

MASTER PLAN ADDENDUM - SOLAR FARMS

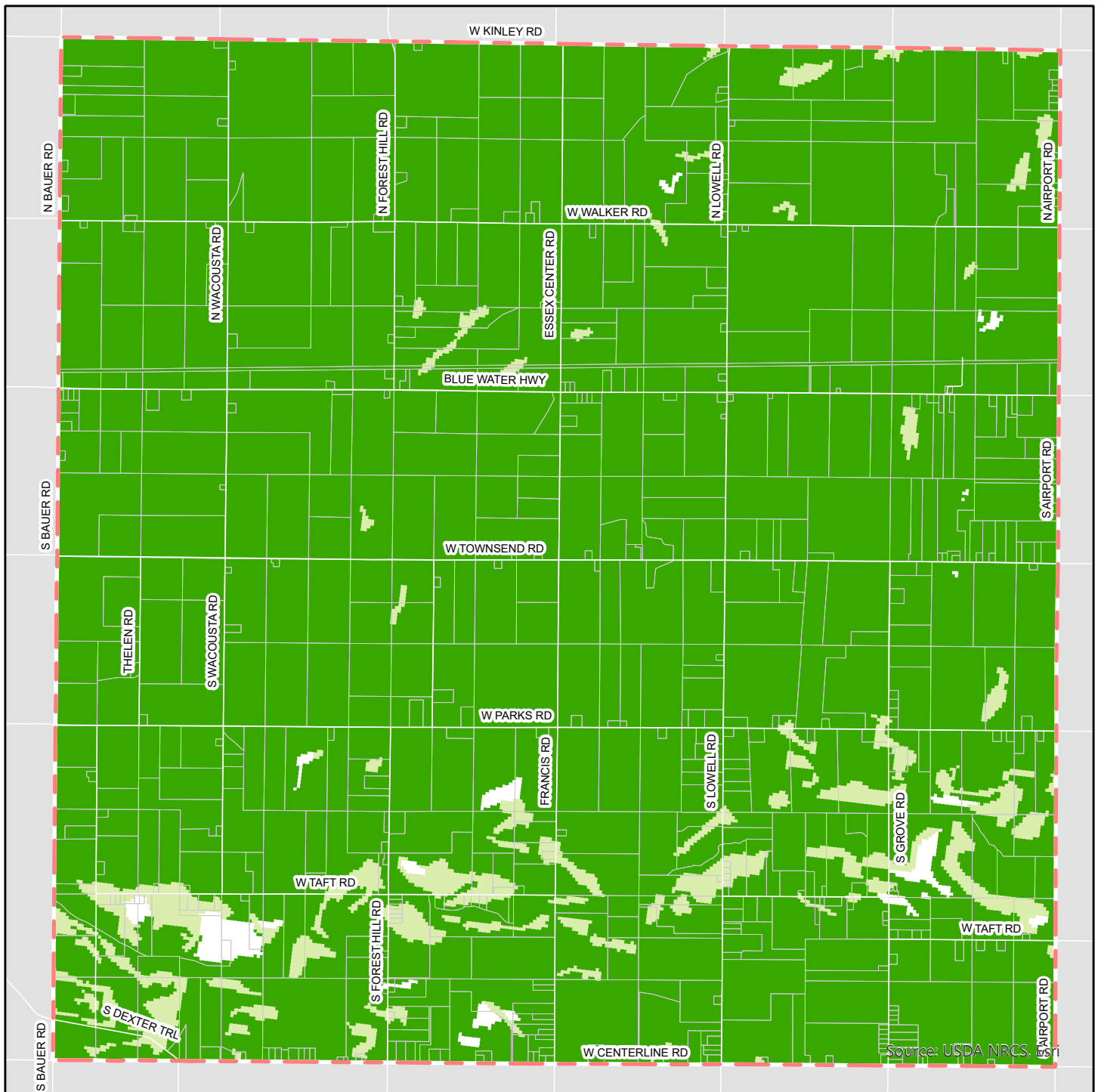
In order to preserve the natural, rural beauty of the Township, the viability of the Township's farmland, the precious ecosystems contained within the Township, and the health, safety, and welfare of the Township's residents, Bengal Township adopts the following policies with regard to the development of solar energy facilities within its borders.

