

Staff Report for the McHenry County Zoning Board of Appeals

Application: #Z25-0065

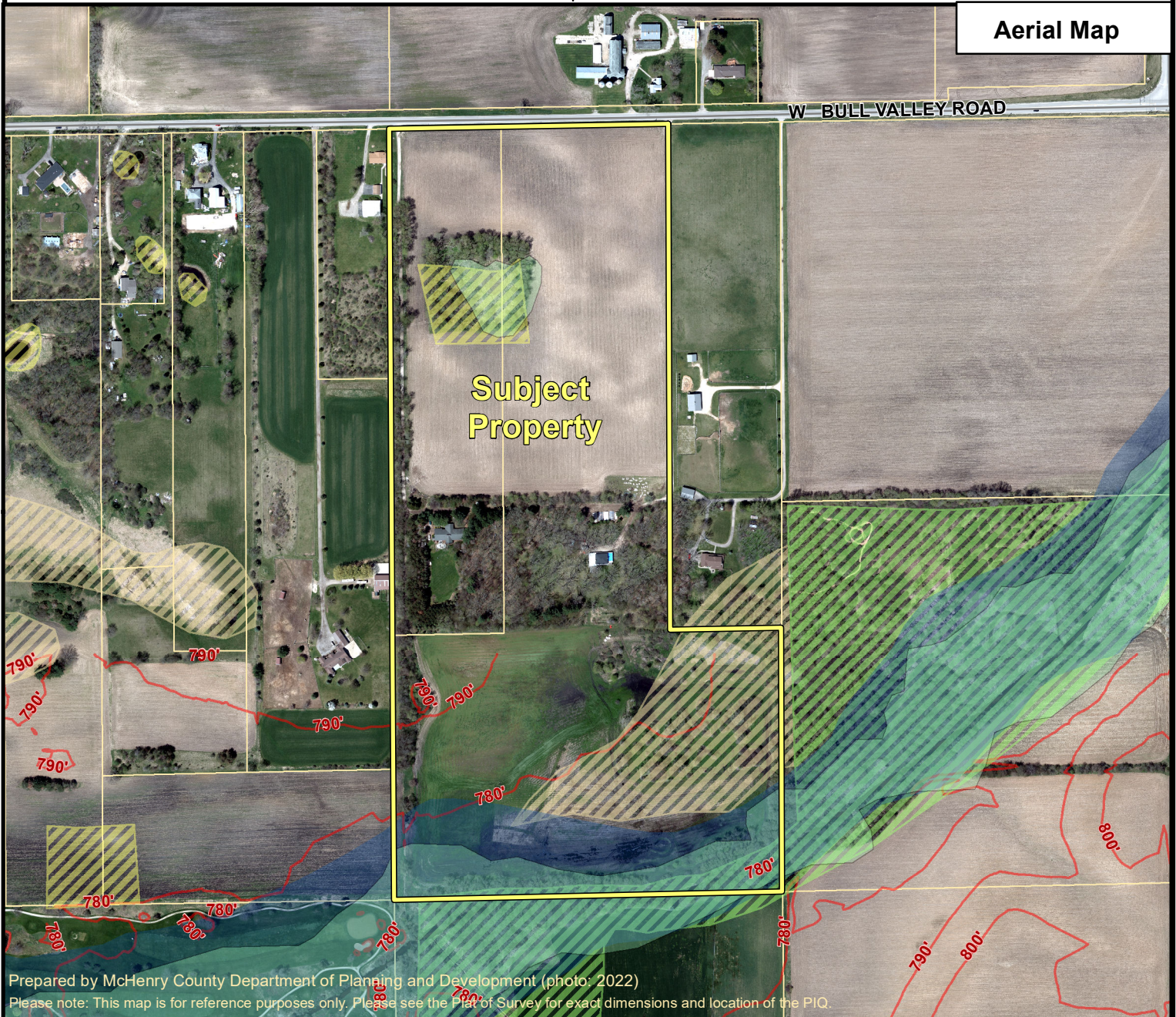
PIN: #14-05-400-004 and #14-05-400-006

Location: The property consists of approximately 64 acres and is located on the south side of W. Bull Valley Rd, approximately ½ mile east of the intersection of S. Draper Rd and W. Bull Valley Rd, in Nunda Twp, IL. Common addresses: 6415 and 6517 W. Bull Valley Rd, McHenry, IL

Hearing: August 27, 2025

Applicant: Pebble Solar, LLC

Request: Conditional Use Permit to allow for a Commercial Solar Energy Facility



Elevation
(feet above sea level)
— Contours

ADID Wetland Map 2005

- High Functional Value Wetland (hfw)
- High Quality Wetland (hqw)
- Wetland (w)
- Farmed Wetland (fw)

FEMA Flood Hazard Areas

- 0.2 % Annual Chance of Flood
- 1% Annual Chance of Flood
- Floodway

Historic Flood Zone



Feet
250 125 0 250 500
1 inch equals 500 feet



Staff Report for the McHenry County Zoning Board of Appeals

STAFF COMMENTS

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

BACKGROUND & REQUEST SUMMARY

The applicant is requesting a Conditional Use Permit to allow for a Commercial Solar Energy Facility. The subject property consists of approximately sixty-four (64) acres and is zoned A-1 and A-2 Agriculture District. According to the Plat of Survey, the subject property currently contains a 2-story frame residence, decks, gazebo, shed, and gravel driveway (eastern parcel.) The western parcel contains a single-family residence and gravel driveway.

According to the narrative, the applicant is proposing a 5-megawatt commercial solar energy facility with accessory battery energy storage system, enclosed by a seven (7)-foot tall security fence, per the regulations of the National Electric Code. The nearest adjacent residence on a nonparticipating parcel is over one-hundred fifty (150) feet from the proposed location of the solar array.

Note: On January 27, 2023, the State of Illinois passed Public Act 102-1123 (further modified under trailer bill P.A. 103-0580 on December 8, 2023), which modifies regulations for proposed commercial solar energy facilities. The County of McHenry has amended the Unified Development Ordinance, as of April 18, 2023, in order to comply with the State's regulations.

MCHENRY COUNTY UNIFIED DEVELOPMENT ORDINANCE

- The applicant must meet the Principal Use Standards for a Solar Farm, listed in County Code Section 16.56.030.PP of the UDO (*with the exception of any changes provided by Public Act 102-1123, as outlined above*).

STAFF ANALYSIS

Current Land Use & Zoning

The property is adjacent to Agricultural uses to the north and south, and Agricultural and Single-Family Residential to the east and west. The surrounding zoning consists of A-1 and A-2 Agriculture to the east, A1 and A2V Agriculture to the west, with the City of McHenry to the north, and the Village of Bull Valley to the south.

2030 Comprehensive Plan Future Land Use Map

The proposed conditional use permit is not consistent with the County's future land use designation of Estate.

2030 Comprehensive Plan & 2030 and Beyond Analysis

The 2030 Comprehensive Plan and 2030 and Beyond Update support the construction of commercial solar energy facilities within existing agricultural areas. (*See analysis below*)

McHenry County 2030 and Beyond, Adopted October 18, 2016

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

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

- The McHenry County Water Resources Division has determined that the panels will not be calculated as an impervious surface for the development permit. This is because the panels are proposed to be elevated above the ground several feet and supported by driven piles. The petitioner will be required to obtain a Stormwater Management Permit which will include calculations for all impervious areas, including but not limited to the piles, access drives, and equipment pads.

Big Idea #2 Let's build on our strengths

"We can make it happen by recognizing the economic and social importance of our agricultural industry." (p. 15)

- The McHenry County Soil and Water Conservation District's Natural Resources Inventory report (#25-052-4713) indicates that the LE score is 82.85 out of a possible 100 regarding soils for crop production. This is due, in part, to approximately 62.8% of the site containing prime farmland soils. The concerns that the development of solar facilities in the county will result in the loss of farmland, particularly prime farmland can be remediated because, unlike other forms of development, the land is preserved for future farming. Also, the proposed native vegetation may slow the velocity of runoff, capturing sediments or other pollutants and allowing water to infiltrate into the soil, thereby reducing potential for erosion and sedimentation and improving soil conditions.

Big Idea #3 Let's grow smarter

"The county should also be open to commercial enterprises in the unincorporated areas that are major generators of jobs or tax revenues for which no suitable municipal sites exist elsewhere in the county, or that are dependent upon a direct proximity to agriculture or open space and designed in harmony with these areas." (p. 17 & 21)

- Due to the size and scale of the project, undeveloped acreage is important to the siting and development of a commercial solar energy facility. The applicant should be prepared to address how the proposed use relates to the statement above regarding generation of jobs, tax revenues, and siting of the facility.

