

**Township of Watertown**  
**Sanilac County, Michigan**  
**Zoning Ordinance Amendment**  
**Solar Energy Systems**  
**Ordinance No. 2022-01**

It is hereby determined by the Watertown Township Board that good and reasonable cause exists to amend the Watertown Township Zoning Ordinance as ordained below:

**THE TOWNSHIP OF WATERTOWN ORDAINS:**

**A: Purpose and Intent**

1. The purpose of this chapter is to establish guidelines for the appropriate placement and use of Solar Energy Systems, with the goals of:
2. Promoting the safe, effective, and efficient use of Solar Energy Systems, in order to contribute to the reduction in consumption of fossil fuels for generating electricity.
3. Preserving and protecting public health, safety, welfare and quality of life; along with maintaining the integrity, rural character, property values, and aesthetic quality of the township by minimizing the potential adverse impacts of Solar Energy Systems.
4. Establishing standards and procedures by which the siting, design, engineering, installation, operation, and maintenance of a Solar Energy System shall be governed.

**B: Definitions:**

**Agrivoltaics:** Refers to co-developing the same area of land for both solar photovoltaic power as well as for agriculture. It is also known as a “Dual Use” solar energy system.

**Array:** An interconnected system of PV modules that function as a single electricity-producing unit. The modules are assembled as a discrete structure, with common support or mounting. In smaller systems, an array can consist of a single module.

**Batteries:** In the context of PV systems, batteries are used for storing excess electricity generated by a PV system when the building is using less electricity than the system generates; batteries can store electricity for use when utility power is unavailable such as during a grid outage, or for off-grid systems.

**Concentrating Solar Thermal Devices (CSP):** Generates solar power by using mirrors or lenses to concentrate a large area of sunlight onto a receiver. Electricity is generated when the concentrated light is converted to heat which drives a heat engine (usually a steam turbine) connected to an electrical power generator.

**dB(A):** Sound pressure level in decibels. It refers to the "A" weighted scale defined by the American National Standards Institute (ANSI).

**Decibel:** Defined as the unit of measure used to express the magnitude of sound pressure and sound intensity. Decibels shall be measured on the dBA weighted scale as defined by the American National Standards Institute.

**Decommissioning:** The process of terminating operation and completely removing a solar energy system and all related buildings, structures, foundations, access roads, and associated equipment.

**Dual Use Solar:** Refers to agricultural production and electricity production from solar photovoltaic (PV) panels occurring together on the same piece of land, and is also known as “Agrivoltaics”.

**Greenbelt:** A greenbelt consists of shrubbery, trees, or other noninvasive plant species that provide a visual screen. Typically, to include 2-4 staggered rows of evergreen trees, 5-8 feet high, intermixed with intermediate sized shrubs, within a total depth of approximately 25 feet.

**IEC – International Electro Technical Commission:** The IEC is the leading global organization that prepares and publishes international standards for all electrical, electronic and related technologies.

**Impervious surface:** A hard surface area that either prevents or retards the entry of water into the soil. Common impervious surfaces include but are not limited to rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, and solar panels.

**Interconnection:** Refers to the process of connecting renewable technologies to the larger electrical grid.

**Inverter:** Equipment that is used to change voltage level or waveform, or both, of electrical energy, such as converting direct current electricity (DC) produced by a solar system into the alternating current electricity (AC) that can be used in a home or building.

**Isolated Area:** In regard to this ordinance, an isolated area is defined as a place that is out of the way or typically secluded from civilization. Not adjacent to a roadway or residence.

**Landowner:** The individual or entity, including their respective successors and assigns that have equity interest or own the property on which the solar energy system is situated in accordance with this ordinance chapter.

**LVIA: Landscape and Visual Impact Assessment:** Identifies and assesses the significance of the effects of change caused by a development on the landscape as an environmental resource as well as views and visual amenity.

**National Electric Code (NEC):** The National Electrical Code (NEC), is a regionally adoptable standard for the safe installation of electrical wiring and equipment in the United States. It is typically adopted by states and municipalities in an effort to standardize their enforcement of safe electrical practices.

**Off-Grid:** Refers to living autonomously without reliance on a utility for power. Typically, it works by generating electricity from solar panels and using it to charge a battery. That electricity is then converted using an inverter so that it can power the home or business.

**On-site:** A solar energy system designed to help meet the electrical needs within the limits of the area encompassed by the tract area or parcel of record on which the activity is conducted.

**Operator:** The individual or entity, including their respective successors and assigns that have equity interest in the solar energy system as a lessee of the real property parcel on which the solar energy system is located.

**Photovoltaic (PV) device:** A solid-state electrical device that converts light directly into direct current electricity of voltage-current characteristics that are a function of the characteristics of the light source and the materials in and design of the device.

**Pollinator:** A pollinator is anything that helps carry pollen from the male part of the flower (stamen) to the female part of the same or another flower (stigma). Examples: Birds, bats, butterflies, moths, flies, beetles, wasps, small mammals, and, bees.

**Power transmission lines:** Are sets of wires, called conductors, which carry electric power from generating plants to the substations that deliver power to customers.

**Photovoltaic (PV):** A semiconductor-based device that converts light directly into electricity.

**Racking:** Also called photovoltaic mounting systems, a solar racking system is used to safely fix solar panels to various surfaces such as roofs, building facades, or the ground.