- Renewable energy is important for the sustainability of ecosystems, food systems, economies, and communities. However, the large-scale positive impacts must be weighed against local negative impacts, including the health, safety, and welfare of the residents of Bengal Township.
- On-site solar energy systems provide ecological and economic benefits, at a scale that is desirable in a rural community and with fewer impacts on the immediate surroundings than utility-scale solar energy systems. However, the impacts they do have must be managed through zoning regulations.
- Utility-scale solar energy systems ("solar farms") should be developed with careful consideration of the impacts on local ecosystems, farmland, rural beauty, and the health, safety, and welfare of the Township's residents. Specifically, in determining whether to approve a new solar farm, the Township will take the following into account:
 - **The Township's natural beauty must be preserved**, especially wetlands and woodlands. To the extent possible, existing wetlands and woodlands should not be removed for solar energy development. The Township will also require the provision of pollinator habitat within solar farms, in order to promote a healthy ecosystem.
 - **The Township's agricultural systems must be protected**. While the loss of some farmland to solar energy production is likely, the Township will seek an appropriate balance of land uses to retain the vibrant food production economy that already exists in the community.
 - **Nearby residents** must be protected from noise, flooding, glare and aesthetic degradation, through appropriate setbacks and landscaping along the edges of solar farms.
 - **Solar farms should be located in appropriate locations with regard to transmission infrastructure**. Certain parts of the Township do not have efficient access to long-distance electric transmission lines. Solar farms should not be located in this area, because of the need to erect unsightly and potentially hazardous high-tension power corridors in order to connect the new solar farm to the grid.
 - **Solar development should not exceed transmission capacity**. The region's long-distance electric transmission lines have finite capacity. The Township will limit the size and/or number of approved solar farms within its boundaries if the capacity of the transmission lines becomes insufficient for additional energy production.
- **The Township may, at some point, hit its "solar limit."** Bengal Township acknowledges the importance of renewable energy, but, as described in this section, other priorities, such as local ecosystems, agricultural production, transmission infrastructure capacity, and rural aesthetics, are also important. Therefore, once solar farms are approved and operational in the Township, the Township may restrict the size of new proposals, or not approve them at all, in order keep balance between the community's priorities.

Specifically, the Township's "solar limit" shall be 695 to 870 acres of large, freestanding solar arrays. Small "back yard" arrays and rooftop arrays shall not be counted in this limit, but community solar gardens, as defined in the Zoning Ordinance, shall count towards to the solar limit. The Township determined the limit as follows:

 - Bengal Township consists of approximately 23,040 acres, 92% of which is used for agriculture or rural preservation uses – and nearly all of which is considered "Prime Farmland," as shown on the map included with this addendum.

- One of Bengal Township's most crucial agricultural products is dairy. Currently, according to the Clinton County Agricultural Census, there are 64,037 head of cattle in the County. The generally accepted standard for the number of acres needed to raise healthy cattle is two per head. Therefore, Clinton County needs approximately 128,000 acres of dairy farms to maintain its cattle population.
- Bengal Township occupies approximately 6% of Clinton County. Once developed areas and areas unsuitable for livestock raising are removed, that figure rises to approximately 10%. It is incumbent on Bengal Township to provide its share of land for cattle raising. Therefore, Bengal Township should **maintain at least 12,800 acres of land that is suitable for raising cattle.**
- Additionally, **1,542 acres** in the Township are not available for agriculture, because they are used by businesses, institutions, or residences with insufficient land to cultivate the rest of the property.
- Subtracting out the minimum acreage necessary for cattle raising and the non-agricultural acreage leaves **8,698 acres.** As noted above, almost all of that land is considered "Prime Farmland" that the Township must protect. Therefore, **no more than 8-10% of that land can be dedicated to large scale solar arrays – leaving a Township "solar limit" of 695 to 870 acres.**
- In this context, the Township is trying to prevent land from being removed from the agricultural system. Therefore, land should count against the "solar limit" if it has been rendered unusable for agricultural production. The Township may or may not determine that setbacks, wildlife corridors, and preserved natural spaces within solar farms constitute "land removed from the agricultural system."
- The limit is presented as a range to give the Township flexibility. But it should be taken into account when reviewing large scale solar arrays, especially as the Township approaches the limit.



Prime Farmland Analysis

Bengal Township
Clinton County, Michigan

February 9, 2022

LEGEND

- Prime Farmland
- Farmland of Local Importance
- Farmland of Statewide Importance
- Farmland of Unique Importance
- Not Prime Farmland
- Bengal Twp Parcels
- Bengal Twp Boundary



0 3,000 6,000
Feet

Basemap Source: Michigan Center for Geographic Information, v. 17a. Data Source: Clinton County. McKenna 2022.