Big Idea #4 Let's expand our economy

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

- The proposed commercial solar energy facility will provide a renewable energy source to the electrical grid as an alternative to energy created from sources with a larger carbon footprint.

McHenry County 2030 Comprehensive Plan, Adopted April 20, 2010

Community Character & Housing

No applicable text.

Agricultural Resources

"Encourage owners of parcels with the greatest potential for productive agricultural use, such as parcels with an LE score of 80 or above that are in agricultural use and contiguous with other such parcels, to preserve their parcels for agricultural uses." (p. 38, #7)

- Commercial solar energy facilities typically have a life of approximately thirty (30) to forty (40) years and after that time the property may return to agriculture.

"Continue joint participation with the USDA Natural Resources Conservation Service and McHenry County Soil and Water Conservation District in educational programs regarding best soil conservation practices and improving rural water quality." (p. 38, #20)

- The McHenry-Lake County Soil and Water Conservation District recommends that areas between panels be planted to a native prairie mix to help increase water infiltration and reduce runoff from the site. It is recommended that a planting and maintenance plan be developed with the landowner to ensure that noxious weeds are controlled, and native plantings are properly installed and managed. The petitioner is encouraged to add pollinator species to this planting plan. The Soil and Water Conservation District also recommends, upon decommissioning, that if any underground lines are to remain, they should have at least five (5) feet of cover to adequately allow farming operations to commence after the facility's removal.

Greenways, Open Space & Natural Resources

"Protect environmentally sensitive areas from negative impacts of adjacent land uses." (p.57, #9)

- The IDNR found record of potential protected resources in the vicinity of the project location (Boloria Meadows INAI Site, Boloria Fen and Sedge Meadow Nature Preserve, American Brook Lamprey, Blanding's Turtle, Mottled Sculpin, and Rusty Patched Bumble Bee). They indicated that, due to the lack of information available at this stage in the proposed action, the IDNR was unable to initiate formal consultation. They offered comments to be considered during the planning stages of the project. They administratively closed their review but noted that a new consultation should be initiated with the IDNR at such time that required project details are available.

"Encourage the design of developments to achieve the broader sustainability of human and natural communities, including the social and economic dimensions of sustainability." (p. 57, #15)

- The proposed commercial solar energy facility will contribute to a broader sustainability objective in that it will produce clean energy as a replacement for energy produced by unsustainable means.

Water Resources

"Preserve and enhance the chemical, physical, biological, hydrologic integrity of streams, lakes and wetlands." (p.63)

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

- The applicant will be required to obtain a Stormwater Management Permit prior to construction.

Economic Development

"Decrease the degree to which the residential sector in the County must pay for services." (p.87)

- The state legislature has approved standards that would regulate how commercial solar energy facilities are assessed for tax purposes. The standards would result in an increase from the current assessed value of agricultural land.

Infrastructure

"It is estimated that every 120 MW of solar power would eliminate 1.7 million tons of carbon dioxide emissions which is the equivalent of removing 310,000 vehicles from the nation's roadways annually. A 1,000 MW coal plant produces approximately 6 million tons of carbon dioxide per year." (p.116)

"Encourage all governmental units in the County to adopt and support ordinances that will enhance all segments of the areas electric grid." (p. 120, #5)

The proposed commercial solar energy facility is consistent with the *Comprehensive Plan* support of more sustainable energy sources.

STAFF ASSESSMENT

The 2030 Comprehensive Plan and the 2030 and Beyond Update both support the development of commercial solar energy facilities. Once the facility is constructed, there is very little to no traffic generated by the use. There is very minimal risk of noise, lighting, or other nuisances generated by this use. The proposed use is compatible with adjacent uses. As noted within Public Act 102-1123, a request for a Conditional Use Permit for a commercial solar energy facility shall be approved if the request is in compliance with the standards and conditions imposed within the Act, the zoning ordinance adopted consistent with this Code, and the conditions imposed under State and Federal statutes and regulations. A County may not adopt zoning regulations that disallow commercial solar energy facilities from being developed or operated in any district zoned to allow agricultural or industrial uses. All construction will be required to meet applicable codes and ordinances for: fire protection, commercial building and electrical construction, and stormwater management.

Staff offers the following conditions for consideration:

1. The Conditional Use shall have no time limit, unless the use is abandoned as specified in 16.56.030.PP.4 of the McHenry County Unified Development Ordinance.
2. Site development shall be in substantial conformance with the site plan prepared by Kimley-Horn, dated June 18, 2025, and received by the Department of Planning and Development on July 17, 2025. (attached).
3. The *Decommissioning Plan* shall be applicable in part as well as in whole. If any portion of the commercial solar energy facility ceases to perform its intended function for more than twelve (12) consecutive months, that portion of the facility shall be decommissioned in compliance with all the terms of the *Decommissioning Plan*.
4. A McHenry County Stormwater Management Permit shall be secured prior to construction. Any damaged drainage tiles shall be repaired at the expense of the Petitioner and in a manner satisfactory to the Water Resources Division Manager.
5. A detailed Landscape Plan illustrating compliance with required landscape screening standards and Illinois Department of Natural Resources Pollinator Scorecard Standards and land management practices shall be approved by the Zoning Enforcement Officer prior to issuance of construction/building permit.
6. Recommendations made by the Illinois Department of Natural Resources in their June 26, 2025 letter to the applicants, with regard to protected resources in the vicinity of the project location, shall be followed.
7. Fencing shall be provided in compliance with the National Electrical Code, as applicable. The use of barbed wire is prohibited. Setting fence posts in concrete is prohibited except for gate posts and where otherwise required for stability.
8. All requirements of McHenry County Unified Development Ordinance §16.56.030.PP (as amended, subject to State of Illinois Public Act 102-1123 and Public Act 103-0580) shall be met or exceeded unless specifically amended by this Conditional Use Permit.
9. All other federal, state, and local laws shall be met.

16.56.030 Principal Use Standards

PP. **COMMERCIAL SOLAR ENERGY FACILITY.** Conditional use permits for a COMMERCIAL SOLAR ENERGY FACILITY shall have no time limit, unless the use is abandoned as specified in subsection PP.4. below (COMMERCIAL SOLAR ENERGY FACILITY: Abandonment), or the permit is revoked in accordance with § 16.20.040I. (Revocation of Conditional Use Permits).

1. Application.

- a. A threatened and endangered species consultation (EcoCAT) from the Illinois Department of Natural Resources is required at the time of conditional use permit application for any site that is five (5) acres or greater in size and currently in agricultural use or undeveloped.
- b. A site plan shall be provided showing all improvements, including structures, fencing, power lines (above and below ground), lighting, and landscaping, at a detail sufficient to understand the location, height, appearance, and area.
- c. All other application submittal requirements outlined in the *Planning and Development Department Zoning Application Packet* as published on the McHenry County Website.

2. Site design.

- a. Solar panels, structures, and electrical equipment, excluding fences and power lines for interconnection, shall be erected no less than fifty (50) feet from any lot line and no less than one hundred fifty (150) feet from any residence, other than a residence on the same ownership parcel.
- b. No structures, excluding power lines for interconnection, may exceed twenty (20) feet in height. Power lines shall be placed underground to the maximum extent possible.
- c. Lighting must comply with § 16.60.020 (Exterior Lighting).
- d. Solar panels shall have a surface that minimizes glare and shall comply with § 16.60.040D. (Lighting and Glare).
- e. The facility shall be situated as to minimize impacts to woodlands, savannas, wetlands, drainage tiles, and encroachment into flood plains. All site development shall comply with the Stormwater Management Ordinance. Any damaged drainage tiles shall be repaired.
- f. In order prevent erosion, manage run-off, and provide ecological benefit, the facility shall be planted with "low-profile" native prairie species, using a mix appropriate for the region and soil conditions per Illinois Department of Natural Resources (IDNR) standards, as amended from time to time.
- g. Fencing shall be provided in compliance with the National Electrical Code, as applicable. The use of barbed wire must comply with § 16.56.050H.1.c. of this Ordinance.
- h. Any part of the facility that is within five hundred (500) feet of a NONPARTICIPATING RESIDENCE, or road right-of-way, shall be landscaped with an arrangement of native shrubs, subject to approval by the County Board, unless the facility is screened from view by existing vegetation.
- i. Prior to building permit issuance, the operator shall prepare a landscape monitoring and maintenance plan to ensure the establishment and continued maintenance of the native prairie species, all installed landscape screening, and all existing vegetation that provides required landscape screening.
- j. Prior to scheduled public hearing, the operator shall enter into an Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture (IDOA), as required by that department.
- k. Prior to building permit issuance, the operator shall provide an executed road use agreement between the Applicant and the appropriate governing road and highway jurisdictions or the Illinois Department of Transportation (IDOT), showing approved entrances.