**Solar Array:** Any number of Photovoltaic Devices connected together to provide a single output of electric energy.

**Solar Energy System:** Any device or structural design feature used for the collection, storage, and distribution of solar energy for space heating, space cooling, lighting, electric generation, or water heating.

**Solar Energy System, Building-Mounted:** A solar energy system that is structurally mounted to the side of a building or structure.

**Solar Energy System, Ground-Mounted:** A solar energy system that is structurally mounted to the ground and is not roof-mounted.

**Solar Energy System – Large (SES-L):** A utility-scale commercial facility, occupying an area of five (5) acres or more, with multiple ground-mounted solar arrays and their associated control or conversion electronics, that converts sunlight into electricity by photovoltaics and will be used for the purpose of wholesale or retail sales of generated electricity to off-site customers. Zoning Compliance Permit, Building Permit, Public Hearing, Special Approval and Site Plan Review required.

**Solar Energy System – Medium (SES-M):** A private on-site or utility-scale solar energy conversion system consisting of roof panels, ground-mounted solar arrays, and associated control or conversion electronics, occupying an area of more than one (1) acre but less than five (5) acres of land, and that will be used to produce utility power for on-site or off-site uses.

**Solar Energy System, Roof-Mounted:** A solar energy system that is structurally mounted to the roof of a building or structure.

**Solar Energy System – Small (SES-S):** A single residential or small commercial business scale solar energy conversion system consisting of roof/building mounted panels, ground-mounted solar arrays, or other solar energy fixtures, and their associated control or conversion electronics, occupying an area of not more one (1) acre of land, and that will be used only to produce utility power for on-site users, except for the incidental sale of surplus electrical energy back to the electrical grid. These installations are permitted as “accessory uses or structures”. Zoning Compliance Permit, Building Permit, and Electrical Permit required.

**Solar Panel:** A structure containing one or more receptive cells, the purpose of which is to convert solar energy into usable electrical energy by way of a solar energy system.

**Substation:** Any electrical facility containing power conversion equipment designed for interconnection with power lines. Part of the electrical transmission system converting high voltage to low voltage or converting low voltage to high voltage for incorporation into the electrical power grid.

**UL, Underwriters Laboratories:** UL is a safety certification company participating in the safety analysis of many of that century's new technologies.

**Viewshed:** The view of an area from a specific vantage point. If a terrain is flat, you can see all the way to the horizon. If a terrain has hills and valleys, you can see some parts of the terrain, the **viewshed**, and other parts of the terrain are hidden.

**Wildlife Friendly Fencing:** A fencing system with openings that allow non-targeted wildlife species to transit through the fenced area.

#### **C: Applicability:**

1. This ordinance applies to solar energy systems to be installed and constructed after the effective date of the ordinance.
2. Solar energy systems constructed prior to the effective date of this ordinance shall not be required to meet the requirements of this ordinance.
3. Any upgrade, modification, or structural change that materially alters the size or placement of an existing solar energy system shall comply with the provisions of this ordinance.

#### **D: Solar Energy Systems - General Requirements**

All solar energy systems, whether building mounted or ground mounted, are subject to the following general requirements:

1. All Solar Energy Systems must conform to all applicable federal, state, county and township requirements, as well as any applicable industry standards.
2. A Solar Energy System shall not have a negative impact on the health and safety of humans or animals; nor diminish the value of neighboring properties.
3. No signage will be allowed except for public and employee safety, and that required by federal, state, county and township regulations.
4. No Solar Energy System shall be installed until evidence has been given to the Zoning Administrator that the electric utility company has approved the developer's intent to

install an interconnected customer-owned generator to the grid. "Off Grid" systems shall be exempt from this requirement.

5. Any on-site electrical storage, Battery Energy Storage Systems (BESS) must conform to industry standards and applicable federal, state and local regulations.
6. No Solar Energy System shall produce electromagnetic interference that adversely affects normal operation of radio, television, Internet, or cellular telephone service or exceeds any applicable standards established by federal or state regulations. Such interference is grounds for the Township to restrict the operation of the Solar Energy System until it is resolved.
7. Concentrating solar thermal devices or any other various experimental solar technologies are not allowed in any zoning district, except by approval of the Watertown Township Zoning Board of Appeals.
8. All power transmission lines from a ground-mounted Solar Energy System to any building or other structure shall be located underground, and comply with the National Electrical Code (NEC). The Planning Commission may modify this requirement if, in its sole discretion, it determines that it would be impractical to install, place or maintain such transmission lines underground.
9. Any Solar Energy System and the surrounding premises must be maintained in good repair and condition at all times, and must continuously conform to all applicable building and electrical codes. This shall include, but is not limited to, ensuring that any fencing is maintained to provide sufficient protection and screening, that the property is kept clear of trash and other debris, that all aspects of the Solar Energy System are maintained according to industry standards, and that no portion of the Solar Energy System including Greenbelts is in a blighted, unsafe, or substandard condition.
10. Drainage, including stormwater, soil erosion and sediment control, and snowmelt runoff shall be managed in a manner consistent with all applicable federal, state, and local regulations. All drainage infrastructures on-site, including drain tile and ditches, shall be maintained during the operation of the Solar Energy System, and shall not impact setback/buffer areas or neighboring properties.
11. No Solar Energy System shall produce glare that would constitute a nuisance to occupants of neighboring properties or to persons traveling neighboring roads. Upon written notice to the owners of the Solar Energy System from the Complaint Resolution Committee or Township Supervisor, that glare from the Solar Energy System is causing a nuisance to neighboring residents, or to persons traveling neighboring roads, the owner of the Solar Energy System shall have a reasonable time (not to exceed six (6) months) from the date of such notice to remediate such glare.
12. Lighting must be in compliance with the Watertown Township Zoning Ordinance. Outdoor lighting shall be designed to direct light to the ground and not up into the sky. No flickering or flashing lights shall be permitted. No System or any of its components shall be illuminated, except to the degree necessary for public safety or maintenance. Lighting shall not extend beyond the Solar Energy System perimeter.

