

Alexander Property

Parcel 10-03-100-015

Address: 47W829 Route 38 Maple Park

Zoning application: #4616

Kane–DuPage Soil and Water Conservation District

- Land Use Opinion 23-049
- Prepared 8-11-23
- Petitioner: KaneSolar02 LLC

The image shows the cover page of a 'LAND USE OPINION' report. At the top left is the logo for Kane-DuPage Soil & Water Conservation District, which consists of a vertical bar with blue, green, and brown segments. The text 'Kane-DuPage Soil & Water Conservation District' is to the right of the bar. Below the logo, the title 'LAND USE OPINION' is centered between two horizontal lines. Underneath the title, the report number '23-049' is displayed in blue. The date 'August 11th, 2023' is centered below the report number. Further down, the text 'Prepared for: Kane County' is centered. At the bottom right, the petitioner's information is listed: 'Petitioner: Kane Solar 02 LLC, 330 W Goethe, Chicago, IL 60051'. At the very bottom of the page, there is a small footer with the address '2315 Dean Street, Suite 105, Saint Charles, IL 60175' and the slogan 'Healthy Land, Healthy Water, Healthy Communities'.

Kane-DuPage
Soil & Water
Conservation
District

LAND USE OPINION

23-049

August 11th, 2023

Prepared for:
Kane County

Petitioner:
Kane Solar 02 LLC
330 W Goethe
Chicago, IL 60051

2315 Dean Street, Suite 105, Saint Charles, IL 60175 Healthy Land, Healthy Water, Healthy Communities

Soil Interpretations: Solar Array, Soil-based Anchoring Systems

- Page 20
- Red means Very Limited, and poor performance and high maintenance are to be expected.

74.7%, the majority of the property, falls in the VERY LIMITED category when specifically talking about installing solar arrays.

This property is not suited for a commercial solar installation.

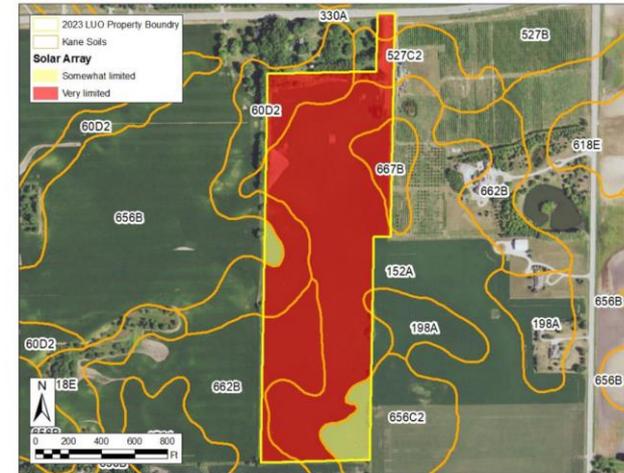


Figure 13: Soil Interpretations for Solar Arrays, Soil-based Anchoring Systems

Ground-based solar arrays are sets of photovoltaic panels that are not situated on a building or pole. These installations consist of a racking system that holds the panel in the desired orientation and the foundation structures that hold the racking system to the ground. Two basic methods are used to hold the systems to the ground, based on site conditions and cost. One method employs driven piles, screw augers, or concrete piers that penetrate into the soil to provide a stable foundation. The other basic anchoring system utilizes precast ballasted footings or ballasted trays on the soil surface to make the arrays too heavy to move. The site considerations that impact both basic systems are slope, slope aspect, wind speed, land surface shape, flooding, and ponding.

Soil-penetrating anchoring systems can be used where the soil conditions are not limited. Installation of these systems requires some power equipment for hauling components and either driving piles, turning helices, or boring holes to install the anchoring apparatus.

The high-water table is often a limiting factor in Kane County.

Areas not shaded represent NOT LIMITED, and good performance and very low maintenance can be expected. Yellow represents SOMEWHAT LIMITED, and fair performance and moderate maintenance can be expected. Red represents VERY LIMITED, and poor performance and high maintenance are to be expected.

See the preceding Soils Section for more information concerning soil limitations.

Soil Interpretations: Lawn and Landscaping

- Page 19
- Red means Very Limited, and poor performance and high maintenance are to be expected.

“Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained.”

A continuous vegetative screen of trees, per the IL and Kane County laws, would be almost impossible to establish and maintain along the majority of the eastern and southern edges of the property.