3. Safety.

- a. Prior to construction, the operator shall prepare an emergency management plan acceptable to the County and the local fire district and shall be responsible for training of emergency personnel, as needed.
- b. A sign shall be posted providing the name of the operator and a phone number to be used in case of an on-site emergency.
- c. Access shall be granted, provided appropriate advance notice, for periodic inspection of the site by the County or the local fire district.
- d. Damaged solar panels shall be removed, repaired, or replaced within sixty (60) days of the damage. The ground shall remain free of debris from damaged solar panels at all times.

4. Abandonment.

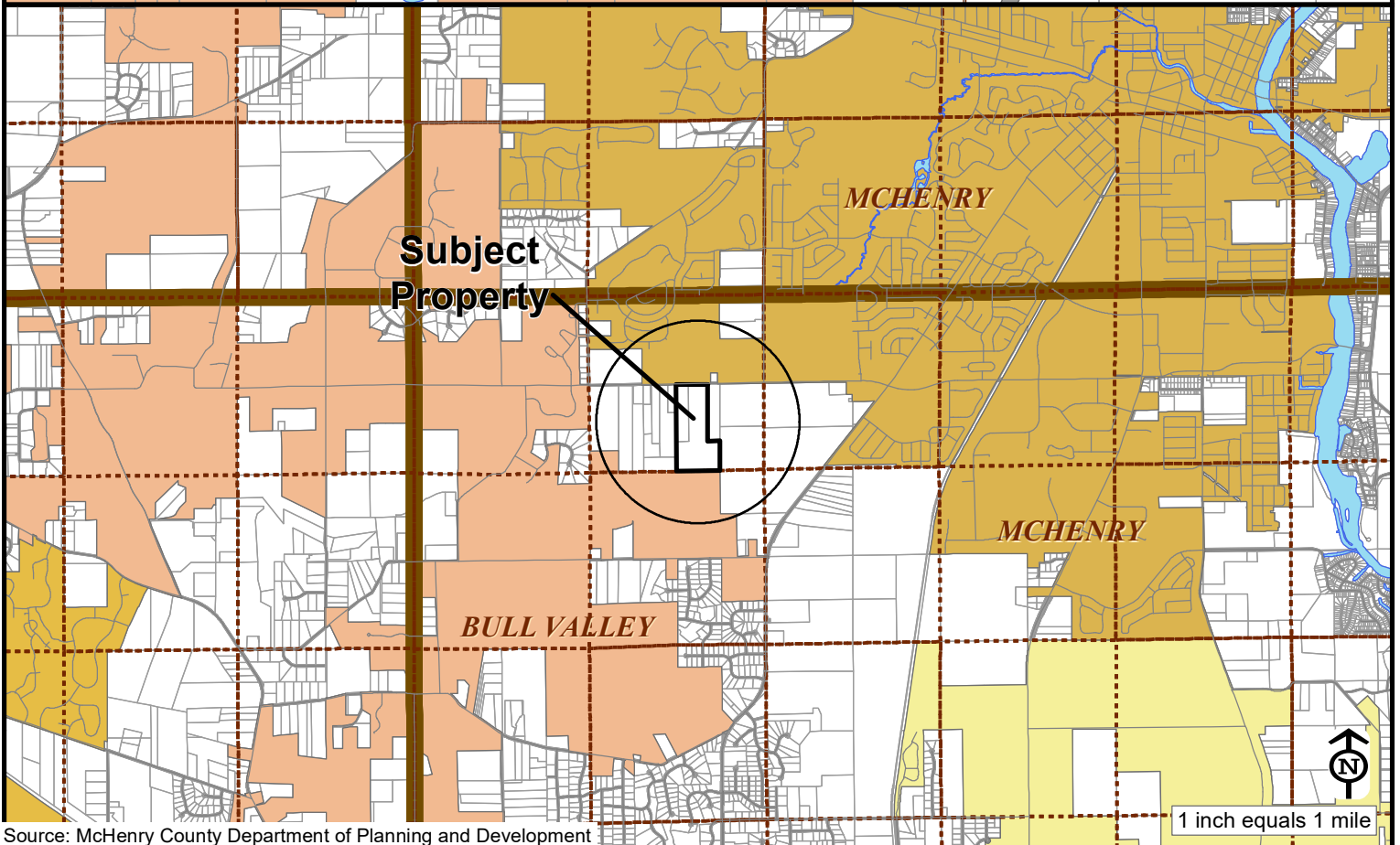
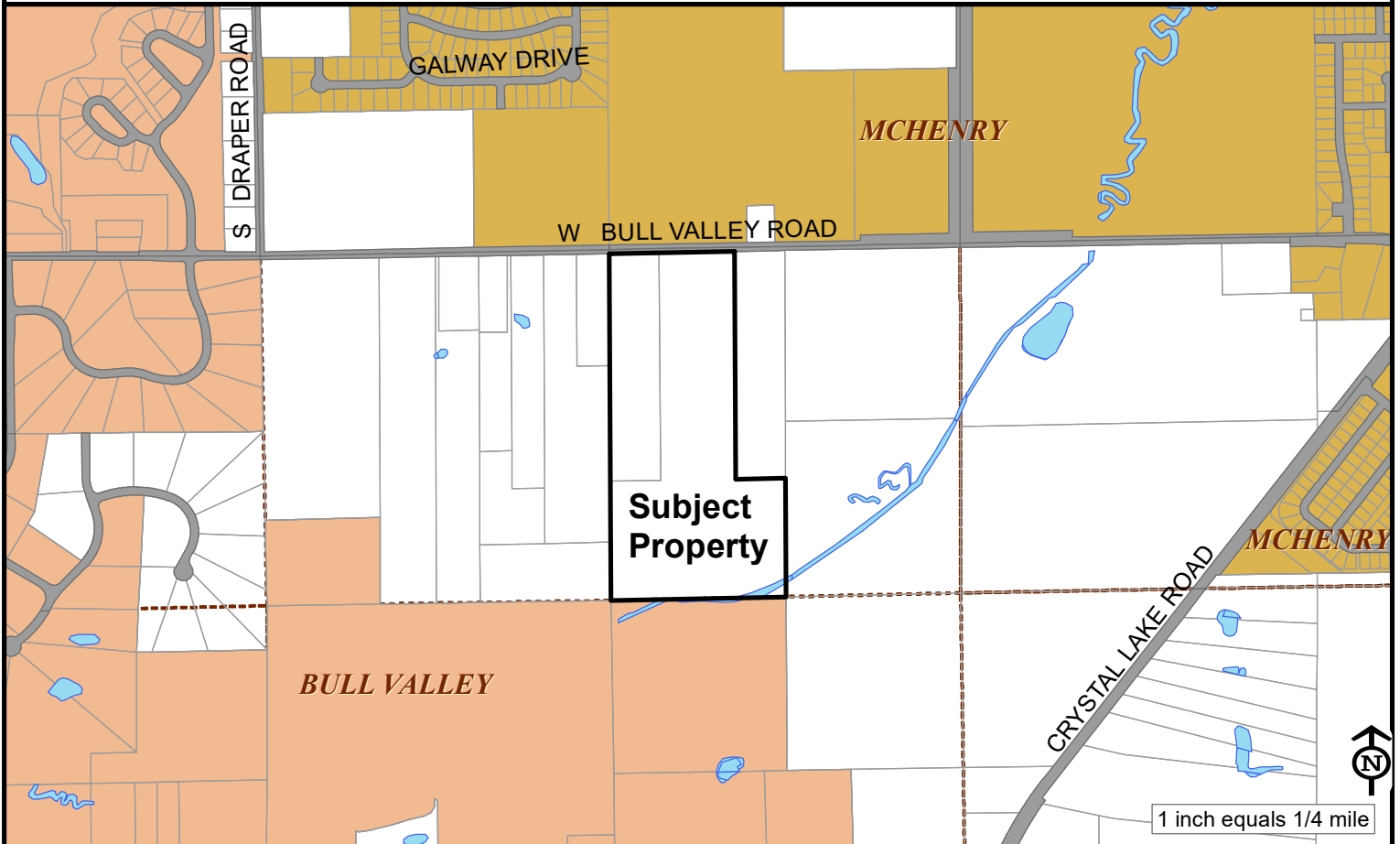
- a. The COMMERCIAL SOLAR ENERGY FACILITY shall be considered abandoned if the operator fails to pay rent as specified in the Agricultural Impact Mitigation Agreement, or it ceases to generate electricity for a period of twelve (12) consecutive months. Reports of electrical power production shall be provided to the County upon request. An abandoned COMMERCIAL SOLAR ENERGY FACILITY must be decommissioned and removed within twelve (12) months from the time it is deemed abandoned. The operator may appeal in writing to the Zoning Enforcement Officer for an extension of time in order to remove the facility or to bring the solar farm back into operation.