13. The applicant shall maintain a current general liability policy covering bodily injury and property damage with limits appropriate to the size of the solar facility. Large Solar Energy Systems (SES-L) shall carry dollar amount limits per occurrence, aggregate coverage, and deductible amounts, all of which shall be agreed upon by the owner/operator and Township Board. All applicants shall be required to provide proof that they meet the insurance requirements to the Zoning Administrator prior to approval.
14. A medium (SES-M) or large (SES-L) Solar Energy System shall employ and maintain one or more of the following dual use land management and conservation practices throughout the project site, including the setback/buffer areas:
  - a. **Pollinator Habitat** - Solar sites designed to meet the pollinator standard found in the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
  - b. **Conservation Cover** - Designed in consultation with the local NRCS field office and following the guidelines established by the National Resources Conservation Service (NRCS Conservation Cover (Ac.) (327) (11/15).
  - c. **Forage for Grazing** - Solar sites that incorporate rotational livestock grazing and forage production shall be designed in consultation with the local NRCS field office and following the guidelines established by the NRCS (National Resources Conservation Service), Prescribed Grazing, Practice Code 528 (Ac) (528) (03/17).
  - d. **Agrivoltaics** - Solar sites that combine raising crops for food, fiber, or fuel and generating electricity within the project area to maximize land use.

Maintenance shall include plans for addressing weed control and the potential for herbicide run off that will impact local streams and adjoining neighbors. No restricted use pesticides (RUP) shall be used.

15. An applicant for a Solar Energy Facility Zoning or Special Approval Permit shall remit an application fee in the amount specified in the fee schedule. The fee schedule may be amended by resolution of the Township Board.
16. The Photovoltaic Panels shall meet all UL (Underwriters Laboratories) standards in effect at the time of construction; and pass IEC 61215-1 testing. The applicant shall provide written specifications, material safety data sheets (MSDS), and countries of origin of the panels used, and include updated specifications as panels are replaced.
17. In the instance that an unavoidable Act of God inhibits, damages, or destroys part of, or the majority of the SES-M or SES-L Solar Energy Facility the owner or operator shall provide a Rehabilitation Plan to remedy the damage and said plan shall be submitted to, and approved by, the Township Board. Said plan will outline the necessary protocol and time schedule for returning the SES-M or SES-L to energy production and must be submitted to the Township within sixty (60) days of the date the damage was incurred or a time determined reasonable by the Township Board.

18. No operating Solar Energy System shall produce noise that exceeds Forty-Five (45) dBA, as measured at the property line of any neighboring lot. Adequate setbacks shall be provided to comply with this requirement.

#### **E: Small Solar Energy Systems (SES-S) On-Site Use:**

An on-site use solar energy system is intended to first serve the needs of the private owner. Small systems may be approved in the following zoning districts upon issuance of a zoning permit, building permit, and an electrical permit provided that the application meets the requirements and standards of this section.

##### **Permitted Use:**

**AR** .....Agricultural - Residential

**R** .....Single Family Residential

**RM** .....Multiple Family Residential

**MHP** ..Manufactured Housing Park – requires Special Approval Permit

**C** .....Commercial

**I** .....Industrial

#### **F: Specific Requirements for Small Solar Energy Systems (SES-S):**

1. **Number of systems:** Only one (1) solar energy system is permitted per lot or premises.
2. **Setbacks:** All Small Solar Energy Systems (SES-S), including associated equipment, shall meet the side or rear yard setback requirements from all property lines.
3. **Screening:** PV panels and associated mechanical equipment shall be screened from residential districts and public rights of way by a greenbelt or six (6) foot high privacy fence.
4. **Submitted plans:** A sketch plan, drawn to scale, shall show existing and proposed structures, driveways, adjacent structures within 100 feet, and any other information requested by the Zoning Administrator that is necessary to determine compliance with this ordinance.
5. **Height: Building Mounted:** accessory to structure: Solar energy systems shall be such a weight to be safely supported by the building. Building inspector approval is required. Solar Energy Systems shall be considered part of the building and meet all the required building height and setback requirements. On a flat roof installation, the Solar Energy Systems shall not project more than three (3) feet above the highest point, and shall be setback from the building edge at least a distance equal to its height. Solar energy systems on pitch roof installations shall not be located within three (3) feet of any peak, eave, or valley to maintain adequate accessibility, and shall not project more than two (2) feet above the roof surface.
6. **Ground Mount Solar Panels:**
  - a. Shall not be installed on a parcel of less than one (1) acre.

