TOWN OF GRANT
SOLAR OVERLAY ADDENDUM TO THE FUTURE LAND USE MAP
(Overlay Map Rationale)

The Town of Grant recognizes the potential impacts to our community of large-scale Solar Energy projects (100 MW or greater) can be both positive and negative. Since the landscape of our Town is attractive for development, the Town recognizes the need to encourage the siting of solar projects to specific areas that best fit the needs and desires of both the citizens and the agricultural community while minimizing negative impacts on existing land use trends and public interests.

The Town of Grant Comprehensive Plan was first developed in 2005 and went through an extensive revision which was adopted by the Town of Grant and Portage County Boards, respectively, in 2018. During development of the Plan, a review was done of how the land is currently being used and then an attempt was made to assess current and future trends of that use. These trend factors were then applied to anticipate future land use. Nowhere in this process was it contemplated that large scale solar operations would be displacing our highly productive agricultural industry.

In April 2023, the idea of developing a Solar Overlay to our Future Land Use Map was introduced during a Plan Commission meeting. This overlay is not intended to prevent solar displacement of the productive agricultural land, but rather to direct future projects to the areas that best fit the overall future land use visions as well as to offer a potential layer of protection to residents affected by such projects adjacent to their property. The overlay is also intended to protect wildlife. The Town understands they do not have direct regulatory/review authority over large scale solar systems, yet it intends to provide recommendations, concerns, and comments to the Public Service Commission (PSC). Each proposed solar project, pursuant to Wis Stat 196.491(3)(d)6, will not unreasonably interfere with the orderly land use and development plans for the area involved. ~~will be evaluated to determine if it is consistent with and does not interfere with our orderly land use development plans.~~

A draft overlay map was developed and shared with the Town of Grant Plan Commission on May 17, 2023. On June 21, 2023, the Plan Commission Chair requested ~~obtaining~~ citizen input regarding the desire for an overlay map before a resolution was developed by the Plan Commission. A Special Meeting – Solar Overlay Addendum to Comprehensive Plan took place. A new draft map was available at that time. Twenty electors voted in favor of amending the Comprehensive Plan revision with no opposition. Based on citizen input, the map was discussed by the Town of Grant Plan Commission and is now being presented to the Town Board for their consideration and adoption. It is important to understand the process that the Commission used in developing the overlay. Areas cross-hatched on the map have been identified as not suitable for solar development from a land use perspective. Areas suitable are shown in white and pink. Areas of special concern are shown in blue. Outlined below are the criteria used in developing both areas:

1. The Plan Commission recognizes that the Portage Solar LLC solar energy project has completed the permitting process with the Wisconsin Public Service Commission and will be constructed and fully operational in the near future. The lands that have been leased and identified by this

DRAFT 12-2023

filing are included in the suitable solar areas and identified with the pink coloring. A second large-scale solar energy project is early in the permitting process.

2. The current Future Land Use Map identifies Enterprise Agriculture as L-1. This classification prevents the splitting of large parcels into sizes less than 35 acres to preserve high intensity agricultural production utilizing our irrigated Central Sands croplands. This land is also attractive to large scale solar footprints. Within this area, there are reasons to consider excluding portions of parcels that are identified as wetlands on the DNR wetland inventory. Therefore, the areas in the Town classified as L-1 were scrutinized by the Commission members and portions of the L-1 parcels that are wetlands were identified and included in the cross-hatched scheme as not ~~compatible~~ suitable with solar use.