5. Decommissioning. Decommissioning and removal of the COMMERCIAL SOLAR ENERGY FACILITY shall be the responsibility of the operator upon abandonment or revocation of the conditional use permit. All operators shall comply with the following:

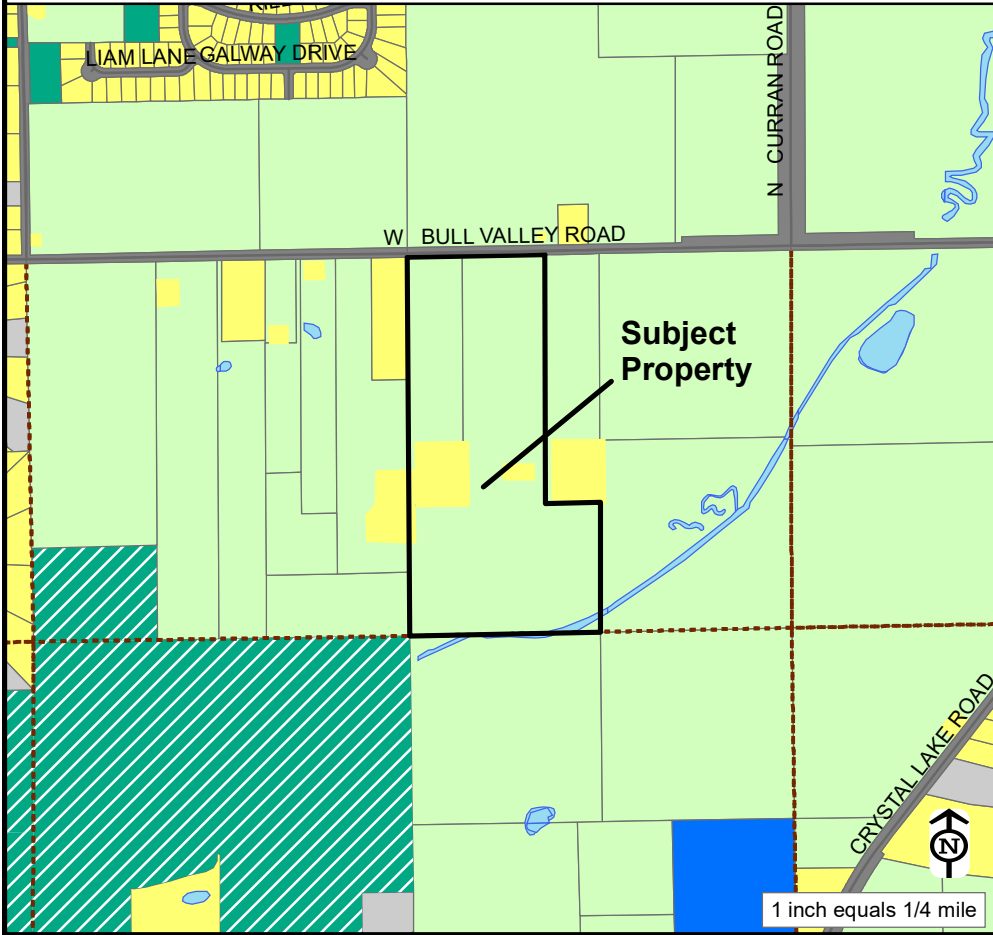
a. Prior to building permit issuance, the operator shall prepare a decommissioning plan which shows the final site conditions after the COMMERCIAL SOLAR ENERGY FACILITY has been removed from the property. Decommissioning plans shall require removal of all solar panels, electrical equipment, poles, piles, foundations, and conduits (above and below ground). Access roads, fencing, groundcover, and landscaping may remain only by agreement of property owner.

b. Prior to building permit issuance, the operator shall submit an engineer's estimate of cost for decommissioning the facility and restoring the site in accordance with the approved decommissioning plan. Upon review and approval by the Zoning Enforcement Officer of the estimate, the operator shall obtain a bond, letter of credit, or other form of surety acceptable to the County to be held by the Department of Planning and Development in the amount of one hundred percent (100%) of the estimate. Provision of this financial assurance shall be phased in over the first eleven (11) years of the project's operation or as otherwise provided in accordance with the executed Agricultural Impact Mitigation Agreement.

c. During the operation of the facility, a new engineer's estimate of cost for decommissioning shall be submitted every ten (10) years to the Department of Planning and Development. Upon approval of the estimated costs by the Zoning Enforcement Officer, a revised surety shall be provided to the Department of Planning and Development in the amount of one hundred percent (100%) of the new estimate.



Current Land Use Map



Current Land Use

Agriculture/Single-Family Residential

Adjacent Land Use(s)

North: *Agriculture*

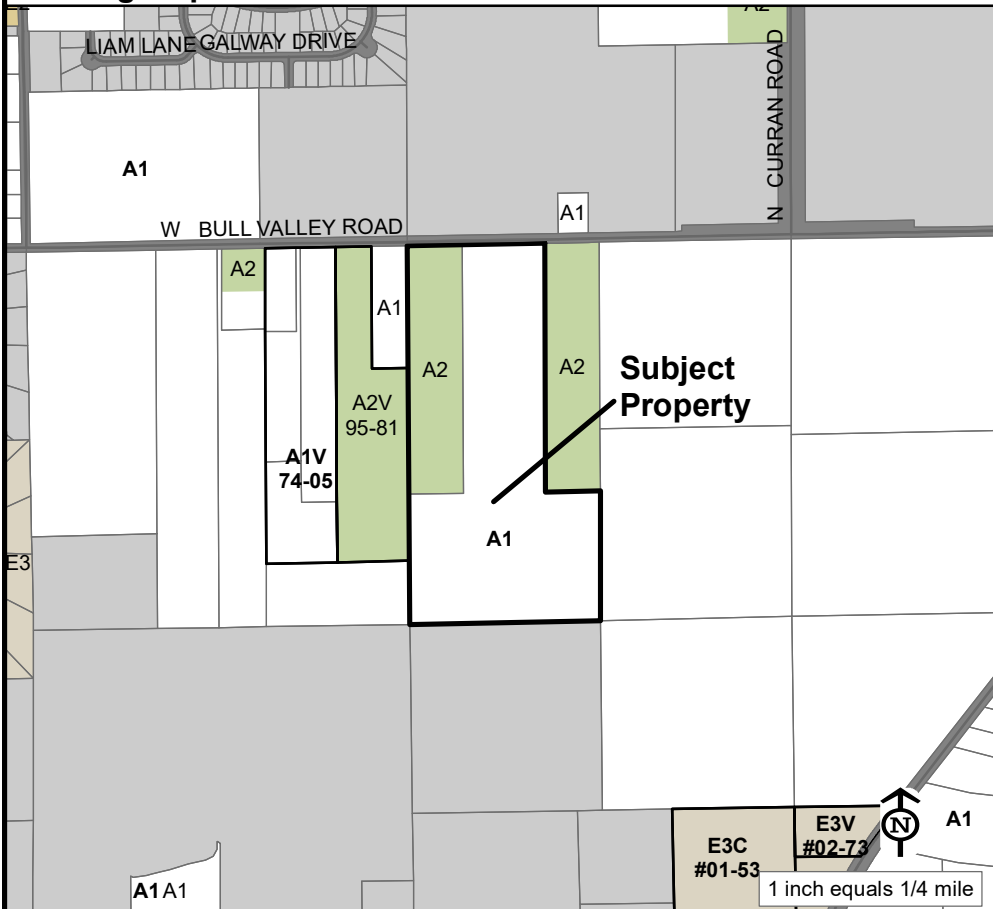
South: *Agriculture*

East: *Agriculture/Single-Family Residential*

West: *Agriculture/Single-Family Residential*

- Agriculture
- MCCD Agriculture
- Single-Family Residential
- Multi-Family Residential
- Open Space
- Golf Course
- Commercial
- Office
- Industrial
- Mixed Use
- Earth Extraction
- Vacant
- Government / Institutional
- Transportation, Communication, Utilities
- Under Review

