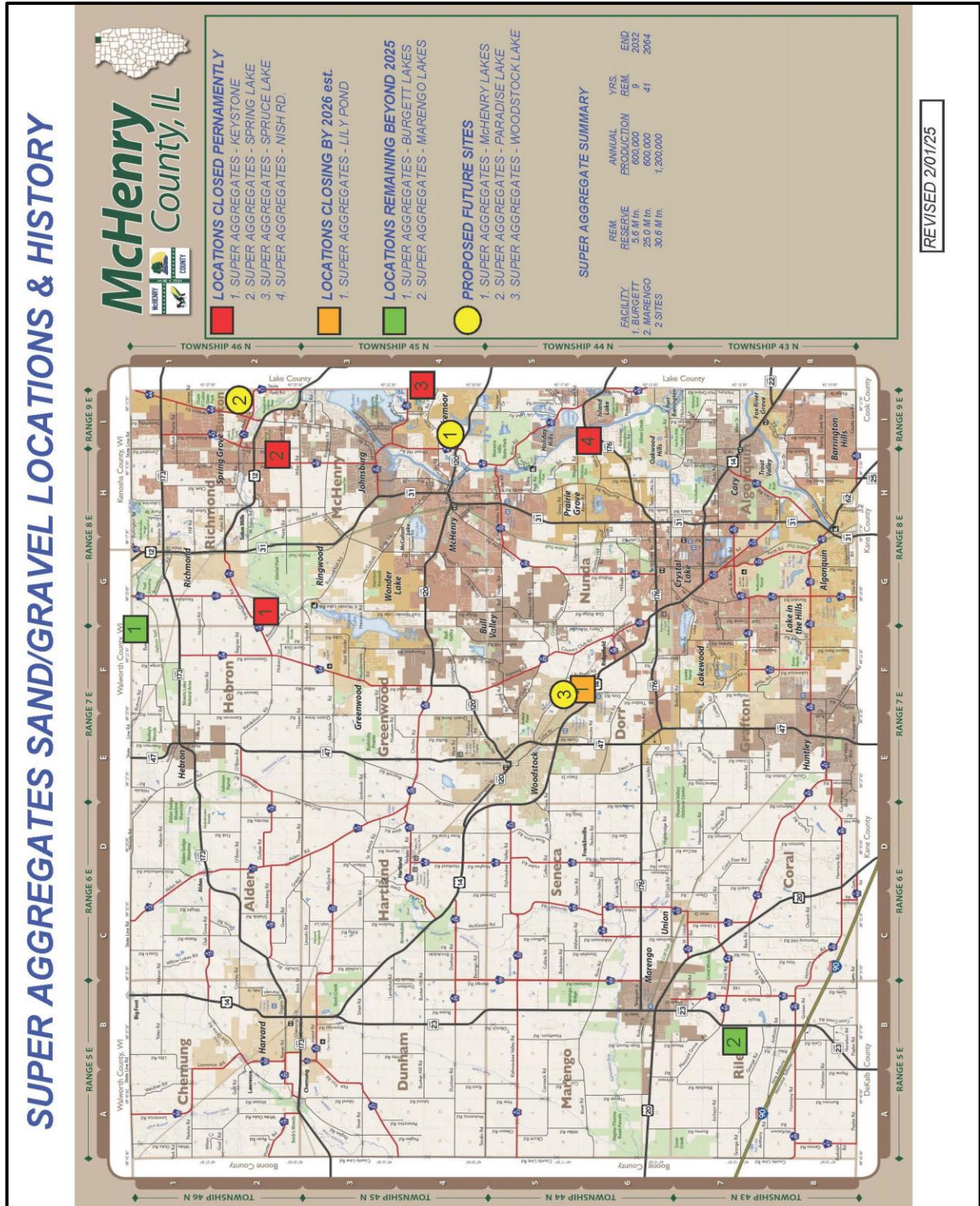
- a. Sand/Gravel Site Lifecycles: Sand/gravel aggregate sites are temporary land use and have a lifecycle that is determined by the horizontal and vertical distance of the aggregate reserve. Figure 11 depicts, i. The location of sand/gravel pits located and operating in the County and municipalities within the last 20 years that have been depleted and closed permanently, ii. The location of pits and quarries that are nearing lifecycle reserve depletion, iii. The location of sand/gravel pits remaining beyond 2025.