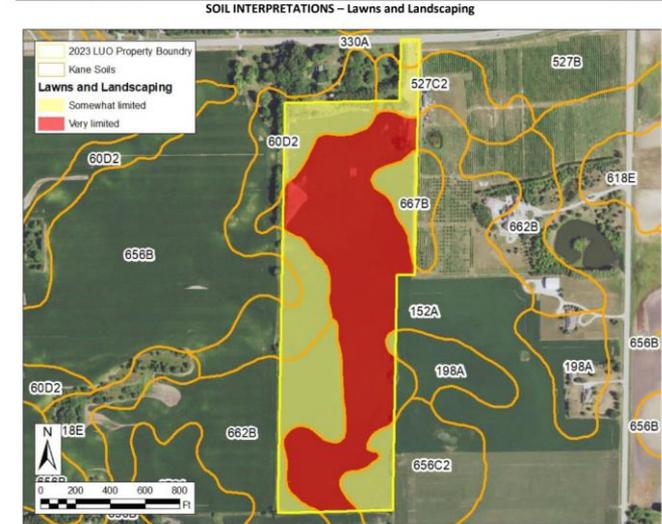


Figure 12: Soil Interpretations for Lawns and Landscaping

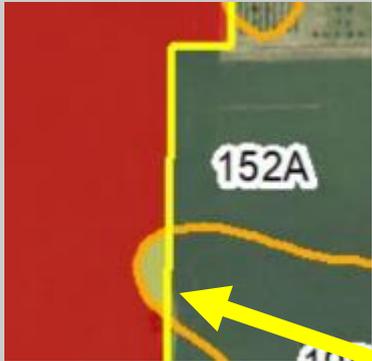
Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are pH (acidic or alkaline conditions); depth to a water table; ponding; depth to bedrock; the available water capacity in the upper 40 inches; and the content of calcium carbonate. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the

surface layer. The high-water table is often a limiting factor in Kane County.

Areas not shaded represent NOT LIMITED, and good performance and very low maintenance can be expected. Yellow represents SOMEWHAT LIMITED, and fair performance and moderate maintenance can be expected. Red represents VERY LIMITED, and poor performance and high maintenance are to be expected.

See the preceding Soils Section for more information concerning soil limitations.

Soil Interpretations: Lawn and Landscaping



My full western property line.



The only trees are in that yellow area. Grew with little/no maintenance.

Kane Co. #5007, page 24, Design and Installation

Vegetative Screening: A vegetative screen shall be provided for any part of the Commercial Solar Energy Facility that is visible to Non-participating Residence(s). The landscaping screen shall be located between the required fencing and the property line of the participating parcel upon which the facility sits. The vegetative screening shall include a continuous line of native evergreen foliage and/or native shrubs and/or native trees.

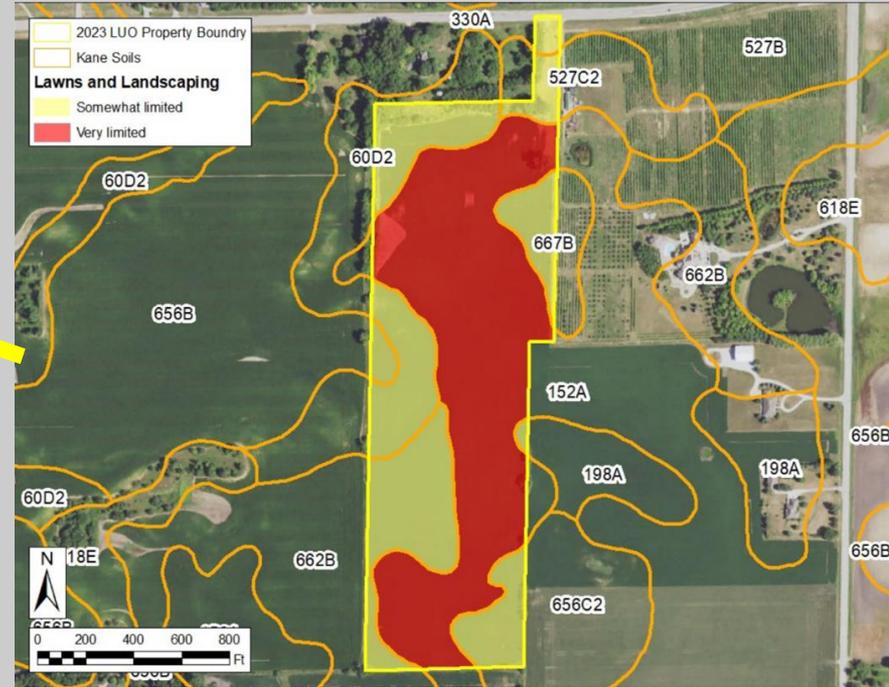


Figure 12: Soil Interpretations for Lawns and Landscaping

Red means Very Limited, and poor performance and high maintenance are to be expected.

Cortland Township - Dekalb County

- 2 megawatt facility
- Airport Road and Bethany Road
- Approved February 11, 2019



Prime Farmland - Land Evaluation and Site Assessment

- Page 23
- Pink means prime farmland - 22%
- Purple means prime farmland if drained - 57%

Based upon the LESA score of 84, and the Kane County Land Evaluation and Site Assessment, this tract warrants Moderate Protection effort from development.

Sites with a LESA score of 85 or greater are considered to warrant protection. This site is 1 point away and within the margin of error.

79% of this property is prime/prime if drained farmland.