Zoning Map



Current Zoning

A-1 Agriculture/A-1 Agriculture

Adjacent Zoning

North: City of McHenry

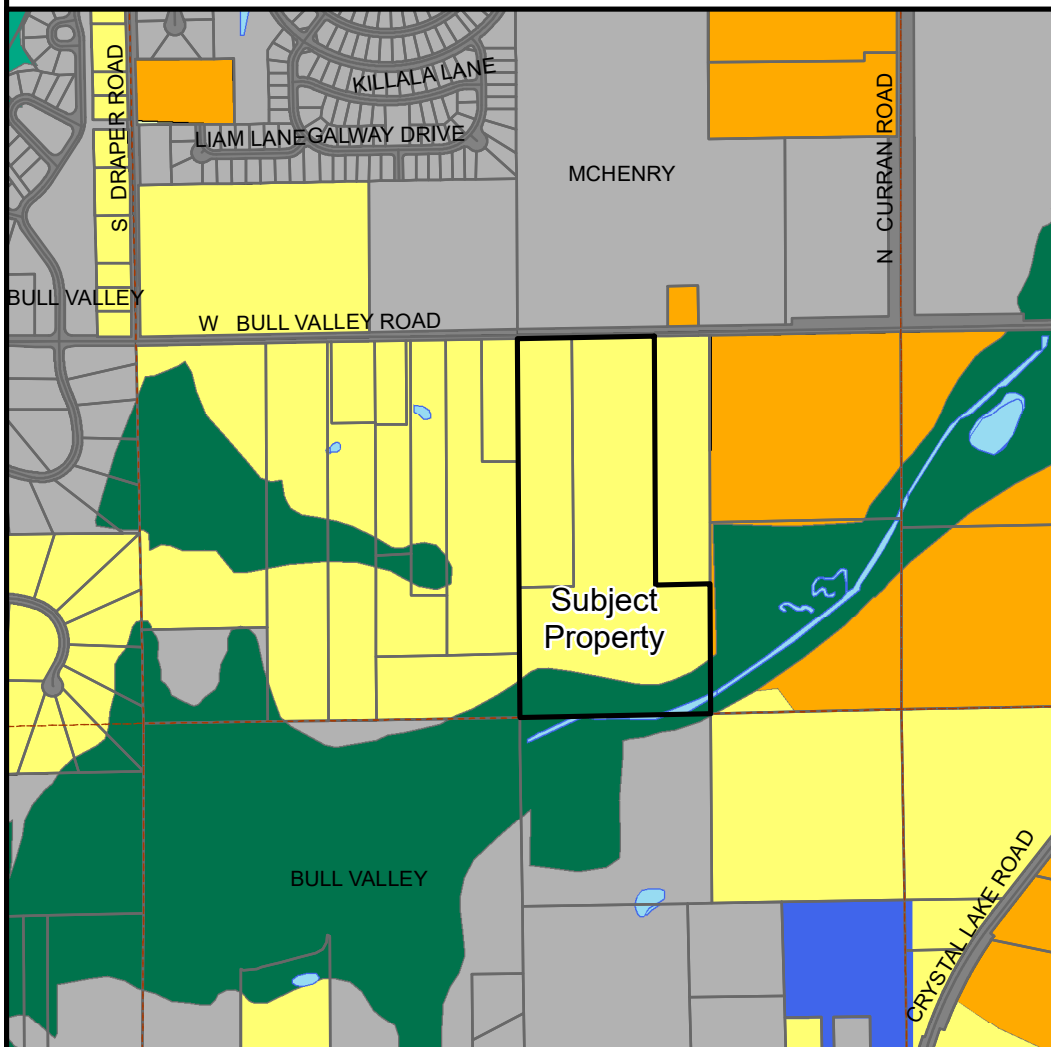
South: Village of Bull Valley

East: A-1 and A-2 Agriculture

West: A-1 and A-2V Agriculture

- A-1 Agriculture
- A-2 Agriculture
- E-5 Estate
- E-3 Estate
- E-2 Estate
- E-1 Estate
- R-1 Single-Family Residential
- R-2 Two-Family Residential
- R-3 Multiple-Family Residential
- B-1 Neighborhood Business
- B-2 Neighborhood Business
- B-3 General Business
- O Office / Research
- I-1 Light Industrial
- I-2 Heavy Industrial
- PD Planned Development
- C Conditional Use
- V Variation
- Incorporated

McHenry County 2030 Comprehensive Plan Future Land Use Map



Future Land Use Map Designation

Estate/ Environmentally Sensitive Area

- Agricultural
 - Open Space
 - Environmentally Sensitive Area
 - Estate
 - Isolated Estate
 - Residential
 - Isolated Residential
 - Retail
 - Mixed Use
 - Office, Research, Industrial
 - Gov't, Institutional, Utilities
 - TOD Existing Rail Station
 - TOD Future Rail Station
 - Active Earth Extraction Site
 - Municipality
- Scale: 1 inch = 1/4 mile



Municipal / Township Plan Designations

Nunda Township: Residential Conservation Development

Bull Valley: 5 to 9.99 acres

McHenry: Conservation Residential Development

Prairie Grove: No Designation

McHenry County 2030 Comprehensive Plan — Text Analysis

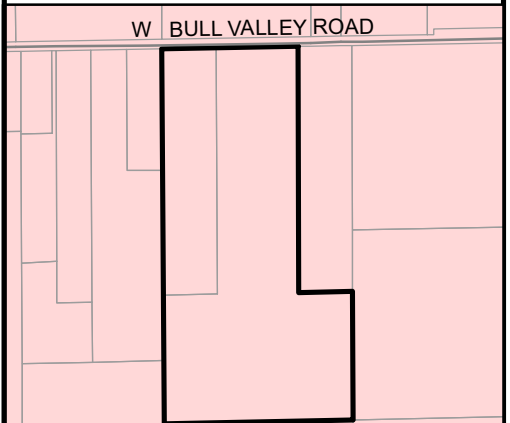
Land Use

Estate includes existing and proposed areas for single-family residential uses at gross densities of one to five acres per dwelling unit. Estate land use is generally designated in areas that are not projected to have access to public sewer and water. Where appropriate, conservation design is encouraged in order to cluster lots and maintain open space within estate developments. Increased estate densities are encouraged where appropriate; however, estate development in close proximity to a municipality should take into consideration that municipality's densities (p. 134).

Sensitive Aquifer Recharge Areas

The site is located in a zone with elevated contamination potential.

Sensitive Aquifer Recharge Areas (SARA)



- Sensitive Recharge Area

McHENRY~LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT

NATURAL RESOURCES INFORMATION REPORT

25-052-4713

July 3, 2025



This report has been prepared for:
Pebble Solar, LLC

Contact Person:
Dylan Haber

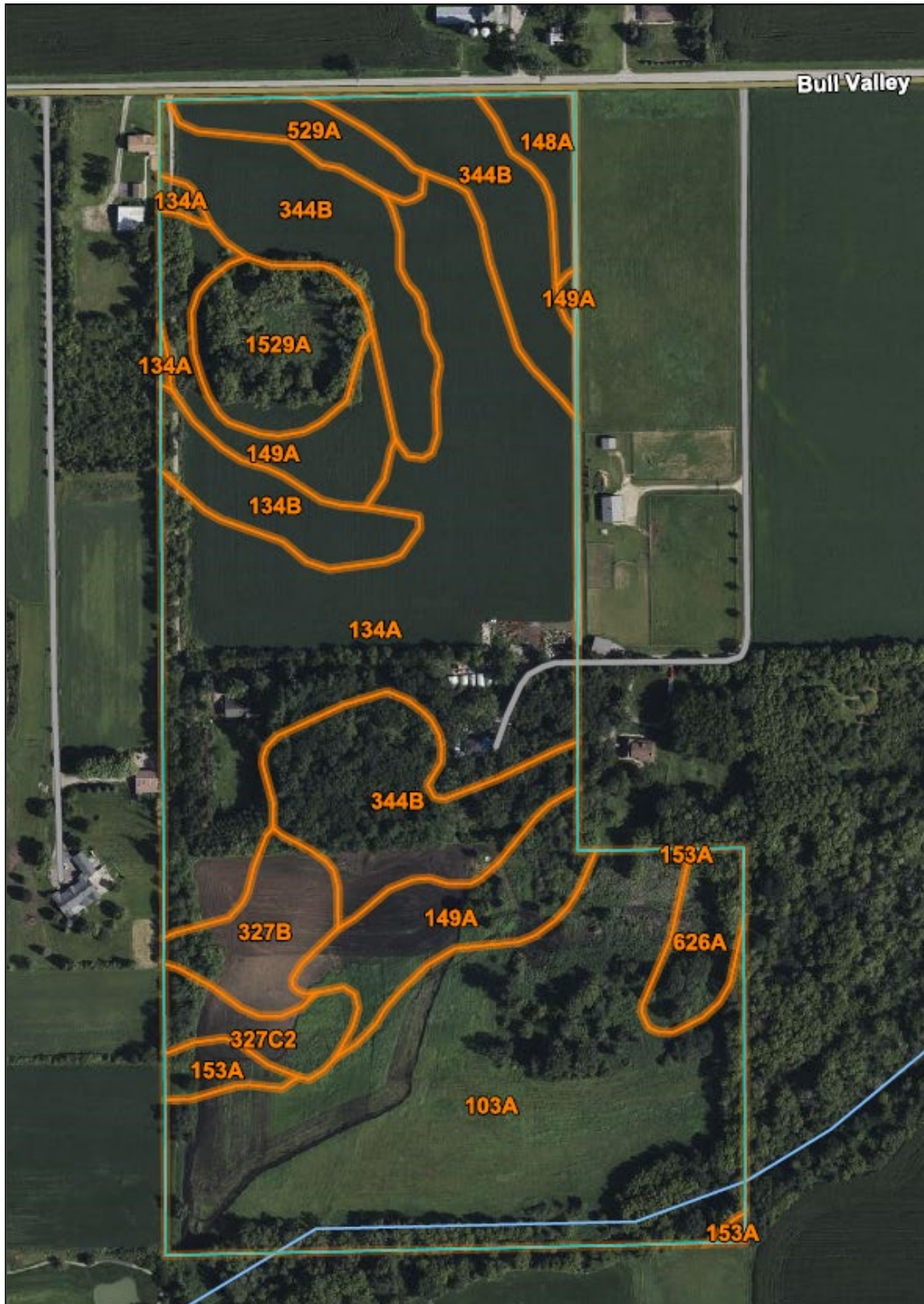
PREPARED BY:
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DISTRICT
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The McHenry-Lake County Soil & Water Conservation District
is an equal opportunity provider and employer.