- b. If more than 2,000 square feet of impervious surface, including hard surface driveways is proposed, a drainage plan shall be submitted.
  - c. A ground mounted Small Solar Energy System (SES-S) shall be located in the side or rear yard only and shall meet the side or rear yard setback requirements.
7. **Height, Backyard Residential:** A ground mounted Solar Energy System in a residential district (including AR, R, and RM) shall be located in the rear yard and shall meet the rear yard setback requirements: 8-foot maximum height, measured at maximum tilt. Solar PV panels shall not be mounted in a manner that will obstruct the view or access to sunlight on any neighboring property. All ground arrays shall be set back a distance of 2.0 times their structure height from all property lines and building setbacks, whichever is greater.
  8. **Height, Backyard Commercial/Industrial:** A ground mounted Commercial Solar Energy System shall be located in the rear yard and shall meet the rear yard setback requirements. Maximum height shall be 16 feet measured at maximum tilt. All other buildings and accessory structures must meet the height requirements of the underlying zoning district. All ground mounted solar arrays shall be set back a distance of 1.5 times their structure height from all property lines and building setbacks, whichever is greater.
  9. **Decommissioning:** If the solar energy system ceases to operate, is abandoned, or in disrepair for a period of six (6) months or is deemed by the Zoning Administrator or Building Inspector to be unsafe or not consistent with code, the current landowner shall repair and restore the system to good working order within a reasonable time set by the Zoning Administrator or Building Inspector or, if no longer operating or, no longer in compliance with federal, state or local codes, the current landowner shall remove the system in its entirety. This shall include removing posts, equipment, panels, wiring, foundations and other items so that the ground is restored to its preconstruction state.

**G: Medium Solar Energy Systems (SES-M) On-Site or Off-Site Utility Use:**

An on-site use Solar Energy System is intended to primarily serve the needs of the on-site owner, with the capability to provide electricity to the electric utility grid. Medium Solar Energy Systems (SES-M) are permitted in the following zoning districts with a Special Approval Permit and Site Plan Review.

- AR.....Agricultural – Residential
- RM.....Multiple Family Residential
- C .....Commercial
- I .....Industrial

**H: Specific Requirements for Medium Solar Energy Systems (SES-M)**

1. **Submitted plans:** A site plan, drawn to scale and conforming to Article 16 of the Watertown Zoning Ordinance 200, shall show existing and proposed structures, driveways, adjacent structures within 100 feet, and any other information requested by the Zoning Administrator or Planning Commission that is necessary to determine compliance with this ordinance.

2. **Setback Requirements:** The following setbacks as shown in Table 1 are required to be established for a Medium Solar Energy System. Fencing, greenbelts, roads, landscaping and crop production may be developed within the setback area.

Table 1 SES-M Setback Requirements		Distance from Structure
As measured from the solar array or other structure to:		
The property line of a participating residence		100 feet
The property line of a participating commercial business		50 feet
The property line of a non-participating parcel*		500 feet
County Roadways *†		200 feet
State Highways *†		500 feet
Rivers and Streams *(as measured from the midpoint)		200 feet
Adjacent, participating parcels (no fence required)		0 feet
County Ditches & Drains	Sanilac County Drain Commissioner inspection/approval required.	
<b>To preserve the township’s rural character and plan for future commercial development, the following extended setbacks are required:</b>		
County roadways, with areas designated for future commercial expansion *† <i>(E. Miller Rd. to Campbell Rd. thence North on Campbell Rd. to the city limits) (S. Gates Rd. from the city limits to Miller Rd.) (Other roadways as deemed appropriate at the time of application.)</i>		600 feet
State highways, with areas designated for future commercial expansion *† <i>(S. Sandusky Rd. (M-19) from the city limits to Marlette Rd.) (East &amp; West Sanilac Avenue (M-46) from Fitch Rd. to Townline Rd.)</i>		600 feet
* Approved greenbelt or screening required. † As measured from the center of the roadway.		

3. **Screening:** Panels shall be screened from residential parcels and public rights of way by a Planning Commission approved greenbelt or six (6) foot high privacy fence. Fencing requirements may be waived or reduced by the Planning Commission when planned or existing natural vegetation accomplishes the same.
4. **Height, Building Mounted:** On a flat roof installation the PV panels shall not project more than five (5) feet above the highest point, and shall be setback from the building edge at least a distance equal to its height. The installation may not exceed maximum building height limitations allowed in that zoning district. Solar Energy Systems on pitch roof installations shall not be located within three (3) feet of any peak, eave, or valley to maintain adequate accessibility, and shall not project more than two (2) feet above the roof surface.
5. **Height, Ground Mounted:** Backyard Commercial and Industrial PV solar panels and associated racking shall not exceed a 16-foot maximum height, measured at maximum tilt. All other buildings/accessory structures must meet the height requirements of the underlying zoning district. All ground arrays shall be set back a distance of 1.5 times their structure height from all property lines and building setbacks, whichever is greater.