Figure 11 – McHenry County Sand & Gravel Locations



Super Aggregates location map, Figure 12, depicts a similar pattern of temporary land use and site lifecycles by, i. Locations depleted of sand/gravel reserves, ii. Location nearing depletion, iii. Locations remaining beyond 2025 and Proposed Future Locations.

Figure 12 – Super Aggregates Sand & Gravel Locations



b. McHenry County and Surrounding Area Annual Demand for Sand/Gravel.

- **AVERAGE ANNUAL DEMAND APPROXIMATELY 10.0 MILLION TONS**
- **4 MAJOR SAND/GRAVEL PRODUCERS REMAINING**
- **EACH REMAINING PRODUCER MUST CONTINUE TO SUPPLY ABOUT 2.5 MILLION TON TO MEET ANNUAL DEMAND.**
- **SUPER AGGREGATES PLAN TO REPLACE 5 OF ITS DEPLETED LOCATIONS WITH 3 PROPOSED NEW SITES TO CONTINUE TO MEET ITS SHARE OF DEMAND.**
 - **PARADISE LAKE – SPRING GROVE**
 - **McHENRY LAKE - McHENRY**
 - **WOODSTOCK LAKE - WOODSTOCK**

Our area market demand requires approximately 10 million tons of sand/gravel each year. The former large sand/gravel sites, encompassing hundreds of acres, owned and operated by global companies, both of which are soon to disappear from the County. The County's future supply must come from many small sites operated by local companies. Additional burden has been placed on these sites and subsequently their lifecycles shorten exponentially as time goes on. Planning and zoning officials must consider an increase in new source approvals before the sand/gravel supply worsens. It is estimated, new source approvals of approximately 150 acres per year will be required to meet the demand and trendline increase.

Super Aggregates plan to meet future sand/gravel supply includes smaller sites, shorter mining terms and predetermined post mine land use. Proposed smaller sites with adjacent residential developments contain the County's remaining economical sand/gravel reserves.

- c. Sand/Gravel Aggregate Sites and Land Use Planning: Many sand/gravel aggregate reserves in the County have been built over by urban growth. These reserves are lost forever and consideration must be given to land use planning and zoning for our remaining sand/gravel aggregate reserves. It is estimated by 2025, McHenry County will have approximately 8 remaining sand/gravel sites down from a high of approximately 33 sites. Many sites are near or have been depleted of quality sand/gravel reserves. Figure 13 depicts the importance of sand/gravel aggregates in municipal planning.

Figure 13 summarizes the importance of sand/gravel reserves in municipality planning.

Aggregate Resources and the Importance in Municipality Planning

DEMAND FOR AGGREGATES

Aggregate production in the United States averages 9.5 tons per person per year.

What does that mean?

That is the same as, when you leave from work, stop at the local home supply store and purchase a fifty-pound bag of landscaping rock for yourself, and for every member in your family. Do this every day, 365 days a year. That's how much aggregate you use!