EXECUTIVE SUMMARY OF NRI REPORT #25-052-4713

It is the opinion of the McHenry-Lake County Soil and Water Conservation District Board of Directors that this report as summarized on these pages are pertinent to the requested zoning change.



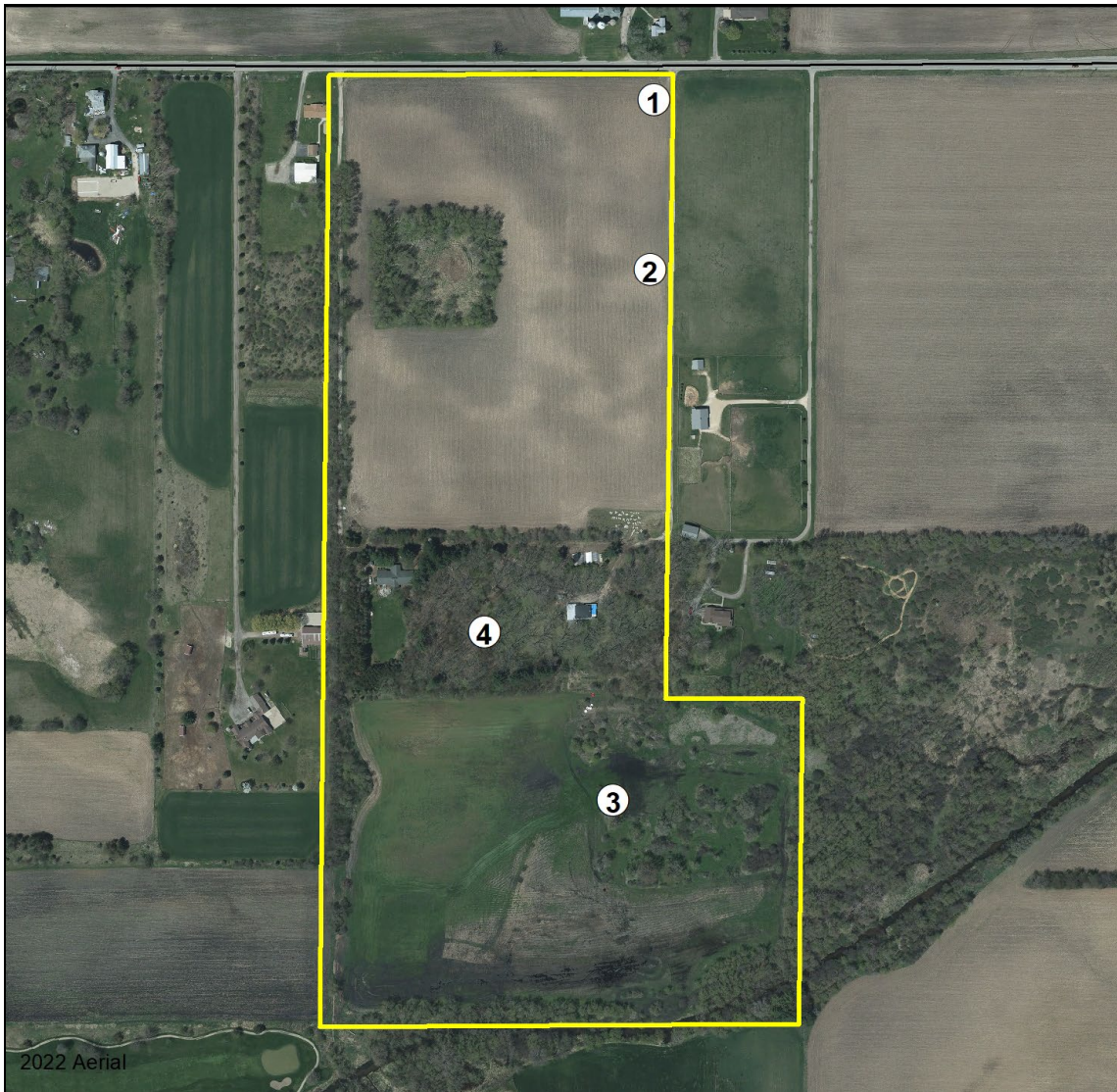
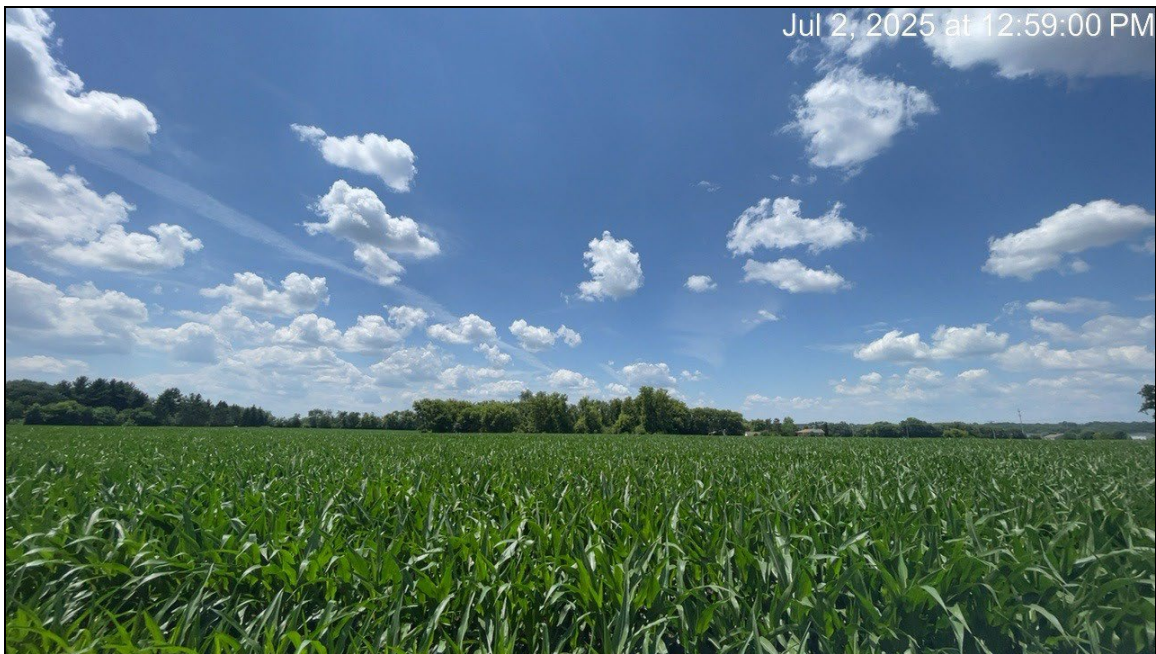


Photo Locations (1-4)