6. **Impervious Surface:** If more than 2,000 square feet of impervious surface is proposed, including associated paved surfaces, a drainage plan shall be submitted.
7. **Transfer of Ownership/Operation:** Prior to a change in the ownership or operation of a Medium Solar Energy System, including, but not limited to, the sale or lease of that System or the underlying property, the current landowner, facility owner or operator shall provide written notice to the Township at least sixty (60) days prior to that change becoming effective. This notice shall inform the Township of the intended transfer of control of the Medium Solar Energy System, and shall include a copy of the instrument or agreement affecting that transfer. Such an instrument or agreement shall include an express statement that the new owner or operator of the Medium Solar Energy System shall not be permitted to operate that System until compliance with the terms of this Ordinance, including requirements for continuing decommissioning funds, and any other required funding has been established. To assure compliance with this section, a deed restriction must be placed on the parcel that guarantees notification of the township in the event of any change of ownership or operation.
8. **Decommissioning-Recycling-Abandonment:** Any ground-mounted solar photovoltaic installation which ceases to operate, has been abandoned, or is in disrepair; as determined by the Zoning Administrator or Building Inspector, shall be removed. Unless otherwise approved by the Township, decommissioning shall begin no later than six (6) months after the solar project has ceased to generate electricity. All panels and structures associated with the project shall be completely removed. All reasonable effort shall be made to reuse or recycle solar components following the regulations and guidelines established by the Federal Resource Conservation and Recovery Act (RCRA), and any other state or local rules that may be currently applicable. The property shall be returned to its condition prior to the installation of the project or to some other condition, as approved by the Township. The applicant shall notify the Township Zoning Administrator and the Sanilac County Building Inspector by certified mail of the proposed date of discontinued operations and plans for removal
9. **Decommissioning shall consist of:**
  - A. Physical removal of all ground-mounted solar photovoltaic panels, installations, structures, equipment, and transmission lines (both above and below ground) from the site.
  - B. Disposal of all solid and hazardous waste that cannot be recycled in accordance with local, state, and federal waste disposal regulations.
  - C. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Township may allow the applicant to leave certain portions of the landscaping in place in order to minimize erosion and disruption to vegetation.
  - D. Restoration of any altered or damaged ditching or field drain tiles.
  - E. Roadway and parking area removal shall be at the discretion of the land owner.

10. Prior to construction, Watertown Township requires a detailed decommissioning plan with documented decommissioning costs and salvage value projections. This plan shall be either produced by, or approved by, a licensed independent engineer.

This plan shall include:

- A. The anticipated life of the project.
- B. The estimated present cost of decommissioning.
- C. An explanation of the calculation of the cost of decommissioning.
- D. The physical plan for decommissioning.
- E. A financial surety to cover the cost of decommissioning.
  - i. The financial security shall be in the form of a surety bond held by a local Michigan licensed, federally insured financial institution, and shall contain a reserve factor of 20% to the cost projections to protect against changes in market value.
- F. An update of the decommissioning plan, costs and salvage projections shall be performed every five (5) years and include a mechanism for updating the security.
- G. A process to require decommissioning if the solar energy system is no longer operational.
- H. In the event of bankruptcy or similar financial default of the Solar Energy System owner, the property owner of the project site shall bear the decommissioning costs.

11. **Installation Standards:** A Professional Engineer registered in the State of Michigan shall certify that the construction and installation of a Medium Solar Energy System (SES-M) meets or exceeds the manufacturer's safety, construction, and installation standards, including the National Electric Safety Code and any applicable Michigan construction codes. Such certification shall be provided to the Township Zoning Administrator prior to the issuance of a zoning compliance permit.

#### **I: Large Solar Energy Systems (SES-L) Off-Site Utility Use:**

A large solar energy system is a solar energy system that is designed and built to provide electricity to the electric utility grid. Large Solar Energy Systems (SES-L) are permitted in the following zoning districts with a Special Approval Permit, a Site Plan Review, and a Public Hearing. A Predevelopment Meeting is highly encouraged. Upon approval of an application for a Large Solar Energy System, the property shall be assessed as either commercial or industrial, at the discretion of the Township Assessor.

- AR.....Agricultural – Residential
- C .....Commercial
- I .....Industrial

#### **J: Specific Requirements for Large Solar Energy Systems (SES-L)**

All Large Solar Energy Systems (SES-L) shall be subject to the following:

1. **Siting and Coverage:** A Large Solar Energy System (SES-L) shall not be installed on a parcel less than five (5) acres. The maximum ground area occupied by solar panels and associated paved and impervious surfaces shall be approved by the Planning Commission based on the circumstances of each particular Large Solar Energy System (SES-L) application.
2. **Submitted plans:** A site plan, drawn to scale and conforming to Article 16 of the Watertown Zoning Ordinance 200, shall show existing and proposed structures, driveways, adjacent structures within 100 feet, and any other information requested by the Zoning Administrator or Planning Commission that is necessary to determine compliance with this ordinance.
3. **Impervious Surfaces:** If more than 2,000 square feet of impervious surface is proposed, including associated paved surfaces, a drainage plan shall be submitted.
4. **Signage:** A sign shall be posted and maintained at the entrance(s) which lists the name and phone number of the owner or operator, and public contact information for inquiries. The Solar Energy Facility owner or operator shall respond to the public's inquiries promptly. Complaints received shall be referred to the Complaint Resolution Committee.
5. **Setback Requirements:** The following setbacks as shown in Table 2 are required to be established for a Large Solar Energy System. Fencing, greenbelts, roads, landscaping and crop production may be developed within the setback area.