PRIME FARMLAND – LAND EVALUATION & SITE ASSESSMENT

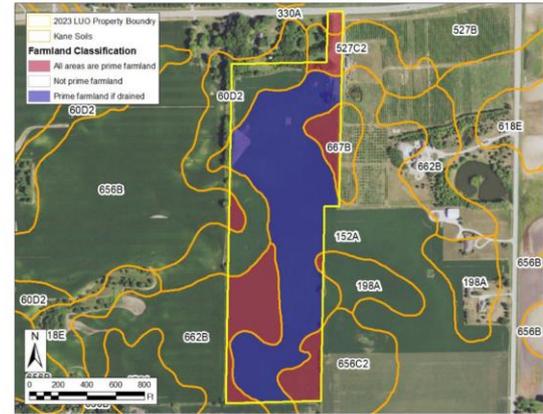


Figure 16: Prime Farmland map

Prime Farmland is a designation assigned by the U.S. Department of Agriculture defining land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these land uses. The Prime Farmland designation is assigned to each soil map unit.

In addition to Prime Farmland, there is Farmland of Statewide Importance (Important Farmland). Important Farmland is designated for soils that are slightly outside the definition of Prime Farmland. Prime and important Farmland are valuable for Kane County agriculture, ag industry, and county tax base. In order to protect the best farmland, a Land Evaluation and Site Assessment (LESA) system was

developed and adopted by Kane County in 2003. LESA is designed to determine the quality of land for agricultural uses and to assess a site for long term agricultural economic viability. The LESA is a 100-point maximum numerical value based on two parts – Land Evaluation (LE) and Site Assessment (SA). The LE is based upon the inherent ability of the soils of a parcel to produce commonly grown crops. The LE counts as 1/3 of the total score. The SA is a value based on the proximity of the parcel to agricultural areas. Parcels further from developed areas rank higher for protection. The SA counts for 2/3 of the LESA score.

The LE value for this site is 28.8 and the SA value is 55.19 for a total LESA score of 84. This score represents Moderate.

Land Use Opinion Summary

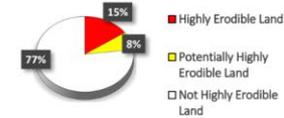
- Page 28
- Only 23% is highly or potentially erodible land
- 74.7% of the land is very limiting for a solar array
- 57.3% is very limiting for lawns and landscaping (and it is the majority of the eastern and southern edge of the property)

Crops are NOT lawn/landscaping

- 57.6% of the land is very limiting for shallow excavations to build the supports for the solar panels

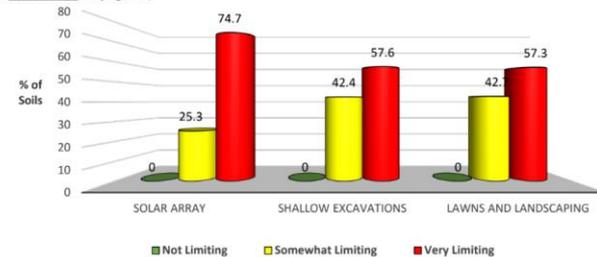
EXECUTIVE SUMMARY
APPLICATION 23-049
August 11th, 2023

Highly Erodible Land: There are Highly or Potentially Highly Erodible Land identified on this site. (See [page 14](#))

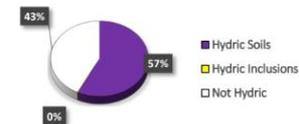


Regulations: Please note that additional permits are required for any development impacting wetlands, streams, or floodplain areas. (Please see [page 24](#) for regulation information.)

Soil Interpretations: Soils at this site may contain limitations for the proposed use. All information is from the Soil Survey of Kane County, Illinois. The limiting factors for this site are: Slope, Dusty, Ponding, Depth to saturation zone, Low exchange capacity, unstable excavation walls, Frost action, low strength, shrink swell, steel corrosion (See [page 16](#) and attached [Soils Tables](#) on [page 17](#))



Hydric Soils: There are hydric soils and/or soils with hydric inclusions identified on this site. (See [page 22](#))

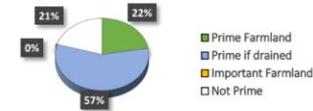


Land Use Opinion Summary

- Page 29
- 79% of the site is prime farmland or prime if drained farmland
- LESA score is 84, placing it in the moderate protection category for farmland
- Sites with a LESA score of 85 or greater are considered to warrant protection

EXECUTIVE SUMMARY
APPLICATION 23-049
August 11th, 2023

Prime Farmland: Prime and Important Farmland occur on this tract.



LESA: Sites with a LESA score of 85 or greater are considered to warrant protection. This site has an LE score of **28.8**, and a SA score of **55.19**, with a total of **84**, placing it in the moderate protection category for farmland. (See **page X** for more information.)

LAND USE OPINION

The most current natural resource data indicates the following concerns for this site: **Soil Limitations and Aquifer Sensitivity**. These concerns need to be managed, monitored, and/or considered in the planning and development of the site for the best possible results and for the least negative impact to the environment and natural resources.

Based upon the LESA score and the Kane County Land Evaluation and Site Assessment, this tract warrants **Moderate** Protection effort from development.

Based on the information in this report, it is the opinion of the Kane-DuPage Soil and Water Conservation District Board that this site is **somewhat suited** for the proposed land use change.