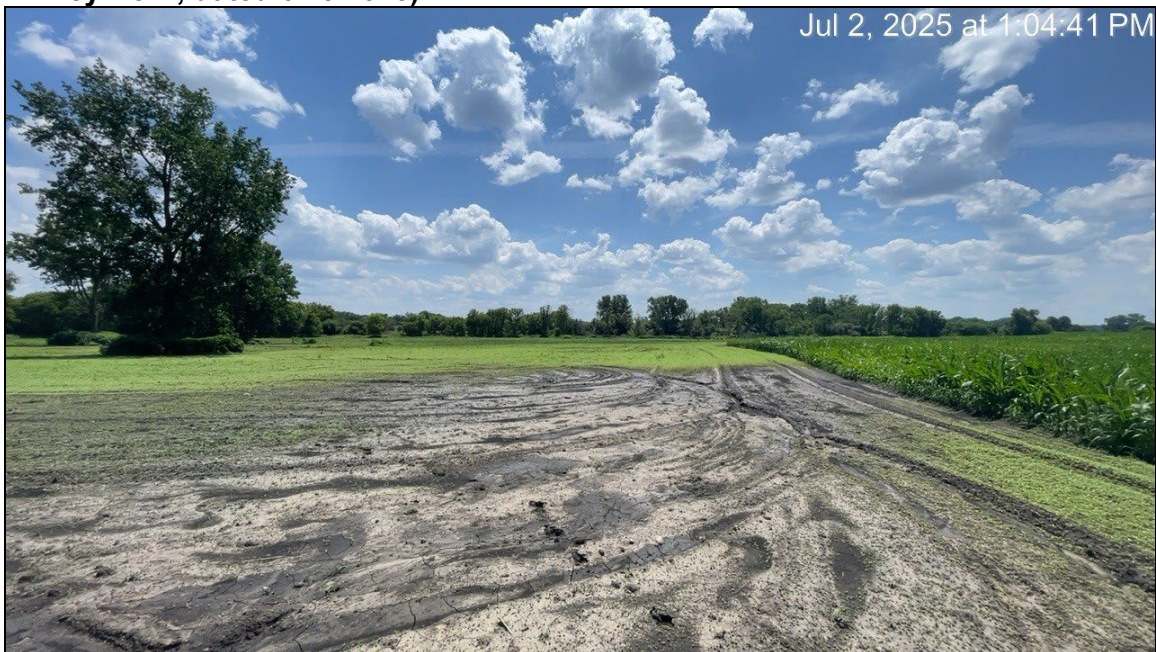
Picture 1 (Photo Location 1): Looking southwest.



Picture 2 (Photo Location 2): Looking west at wooded area with wetland within the center.



Picture 3 (Photo Location 3): Looking east. Single trees within field are proposed for removal according to the site plan provided (Zoning Site Plan, prepared by Kimley Horn, dated 6/18/2025).



Picture 4 (Photo Location 3): Looking south towards Boone Creek.

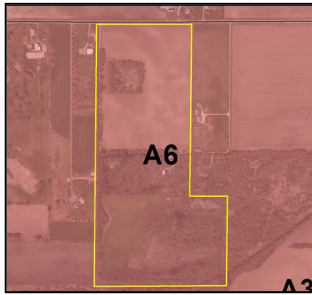


Picture 5 (Photo Location 3): Looking west.



Picture 6 (Photo Location 4): Looking south within proposed access roads through woodland.

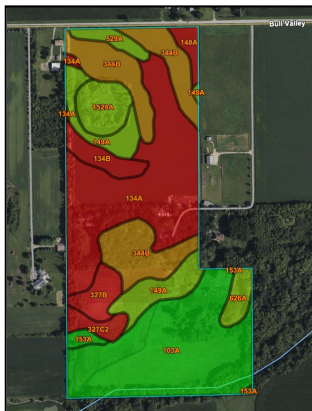
Groundwater Contamination Potential and Recharge Areas:



Aquifer Sensitivity Map (*This is the area beneath the soil profile down to bedrock)
The Geologic features map indicates that the parcel is comprised of A6 geologic limitations. A6 has high aquifer contamination potential.



Sensitive Aquifer Recharge Areas (Includes the soil profile and underlying geology).
The Sensitive Aquifer Recharge Map indicates the parcel is within an area designated as Sensitive Aquifer Recharge.



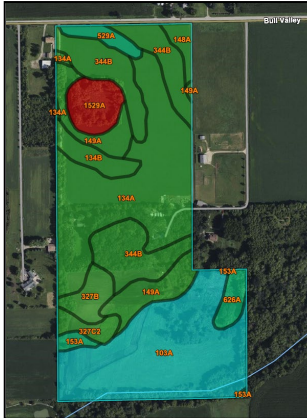
Soil Leachability Map (This is only the soil profile within the parcel from the surface down to approx. 5 feet).
The Soil Leachability Index indicates 23.4 acres or 36.6% of the parcel contains high leachable soils, for fertilizers, on the parcel (identified in red).

Soil Permeability (This is only the soil profile within the parcel from the surface down to approx. 5 feet. Soil permeability is a reflection of the speed in which water (with or without pollutants) can move through the soil profile.)
The USDA-NRCS Soil Survey Map of the area indicates 4.6 acres or 7.3% of the parcel contains highly permeable soils.

Soil Limitations (This evaluates the parcel from the surface down to approximately 5 feet.):

Erosion Ratings

The NRCS Soils Survey indicates 1.3 acres or 2.1% of the parcel contains highly erodible soils.



Prime Farmland Soils

The Natural Resources Conservation Service (NRCS) Soil Survey indicates 40.1 acres or 62.8% of the parcel is comprised of prime farmland soils and 3.4 acres or 5.3% of the parcel is comprised of prime farmland if drained soils (identified in shades of blue and green).



Ground-Based Solar Arrays

The Natural Resources Conservation Service (NRCS) Soil Survey indicates 60.5 acres or 94.7% of the parcel has very limited soils for ground-based solar arrays (identified in red).

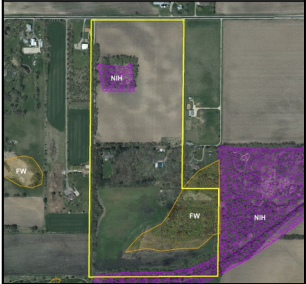




Flood of Record Map (Hydrologic Atlas)

The Flood of Record Map for this area indicates 6.66 acres of the parcel has previously flooded (identified in blue).

Wetland Information:



USDA-NRCS Wetland Inventory

The NRCS Wetlands Inventory identifies 8.08 acres of FW: Farmed Wetland (identified in orange) and 3.69 acres of NIH: Non-inventoried Hydric Soils 1.70 acres of NIH: Non-inventoried Hydric Soil (identified in purple) on the parcel.



ADID Wetland Inventory

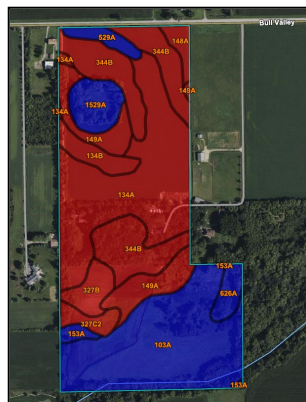
The ADID Wetland Study identifies 8.06 acres of farmed wetland U287, 1.92 acres of wetland U275, and 1.785 acres of High Quality Wetland U154 on the parcel. Additionally High Quality IBI Score Stream is located on the southern boundary of the parcel.

*The Zoning Site Plan, prepared by Kimley Horn, dated 6/18/2025, indicates wetlands U275 and U154 will be avoided.

However, panels and tree removal are planned within wetland U287. It is recommended that a wetland delineation be completed to accurately define the wetland boundaries and associated buffers. Additional permitting will be required for isolated and jurisdictional wetland impacts by McHenry County and/or U.S. Army Corps of Engineers.

Flooding Frequency

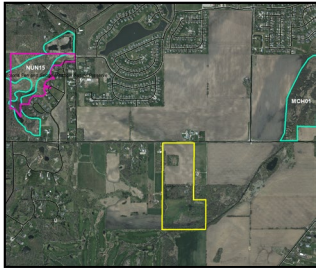
The NRCS Soil Survey indicates that flooding is not probable on the parcel. The chance of flooding is nearly 0% in any year. Flooding occurs less than once in 500 years.



Ponding Frequency

The NRCS Soil Survey indicates that frequent ponding occurs on 23.8 acres or 37.3% of the parcel. Frequent means that ponding occurs, on average, more than once in 2 years. The chance of ponding is more than 50 % in any year (identified in blue).

Cultural Resources: Office maps indicate there is a high probability for cultural/historical features within the southern boundary of the parcel in question.

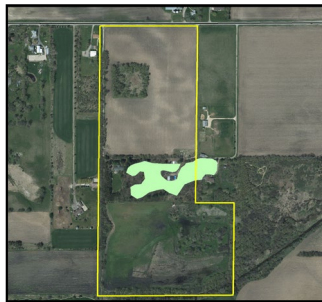


Preserved or Recognized Ecological Sites: Office maps indicate there are two McHenry County Natural Area Inventory sites near the parcel.

McAndrew Sedge Meadow (NUN15) is a privately protected sedge meadow threatened by water table alteration, brush encroachment and Reed Canary Grass.

Boone Creek Lowlands (MCH01) contains a low gradient/low order stream and sedge meadow threatened by an upstream impoundment, water table alteration, cattail expansion, Reed Canary Grass and development. It is an unprotected site.