Table 2 SES-L Setback Requirements As measured from the solar array or other structure to:		Distance from Structure
The property line of a participating residence		100 feet
The property line of a participating commercial business		100 feet
The property line of a non-participating parcel*		500 feet
County Roadways *†		300 feet
State Highways *†		600 feet
Rivers and Streams *(as measured from the midpoint)		200 feet
Adjacent, participating parcels (no fence required)		15 feet
County Ditches & Drains	Sanilac County Drain Commissioner inspection/approval required.	
<b>To preserve the township's rural character and plan for future commercial development, the following extended setbacks are required:</b>		
County roadways, with areas designated for future commercial expansion *† <i>(E. Miller Rd. to Campbell Rd. thence North on Campbell Rd. to the city limits)</i> <i>(S. Gates Rd. from the city limits to Miller Rd.)</i> <i>(Other roadways as deemed appropriate at the time of application.)</i>		800 feet
State highways, with areas designated for future commercial expansion *† <i>(S. Sandusky Rd. (M-19) from the city limits to Marlette Rd.)</i> <i>(East &amp; West Sanilac Avenue (M-46) from Fitch Rd. to Townline Rd.)</i>		900 feet
* Approved greenbelt or screening required.		
† As measured from the center of the roadway.		

6. **Installation Standards:** A Professional Engineer registered in the State of Michigan shall certify that the construction and installation of a Large Solar Energy System (SES-L) meets or exceeds the manufacturer's safety, construction, and installation standards, including the National Electric Safety Code and any applicable Michigan construction codes. Such certification shall be provided to the Township Zoning Administrator prior to the issuance of a zoning compliance permit.
7. **Screening Requirements:** The Large Solar Energy System applicant is required to submit a Landscape and Visual Impact Assessment (LVIA) to the Planning Commission for review. The greenbelt/visual screening plan for the project shall be consistent with the Township Master Plan's intent to protect the rural character of the Township. Alternative screening plans may be considered by the Planning Commission to mitigate the visual impact of the solar energy system to residents. The Planning Commission may require more extensive visual screening in some areas to protect the rural character of the landscape. To encourage flexibility and creativity consistent with the "Rural Character" concept, the Planning Commission may allow specific departures from the requirements of the Zoning Ordinance as a part of the approval process.
8. **Height:** The maximum height for Solar PV panels and associated racking is limited to 16 feet when measured at maximum tilt. An increase of the maximum height for large solar energy systems may be allowed where the plans call for dual-use of the land. Example: cover crops, Agrivoltaics or grazing. All other buildings/accessory structures must meet the height requirements of the underlying zoning district.
9. **Decommissioning-Recycling-Abandonment:** Any ground-mounted solar photovoltaic installation which ceases to operate, has been abandoned, or is in disrepair; as determined by the Zoning Administrator or Building Inspector, shall be removed. Unless otherwise approved by the Township, decommissioning shall begin no later than six (6) months after the solar project has ceased to generate electricity. All panels and structures associated with the project shall be completely removed. All reasonable effort shall be made to reuse or recycle solar components following the regulations and guidelines established by the Federal Resource Conservation and Recovery Act (RCRA), and any other state or local rules that may be currently applicable. The property shall be returned to its condition prior to the installation of the project or to some other condition, as approved by the Township. The applicant shall notify the Township Zoning Administrator and the Sanilac County Building Inspector by certified mail of the proposed date of discontinued operations and plans for removal.
10. **Decommissioning shall consist of:**
  - A. Physical removal of all ground-mounted solar photovoltaic panels, structures, equipment, and transmission lines (both above and below ground) from the site.
  - B. Disposal of all solid and hazardous waste that cannot be recycled in accordance with local, state, and federal waste disposal regulations.
  - C. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Township may allow the applicant to leave certain portions of the landscaping in place in order to minimize erosion and disruption to vegetation.
  - D. Restoration of any altered or damaged ditching or field drain tiles.

- E. Roadway and parking area removal shall be at the discretion of the land owner.
11. Prior to construction, Watertown Township requires a detailed decommissioning plan with documented decommissioning costs and salvage value projections. This plan shall be either produced by, or approved by, a licensed independent engineer.
  12. This plan shall include:
    - A. The anticipated life of the project.
    - B. The estimated present cost of decommissioning.
    - C. An explanation of the calculation of the cost of decommissioning.
    - D. The physical plan for decommissioning.
    - E. A financial surety to cover the cost of decommissioning.
      - i. The financial security shall be in the form of a surety bond held by a local Michigan licensed, federally insured financial institution, and shall contain a reserve factor of 20% to the cost projections to protect against changes in market value.
    - F. An update of the decommissioning plan, costs and salvage projections shall be performed every five (5) years and include a mechanism for updating the security.
    - G. A process to require decommissioning if the solar energy system is no longer operational.
    - H. In the event of bankruptcy or similar financial default of the Solar Energy System owner, the property owner of the project site shall bear the decommissioning costs.
  13. **Safety/Security:** The site must be secured by a fence along all exterior sides of the facility that is a minimum of eight (8) feet in height with a gate and locking mechanism that will allow for emergency access at all times. The fencing shall consist of wildlife friendly, durable, materials which shall be approved by the Planning Commission. The fencing must be located between the required landscape greenbelt and all photovoltaic solar devices and support structures associated with the facility, and shall comply with all federal, state, and local regulations, including MI-DNR Wildlife Conservation Order 2.11.
  14. **Emergency Services:** The Solar Energy System applicant shall cooperate with local emergency services in developing an emergency response plan. Emergency responder training shall be offered to county first responders, as part of a full-day orientation of the project site. The orientation shall be offered within sixty (60) days of commercial operation of the solar generation facility. The Applicant shall provide copies of the manufacturer's safety manual for all proposed Solar Energy System equipment at the time of application for Special Approval Permit, to be kept at the Township Hall and Fire Department. Documentation shall include the type and quantity of all materials used in the operation of all equipment, including manufacturers' Material Safety Data Sheet(s) and any other documentation required by Sanilac County Emergency Management.
  15. **Transportation Plan, Vehicular Access Drives and Parking Areas:** Provide an access plan during both construction and operational phases. Show proposed project service road(s), primary ingress and egress routes, and a layout of the plant service road