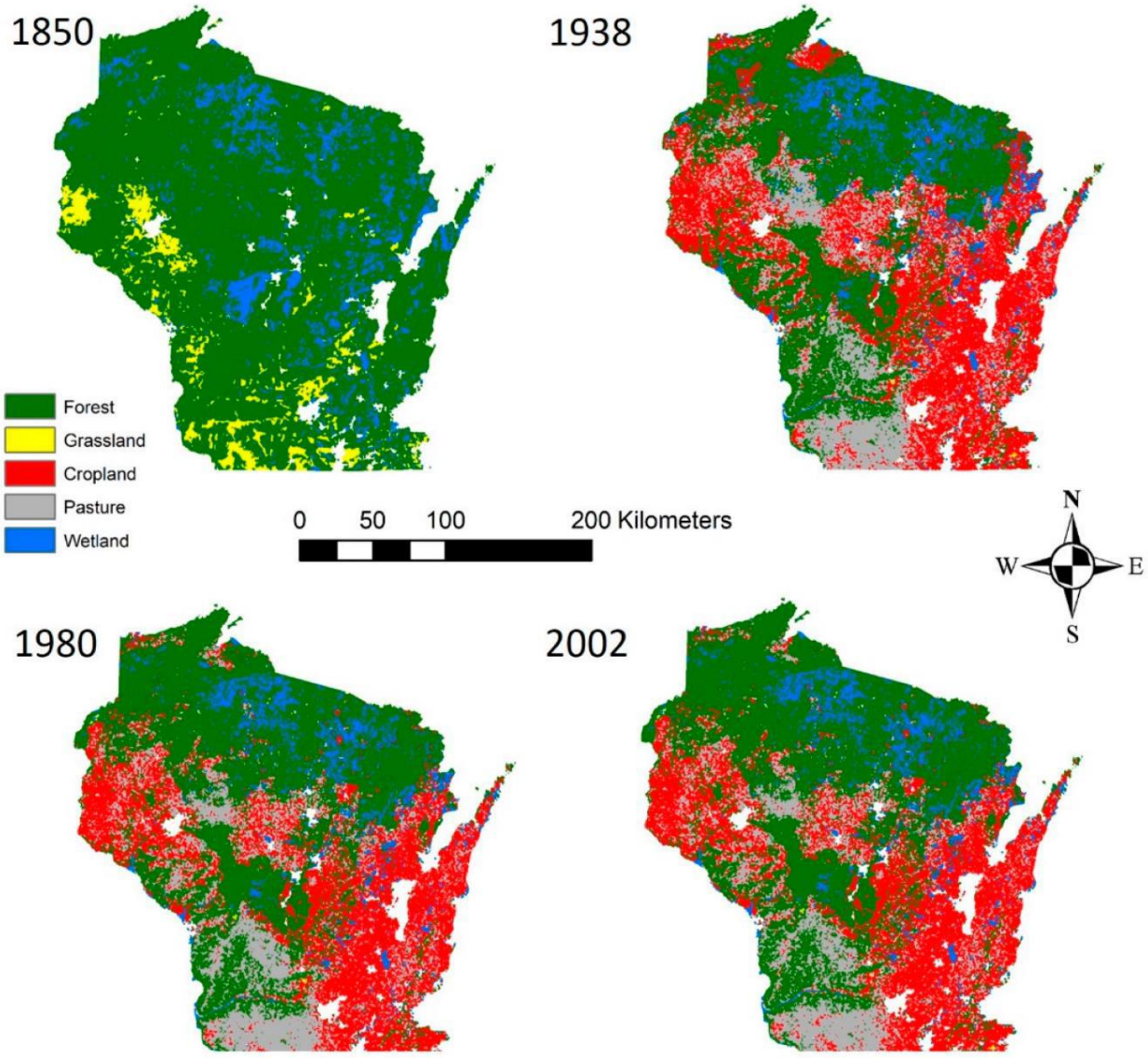
3. Environmentally sensitive areas occurring throughout the Town are not ~~compatible~~ suitable with solar use and are shown as cross-hatched on the map. They include:
    a. Wetlands – DNR classified wetlands as identified in the Portage County GIS system.
    b. Buena Vista Wildlife Area – DNR managed grasslands including parcels owned by:
        i. State of WI - Department of Natural Resources.
        ii. Dane County Conservation League.
        iii. Wisconsin Society of Ornithology.
    c. Lands within one-half mile of the Buena Vista Wildlife Area to limit impacts on grassland species. Female Greater Prairie Chickens typically nest within a one-mile radius of a lek (breeding ground) (Hamerstrom, F.N., Jr. 1939. A study of Wisconsin prairie-chicken and sharp-tailed grouse. *Wilson Bulletin* 51(2): 105-120).
    ~~c.~~d. Areas identified in our Future Land Use Map as "Natural Areas – Limited Development." In general, these areas map directly to land zoned Conservancy.
    ~~d.~~e. Any other land that is zoned Conservancy (i.e., floodplains).