Additional Demand Facts:

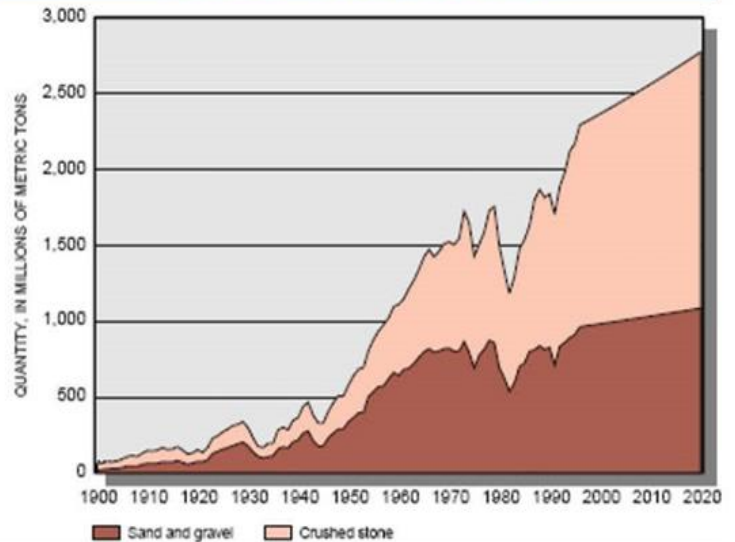
1. One new home and each home's proportional share of the associated schools, libraries, shopping centers, recreational facilities etc., requires over 325 tons of aggregate.



2. 1 mile of Interstate Highway requires 20,000 tons per lane.



AGGREGATE USE, 1900-2000



- In 1900, we consumed .5 ton/person/year.
- Today we consume 9.5 ton/person/year or approximately 3 billion tons/year.
- By 2025 projected consumption will be 5 billion tons/year.

DO WE HAVE ENOUGH REMAINING AGGREGATE RESERVES?

Aggregate Reserves - Concerns & Issues

1. Most people are not aware that aggregate supply will be a problem in the near future.
2. Most municipalities do not understand the economic implications of aggregate supply in relation to transportation and housing plan elements.
3. Most municipal land planning does not recognize aggregates are a finite resource or adequately address those resources.

AGGREGATE RESERVES AND LAND USE PLANNING

1. WE NEED AGGREGATES! Identify, protect and develop without conflict.
2. AVAILABILITY – aggregates occur where the glaciers put them, not where we would like.
3. ACCESS – we are building over our future supply in many urban areas.
4. QUALITY – not all rocks are created equal.
5. NIMBY – everybody wants good roads and cheap concrete, but no pit or quarry next door.

*Brown, B. A. (2006, May 18). Wisconsin Geological Survey, Washington County.
Retrieved from www.co.washington.wi.us/upbads/docs/PLN_AggregateResPresentation06.pdf*

McHenry County is divided into 5 zoning districts, i) Agricultural, ii) Residential, iii) Commercial, iv) Office and Industrial and v) Overlay zoning districts. County land planning & zoning are always challenged with the management and constant changes in these districts as the County continues to grow. It is important to note that certain zoning districts need to be located near characteristics for that zoning district. For example, an industrial district needs to be near complimentary transportation requirements. Another example, commercial zoning districts must be located in areas with high traffic counts. Zoning for sand/gravel becomes more challenging as it does not fit the mold as other zoning districts. These areas cannot simply be designated to pre-determined *area(s)* of the County or municipality like other zoning districts. At many planning & zoning hearings, decision makers are often faced with the opposition's desire to arbitrarily locate sand/gravel operations in remote areas of the county or municipality. Special consideration must be given, economic sand/gravel reserves are located where the glaciers placed them, not in predetermined zoning districts. Stated in McHenry County 2030 Comprehensive Plan, *"Taking advantage of these valued natural resources must be done in a sensible manner that is respectful of nearby or adjacent residential areas with regard to noise, dust, safety and truck traffic activity."* McHenry County's 2050 Comprehensive Plan Working Draft recognizes the County's historical and anticipated growth has transformed from a once-rural landscape into a urban landscape. *"Mining companies, now surrounded by urban development, play a pivotal role in the region's economy by supporting local commerce initiatives, generating tax revenues and providing numerous jobs, notably in the trucking industry. With numerous aggregate deposits available for quarrying, its crucial for the county and municipalities to collaborate on regulations governing new developments that could impact these resources."*