system. Due to infrequent access to such facilities after construction is completed, it is not required to pave or curb solar panel access drives. It will be necessary to pave and curb any driveway and parking lots used for occupied offices that are located on site. All parking and vehicular traffic surfaces shall be maintained in sound condition and free of weeds, dust, trash and debris. All roads and parking areas shall meet all applicable state and local requirements, and federal ADA accessibility regulations.

16. **Inspections:** The Township will conduct annual inspections of Large Solar Energy System (SES-L) Facilities. The cost of the inspection will be funded by the Compliance and Enforcement Escrow Account. The inspections will consist of a general inspection including evaluating compliance with the Zoning Ordinance and Special Approval Permit, and any improvements or updates required. Violations of the provisions of this ordinance shall be subject to a civil infraction penalty for each day of non-compliance.
17. **Complaint Resolution:** The Solar Energy Facility owner/operator shall develop and submit a detailed Complaint Resolution Process to resolve complaints from the Township Board, Township property owners, or residents concerning the construction or operation of the Solar Energy Facility. The complaint resolution process must be approved by the Township board prior to the approval of the Special Approval Permit application. The Township Board shall appoint a three-member Complaint Resolution Committee to oversee and participate in all complaint resolution discussions or meetings between the Township property owners or residents and the Solar Energy Facility owner/operator. The Complaint Resolution Committee shall consist of one (1) Planning Commission member, one (1) member that is a qualified Watertown Township elector chosen from the community, and one (1) representative of the Solar Energy Facility operator; with the process overseen by the Township Supervisor. The Solar Energy Facility owner/operator shall provide not less than forty-eight (48) hour meeting notice to the Complaint Resolution Committee and shall provide the opportunity for the Committee to attend any and all complaint resolution discussions and meetings. The Township shall be kept apprised of all complaints and shall receive a report outlining the issue, the progress, and the resolution. Such reports shall be presented as necessary by the Complaint Resolution Committee.

The establishment of a Complaint Resolution Committee and the referral of potential violations of this ordinance thereto does not in any way limit the Township's ability to enforce compliance of this section or any township ordinance by other lawful means, including court action.

18. **Enforcement and Compliance Escrow Deposit:** In addition to the application fee (as noted under general requirements), a Large Solar Energy System (SES-L) applicant shall fund a continuing escrow deposit in the form of a cash deposit to be collected by the Township and held in a local financial institution prior to the commencement of construction of any Large Solar Energy System (SES-L). The funding of the escrow deposit shall be maintained by the Solar Energy System operator until the Solar Energy System has been permanently decommissioned and removed. The monetary amount placed by the applicant in escrow with the Township shall be estimated by the Township

to cover all reasonable costs and expenses associated with continuing enforcement of this Ordinance and the terms of the Special Approval Permit. Costs can include, but are not limited to, meeting expenses, publication and notification expenses, costs for any required reports or studies, attorney fees, and other costs as may be incurred by the Township during the application, review, and operational process. If the escrow amount paid by the applicant proves to be insufficient to cover the Township's enforcement costs, the Township may require the applicant to place additional funds into escrow with the Township.

19. **Continuing Obligations:** Failure to keep the required decommissioning financial security and enforcement escrow deposit in full force and effect at all times while a Large Solar Energy System exists or is in place shall constitute a violation of the Special Approval Permit and this Ordinance, and will subject the Large Solar Energy System applicant, owner and operator to all remedies available to the Township, including enforcement action and revocation of the Special Approval Permit. Electronic access to financial information with respect to decommissioning, security, and escrow requirements shall be available throughout the life of the project.
20. **Transfer of Ownership/Operation:** Prior to a change in the ownership or operation of a Large Solar Energy System, including, but not limited to, the sale or lease of that System or the underlying property, the current landowner, facility owner or operator shall provide written notice to the Township at least sixty (60) days prior to that change becoming effective. This notice shall inform the Township of the intended transfer of control of the Large Solar Energy System, and shall include a copy of the instrument or agreement affecting that transfer. Such an instrument or agreement shall include an express statement that the new owner or operator of the Large Solar Energy System shall not be permitted to operate that System until compliance with the terms of this Ordinance, including requirements for continuing decommissioning funds, and any other required funding has been established. To assure compliance with this section, a deed restriction must be placed on the parcel that guarantees notification of the township in the event of any change of ownership or operation.
21. **Additional Special Approval Criteria:** In addition to the requirements and standards contained in Article 17 of the Watertown Zoning Ordinance 200, regarding Special Approval in general, no Special Approval Permit request for a Large Solar Energy System (SES-L) will be met unless the Planning Commission finds that the following criteria will also be provided to the Township:
  - A. **Economic Impact Analysis** prepared by a qualified third-party that reports any expected change in the value of the subject property, expected employment during and after the construction of the facility, any expected impact on the township's tax revenues, the estimated costs to the township associated with the facility in the form of additional services, and information on any other economic benefits or burdens from the facility.
  - B. **Property Value Impact:** A report shall be provided of the impact on adjacent property values prepared by a qualified, independent third-party, such as a licensed real estate appraiser; and should include mitigation strategies for any identified adverse impacts.