Within the Buena Vista Wildlife Area threatened, endangered, and special concern species have been identified and listed by the Wisconsin Department of Natural Resources (WI DNR.) The survival of these species in the Town of Grant is due in large part to significant grasslands protected in the Town. The Buena Vista Wildlife Area is the largest grassland complex east of the Mississippi River in the United States.

A 2019 study (DOI: 10.1126/science.aaw1313) found an overall bird loss of 29% in the continental U.S. and Canada. Grassland birds showed the largest total population loss since 1970—more than 700 million breeding individuals across 31 species—and the largest proportional loss at 53%. The study found 74% of grassland bird species are declining.

DRAFT 12-20-23

Most of Wisconsin's grasslands have been lost, as shown in the maps that follow (https://www.mdpi.com/2072-4292/11/12/1504).



The Town recognizes that there are areas of Special Concern for lands adjacent to sections a ~~-d~~ e that likely merit additional mitigation and/or protection efforts, as identified in blue on the map. These areas of special concern ~~also~~ include lands within one-quarter mile of trout and feeder streams and the associated wildlife corridors, and lands within 1 mile of lands owned by the DNR, Dane County Conservation League, and Wisconsin Society of Ornithology.

The goals for identifying parcels as areas of special concern are:

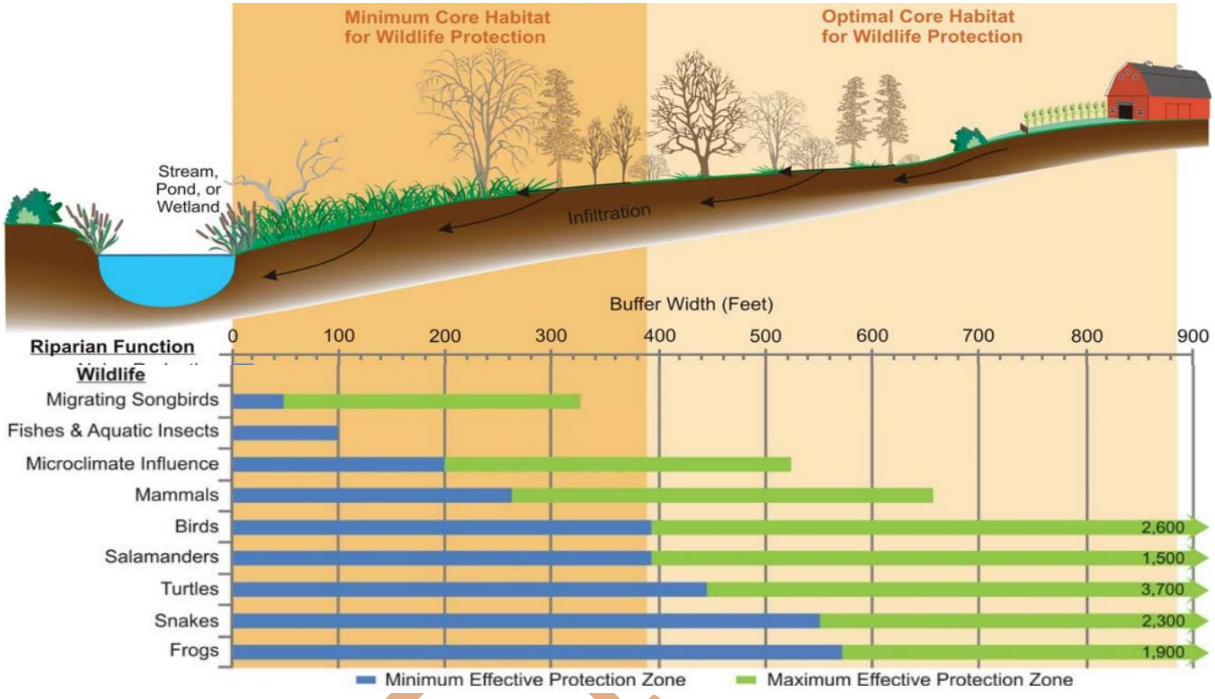
- one-mile buffer abutting conservation lands to maintain habitat for grassland wildlife species.
- 150-foot vegetative buffer surrounding residences to provide a visual screen between residences and solar energy project.
- one-quarter mile on each side of Class I and II trout streams, and headwaters/feeder streams to acknowledge and protect these known wildlife corridors where deer, turkeys, swans, coyotes, racoons, and otters have been photographed in the Town of Grant. Protecting these corridors also keeps trees in place to provide shade for trout streams as brook trout are most stable when water temperatures do not exceed 66 degrees Fahrenheit. Source: https://www.usgs.gov/news/state-news-release/projected-warming-wisconsin-streams-could-negatively-affect-trout#:~:text=Brook%20trout%20populations%20are%20most,or%20about%2066%20degrees%20Fahrenheit.