In some states, such as Wisconsin, a proactive State land use approach has been taken to secure sand/gravel aggregate for state road projects. State statute allows the exemption from local zoning for borrow materials if certain criteria are met. This statute has secured road construction materials, held material/cartage costs down and reduced road project delays for state transportation projects. Recently, proposed legislation has been introduced that would limit local governments' ability to control the permitting, development and operation of sand/gravel sites. This proposal is also an action to secure road materials, hold down material/cartage costs and project delays for state highway projects.

d. How to Avoid a Sand/Gravel Supply Crisis:

If local planning and zoning officials fail to approve new sand/gravel sites, aggregate suppliers will be forced to ship aggregates from Wisconsin, South of Chicago or Rockford to meet McHenry County's demand. This option becomes:

- i. Time-consuming and costly.
- ii. Allocates additional truck traffic on local roads.
- iii. Reduces the road quality.
- iv. More trucks equal more emissions.

McHenry County and surrounding municipalities can avoid future supply concerns by continuing the mutually beneficial relationship and support for sand/gravel aggregate sites, mitigating negative public perception, increasing new source sand/gravel site approvals, identifying, protecting and controlling the remaining reserves for future extraction availability. These actions will secure the County's future economic health and growth for generations.

e. The Emerging Sand/Gravel Supply Crisis Summary:

I. Fewer Mining Sites:

- a. In 2000, 33 mining sites were in operation.
- b. In 2023, 11 mining sites are currently in operation.
- c. By 2026, it is estimated, only 8 active mining sites will be in operation.

II. Public Need: Is an activity or project that provides important tangible and intangible gains to society.

- a. If you live in a straw hut, don't have a car and only walk on dirt paths, you may not have any interest in sand/gravel mining operations.
- b. If you prefer living in a house, driving your car to stores & schools on maintained roads and walking on sidewalks, you need sand/gravel mining operations.

III. New Source Approvals: Mining sites have a pre-determined lifecycle and new source approvals should maintain commercial/public demand requirements. New source approvals should only be granted to responsible operators.

- a. Operators that supply a wide variety of products for commercial/public demand.
- b. Deliver the products in late model and a well-maintained truck fleet.
- c. Operate a clean, quiet, and safe mining operation.
- d. Incorporate a post mining development plan, reclaim mined areas contemporaneously with mining operations and achieve a beautiful development upon mining cessation.

IV. Consequences of a Sand/Gravel Supply Crisis:

- a. Higher construction costs for everyone.
- b. Reduce the number of Private Projects (Retail, Residential and Industrial).
- c. Reduce Infrastructure Quality.
- d. An increase in project timelines and delays.
- e. A decrease in maintenance construction projects.
- f. An increase in project life cycles.
- g. A decrease in expansion projects.
- h. A decrease in repair projects.
- i. Increase TAXES.
- j. Limit future growth.

A reduction in the number of sand/gravel sites along with a surging annual demand increase is leading the County and surrounding area into an emerging supply crisis.

XI. Conclusion

Not only does mine depletion lifecycles lead to a reduced number of County sites, but supply concerns are also related to a negative public perception and a *Not In My Back Yard (NIMBY)* public sentiment and opposition.



Why is the aggregate industry, a necessity in the normal function of our society, so misunderstood and opposed? Everyone wants good roads, new buildings and affordable asphalt & concrete but does not want to be near a sand/gravel site. The negative perception and NIMBY opposition continue to challenge municipal planning and zoning officials by circulating petitions, opposition member only websites, garnering opposition support from unaffected non-area residents, posting signs, wearing tee shirts and intimidating officials at meetings and public hearings.

The NIMBY opposition often uses social media to relay misinformation, create diversion and circulate fear in an attempt to hide the true and personal feelings of any development or change. When all the facts have erased the false claims and fear tactics, the opposition continues its NIMBY campaign. This stance is always true for any type of proposed land development or land use change such as a proposed convenience store with underground petroleum storage tanks, a hundred-acre solar farm, any commercial or retail development, all types of residential development and any type of roadway widening or expansion project.