Additionally, Beloria Fen & Sedge Meadow State Nature Preserve is northwest of the parcel (identified in purple).



Woodlands: The McHenry County Conservation District's Remnant Oak Woodland Study indicates 3.37 acres in the central portion of the property contains a remnant oak woodland.

*The Zoning Site Plan, prepared by Kimley Horn, dated 6/18/2025, indicates an access road through the remnant oak woodland with tree removal proposed. The site visit conducted on 7/2/2025 identified, an existing dirt access with multiple old growth oak trees and Shagbark Hickories lining the path (see Photo 6 above). We recommend avoiding removal of these mature trees and care be exercised to ensure the root zone is not impacted through compaction, including providing fencing around drip lines to keep equipment out.

Agricultural Areas: Office Maps indicate there are no State designated agricultural areas on the parcel in question.

Land Evaluation Site Assessment (LESA)

The Land Evaluation Score for the parcel is 82.85. A Site Assessment was not completed due to the Agricultural zoning on the parcel.

Agricultural Impact Mitigation Agreement: We have received notice from the Illinois Department of Agriculture that an Agricultural Impact Mitigation Agreement has been filed.

ADDITIONAL CONCERNS

The Board recommends that areas between panels and within the buffers be planted to a native prairie mix to help increase water infiltration and reduce runoff from the site. It is recommended that a planting and maintenance plan be developed with the landowner to ensure that noxious weeds are controlled, and native plantings are properly installed and managed. The petitioner

should refer to the planting requirements of the Illinois Department of Natural Resources and McHenry County Department of Planning & Development.



NATURAL RESOURCE INFORMATION REPORT (NRI)

NRI Report Number	25-052-4713		
Applicant's Name	Pebble Solar, LLC		
Size of Parcel	63 acres		
Zoning Change	Solar Facility		
Parcel Index Number(s)	14-05-400-004, 14-05-400-006		
Common Location	Undefined		
Contact Person	Dylan Haber		
<i>Copies of this report or notification of the proposed land-use change were provided to:</i>	<i>yes</i>	<i>no</i>	
The Applicant	x		
The Applicant's Legal Representation/Consultant		x	
The Village/City/County Planning and Zoning Department or Appropriate Agency	x		

Report Prepared By: *Spring M. Duffey*

Position: *Executive Director*



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

THIS LETTER IS FOR INFORMATIONAL PURPOSES ONLY. IT **DOES NOT** CONSTITUTE A
FULFILLMENT OF THE CONSULTATION REQUIREMENT.

June 26, 2025

Dylan Haber
30 W Hubbard St
Suite 400
Chicago, IL 60654

Re: **Pebble Solar, LLC**
Consultation Program
EcoCAT Review #2513921
McHenry County

Dear Mr. Haber:

The Department has received your submission for this project for the purposes of consultation pursuant to the Illinois Endangered Species Protection Act [520 ILCS 10/11], the Illinois Natural Areas Preservation Act [525 ILCS 30/17], and Title 17 Illinois Administrative Code Part 1075. Due to the lack of information available at this stage in the proposed action, the Department is unable to initiate formal consultation. However, the Department does offer the following comments to be considered during the planning stages of this project.

The proposed action consists of a solar farm in McHenry County.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Illinois Natural Areas Inventory
Boloria Meadows INAI

Illinois Nature Preserves Commission Lands
Boloria Fen and Sedge Meadow Nature Preserve

State Threatened or Endangered Species
American Brook Lamprey (*Lethenteron appendix*)
Blanding's Turtle (*Emydoidea blandingii*)
Mottled Sculpin (*Cottus bairdii*)
Rusty Patched Bumble Bee (*Bombus affinis*)

Due to the project scope and proximity to protected resources the Department offers the following comments for your consideration:

Boloria Meadows INAI and Boloria Fen and Sedge Meadow Nature Preserve

The Department has determined impacts are unlikely for these sites.

American Brook Lamprey and Mottled Sculpin

EcoCAT has indicated records for the state-listed Mottled Sculpin and American Brook Lamprey in the vicinity of the project area. Due to the known occurrence of the Mottled Sculpin and American Brook Lamprey in the project area, the Department could recommend:

- No instream work. If instream work is necessary, the Department could recommend:
 - A survey be conducted in the project area by a qualified biologist to determine if these species is present. The survey should assess habitat types and include areas at least 100 yards upstream and downstream. The principal investigator should obtain a Scientific Collectors Permit and T&E Permit from the Department to conduct such work. A survey proposal should be sent to this office for concurrence on methods, along with the results for final comment.
 - Subsequently, if the Mottled Sculpin or American Brook Lamprey are identified during the survey, The Department recommends the project proponent seek an Incidental Take Authorization (ITA) pursuant to Part 1080 and Section 5.5 of the *Illinois Endangered Species Protection Act* for the Mottled Sculpin. All questions pertaining to ITA should be directed to the ITA coordinator, Heather Osborn (Heather.Osborn@Illinois.gov). Visit the link below for information on the ITA process: Incidental Take Authorizations - Species Conservation (illinois.gov) [Incidental Take Authorizations - Species Conservation \(illinois.gov\)](https://www.illinois.gov/Conservation/Pages/Incidental-Take-Authorizations.aspx)
 - Alternatively, the applicant may assume the presence and potential adverse effects to the Mottled Sculpin and American Brook Lamprey and seek an Incidental Take Authorization (ITA) pursuant to Part 1080 and Section 5.5 of the *Illinois Endangered Species Protection Act* to avoid potential liability.

Blanding's Turtle

EcoCAT has indicated records for the state-listed Blanding's Turtle in vicinity of the project area. The Department could recommend:

- Work on the project occurs during the turtle's inactive season from approximately November 1st to March 1st. If work must occur during the active season:
- Educate personnel working on site about the Blanding's Turtle. Post photos of juvenile and adult Blanding's Turtles at a central location. State-listed species may not be handled without the appropriate permits pursuant to the *Illinois Endangered Species Protection Act*.
- Install exclusionary silt fence by the end of March and maintain it through October (if needed) to prevent turtles from entering the construction area. Conduct daily inspections during construction to ensure that exclusionary fencing is properly installed (dug into the ground) and to check if turtles are present.
- Cover trenches at the end of each workday. Before starting each workday, trenches and excavations should be routinely inspected to ensure no turtles (or other amphibians and reptiles) have become trapped within them.
- If Blanding's turtles are encountered, crews should stop work immediately, allow the turtle to move out of the way and contact IDNR at (217) 785-5500.

Rusty Patched Bumble Bee

EcoCAT indicates a record of the state-listed Rusty-patched Bumble Bee occurs in the vicinity of the project. Department could recommend:

- Work which disturbs the ground or may remove flowering plants should be done between October 1st and April 1st to avoid potential impacts.

Please note that due to the federal status of the Rusty Patched Bumble Bee, and its potential occurrence in the project area, coordination with the U.S. Fish and Wildlife Service may be necessary and is separate from Illinois State consultation requirements and regulations.

The Department also offers the following conservation measures be considered to help protect native wildlife and enhance natural areas in the project vicinity:

- The Department strongly recommends that the project proponent establish pollinator-friendly habitat as groundcover wherever feasible. Solar Site Pollinator Establishment Guidelines can be found here:
- <https://dnr.illinois.gov/conservation/pollinatorscorecard.html>
- The site should be de-compacted before planting.
- Long term management of the site should be planned for prior to development to ensure successful native pollinator habitat establishment and prevent the spread of invasive species throughout the lifetime of this project. An experienced ecological management consultant should be hired to assist with long-term management.
- Required fencing, excluding areas near or adjacent to public access areas, should have a 6-inch gap along the bottom to prevent the restriction of wildlife movement. Woven wire or a suitable habitat wildlife friendly fence should be used. Barbed wire should be avoided.
- If tree clearing is necessary, the Department recommends removing trees between November 1st and March 31st to avoid impacts to the state-listed bats and birds.
- Any required night lighting should follow International Dark-Sky Association's (IDA) Five Principles for Responsible Outdoor Lighting to minimize the effect of light pollution on wildlife: [Five Principles for Responsible Outdoor Lighting | DarkSky International](#)

The Department is administratively closing this review unless the applicant desires additional information related to this proposal. The comments offered in this document are for informational purposes only. **This response does not meet the requirements of consultation for part 1075.** If this proposed action is authorized, funded, or carried out by State and local governments of Illinois, a new consultation should be initiated with the Department at such time that required project details are available.

Please contact Isabella Newingham (Isabella.newingham@illinois.gov) with any questions about this review.

Sincerely,



Bradley Hayes
Manager, Impact Assessment Section
Division of Real Estate Services and Consultation
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