No fences or solar structures are allowed within 300 feet of the ordinary high-water mark within the one-quarter mile stream buffer. Wildlife needs were considered when setting the 300-foot fence and solar structure exclusion. Based on the needs of wildlife species found in Wisconsin, the minimum core habitat buffer width is about 400 feet and the optimal width for sustaining most wildlife species is about 900 feet. Hence, the value of large undisturbed parcels along waterways which are part of, and linked to, an environmental corridor system. The minimum effective buffer width distances are based on data reported in the scientific literature and the quality of available habitats within the context of those studies. (Riparian Buffer Management Guide No. 1: Managing the Water's Edge – Making Natural Connections, Southeastern Wisconsin Regional Planning Commission, 2010, page 10, https://www.sewrpc.org/SEWRPCFiles/Publications/ppr/rbmg-001-managing-the-waters-edge.pdf)

DRAFT 12-20-23

Wider is Better for Wildlife

Why? Because buffer size is the engine that drives important natural functions like food availability and quality, access to water, habitat variety, protection from predators, reproductive or resting areas, corridors to safely move when necessary, and help in maintaining the health of species' gene pools to prevent isolation and perhaps extinction.



Large solar projects impact wildlife due to fencing, panels, and other structures that impede their movement, redirect them, and prevent some wildlife from accessing the solar project areas within the fences. To limit these impacts, fences are required to be raised so that they have an eight-inch gap between the bottom of the fence and the soil to allow passage of small wildlife.
Windbreaks that have been previously established by the Central Wisconsin Windshed Partnership Group shall be retained wherever possible for the purpose of providing a living snow fence for safety, wildlife habitat, trees for carbon storage, and erosion control.

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4. Protection of property owners that have residences and/or structures is an important issue that the Plan Commission wanted to address. Residences or other structures are shown with red dots on the overlay map.

   There are two classifications of property owners within the area identified as suitable for solar development:

   a. Those who choose to participate by leasing land to the solar project.
   b. Those who are not participating in the solar project.

The Plan Commission felt an obligation to create a level of protection for the non-participating landowners/residents by limiting the closeness of the solar farm to any parcel containing a structure. To achieve that, a minimum natural vegetative buffer of ~~up to 500-feet~~150-feet in depth is required on the solar project land and shown~~as identified~~ in blue on the map ~~is~~ as an additional area of special concern. These areas are ~~encouraged~~ to be protected if existing or newly developed if not currently present, and maintained by the solar company from the property line on each side of those ~~abutting~~ adjacent parcels including those across the road. A native mixture of deciduous trees, shrubs, and conifers should be used. This buffer requirement may be modified or waived in its entirety at the sole discretion of the non-participating landowner. The establishment of this buffer area is intended to visually screen residences from solar energy projects, to mitigate any aesthetic issues as well as concerns regarding loss in property values when a non-participating landowner is adjacent to a solar energy project on any or all sides of their property.

The Plan Commission recognizes that all property owners have certain rights in determining the use of the land under their ownership. Fracturing of contiguous parcels under common ownership was avoided as much as possible throughout the Town to allow the landowner to have full decision-making capabilities about his/her acreage. However, the landowner's neighbors also have a right to be protected from non-~~compatible~~ suitable uses of adjacent lands. The area(s) in the Town identified as ~~compatible~~ suitable with solar development provides adequate areas for any future solar expansions within our town and is consistent with the current Land Use Element which was adopted in 2018.

DRAFT 12-20-23