The NIMBY opposition disregards, (i) The depth of regulatory control the Federal, State and County has implemented for interim sand/gravel sites that protect them and the environment; (ii) The opposition is contrary with their demand for all types of construction, quality roads and consumer products that have led to the depletion of 22 McHenry County sand/gravel sites; (iii) All types of construction have a limited life and need replacement. For example, roads, whether concrete or asphalt, need to be repaved/repared every 15 years, bridges become obsolete and need repair/replacement every 40 years, and most buildings need to be replaced/repared every 100 years, these projects all require local sand/gravel sites.



The NIMBY opposition enjoy the benefits of all types of development and a higher quality of life as long as it is located in someone else's backyard. Sand/gravel deposits are only located where the last glacier placed them. Nearly all the NIMBY opposition do not realize their own residence and residential neighborhood was constructed from an adjacent or nearby sand/gravel site.



The NIMBY opposition's common goal is to *stop it at all costs, fight, fight fight!* A goal, that is contrary to a higher quality of life and interest of public welfare for today and the future. When a new local sand/gravel site is denied at local planning and zoning hearings, the NIMBY opposition celebrate *we won*, when, in fact, they really lost.

Federal/State statutes, County ordinances and regulatory control provide the political cover for planning and zoning officials, but, in many instances, planning and zoning officials surrender to the NIMBY opposition pressure. How is it possible that the NIMBY opposition is allowed to override and disregard existing ordinances at the expense of everyone else? How can the opposition control land use planning beyond their property line instead of planning and zoning officials?

At meetings and public hearings, planning and zoning officials have the opportunity to educate and inform the NIMBY opposition of the stringent regulations already in place to protect the neighbors and environment, ensure the requirements of existing County ordinances are met and encourage compromise and negotiation for a collaborative approach to mitigate any perceived impacts to adjacent property owners. This remedy can be achieved by placing reasonable conditions on the proposed sand/gravel site through the *Conditional Use* permit approval process. These conditions provide the adjacent NIMBY opposition to receive reasonable relief or mitigation from perceived impacts of sand/gravel site while the sand/gravel site receives the *Conditional Use* permitting approval to provide sand/gravel products that are used in the best interest for all of the general public.



XII. Framing a Political Decision for A New Sand/Gravel Source Approval

Support	Oppose	Statement
		Sand/gravel resources are a Natural Resource that is a necessity for society.
		Economical sand/gravel resources are located where the glacier placed them.
		Sand/gravel resources should be utilized before they are lost to development forever.
		All types of development, <u>including</u> residential, occur near and surround a local sand/gravel site.
		McHenry County experienced rapid growth (1990-2010) that led to the depletion of 22 County sand/graves sites.
		In 2024, McHenry County’s population is estimated at 314K and is projected to grow by an additional 67K households by 2050, as stated in the County’s 2050 Comprehensive Plan Draft.
		Sand/gravel are the building blocks the County requires and their use serves the best interest for the existing and projected County population.
		The County has implemented mitigation efforts for sand/gravel sites through the County’s Unified Development Ordinance – Article 16.56.030, P.
		Future new source/site approvals are necessary to replace depleted sites. These approvals should be granted to operators that have a good history, a plan to meet current & trendline demand and evidence of being a good neighbor.

APPENDIX A

MCHENRY COUNTY UNIFIED DEVELOPMENT ORDINANCE TITLE 16

(Article 16.56.030, P – Earth Extraction and Mining Use Standards)

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.
 - l. 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.

d. *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 Elements.* 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 also 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 end match 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).

7. Operation Requirements.

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 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.

l. 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.

8. *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 Table 16.56-1: General Groundwater Quality Indicators. 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 Table 16.56-1 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 Table 16.56-1 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 Table 16.56-1 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 Table 16.56-1, 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
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	
Acenaphthylene*	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.

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