- C. **On-Site Traffic Analysis:** Estimated construction jobs, estimated permanent jobs associated with the development.
- D. **Proof of Lease Agreement:** An affidavit or evidence of an agreement between the landowner and the solar facility's owner/operator confirming the owner/operator has permission for construction and operation of the Solar Energy Facility.
- E. **Environmental Impact Analysis:** An assessment of the likely significant environmental effects arising from a proposed SES-L development. The analysis shall include:
  - 1. The noise, vibration and dust from project activities, both during construction and during operation shall be evaluated.
  - 2. Identify any adverse impact on the water quality and water supply in the area.
  - 3. Identify any solid waste or hazardous waste generated by the project.
  - 4. Review the potential impacts on wildlife on the project site.
  - 5. Perform a study of the possible impact of PVHI (Photovoltaic Heat Island) effect on surrounding residential areas.

The analysis shall include plans to minimize any identified adverse impacts.

- F. **Visual Impact Assessment:** In order to preserve the "Rural Character" of the township a Landscape and Visual Impact Assessment (LVIA) is required. The LVIA shall be submitted to the Planning Commission for review prior to the Site Plan Review or the issuance of a Special Approval Permit. The assessment shall include, but not be limited to:
  - 1. Identify, evaluate and describe the existing landscape characteristics of the site and its surroundings.
  - 2. Identify affected residents and evaluate their reaction to the type of changes proposed.
  - 3. Identify and evaluate any impacts of the development and the extent they affect the viewshed.
  - 4. Establish and describe mitigation measures appropriate for the proposed development, including zone of theoretical visibility maps and an accurate visual representation of the proposed development.
- G. **Public Infrastructure:** If determined by the Township Supervisor that the project may impact the Township's public infrastructure, the applicant will be required to complete a Road Use and Repair Agreement, that includes approval by the County Road Engineer, or a Public Drainage System Protection Agreement, which requires approval from the County Drain Commissioner. These agreements shall be completed, and included at the time of application for a Special Approval Permit to the Township.
- H. **Aviation Notification:** The proposed SES-L operator shall provide proof of approval by the Sanilac County Airport Zoning board of appeals; be required to notify the Airport Manager of any airport within five nautical miles, and the Federal Aviation Administration Flight Standards District Office of the proposed Solar Energy Project. Notification shall include the facility location, size and type of system. For Solar Energy Systems located within five hundred (500') feet of an airport or within approach zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the airport traffic pattern and final approach paths,

consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.

**K: Limitations:**

The majority of land in Watertown Township is prime farmland if properly drained. While recognizing the need to contribute to environmental sustainability; in order to protect this natural resource and to protect the Master Plan's goal of preserving the rural character of the community. Small Solar Energy Systems (SES-S) are exempted from this limitation.

**L: Violations:**

Any person, firm, or corporation, or anyone acting in behalf of said person, firm, or corporation, who shall violate any of the provisions of this Ordinance, or who shall fail to comply with any of the regulatory measures or conditions of the Board of Zoning Appeals or the Planning Commission, is responsible for a municipal civil infraction and shall be subject to a fine of not more than Five Hundred (\$500.00) dollars plus court costs and fees. Each day such a violation continues shall be deemed a separate offense. The imposition of any sentence shall not exempt the offender from compliance with the requirements of this Ordinance.

**M: Severability:**

The provisions of this Ordinance are hereby declared to be severable and if any provision, section or part of this Ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall only affect the particular provisions, section or part involved in such decision and shall not affect or invalidate the remainder of such Ordinance, which shall continue in full force and effect.

**N: Adoption:**

Made and passed by the Township Board of Watertown Township, Sanilac County, Michigan, on this 4th day of January, 2022.

1. Date of Public Hearing: December 7, 2021
2. Date of Adoption by Township Board: January 4, 2022.
3. Published In: Tribune Recorder Leader
4. Date of Publication: January 12, 2022.
5. Date and Time Ordinance Shall Take Effect: January 19, 2022.

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Tammy Ross, Clerk, Watertown Township

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Scott Franzel, Supervisor, Watertown Township

**O: Certification:**

I, Tammy Ross, Clerk of the Township of Watertown, do hereby certify that Ordinance No 2022-01 was adopted by the Township Board at a regular meeting of the Township Board held at the Township Hall on January 4, 2022.

Vote on this Ordinance, four members being present, was as follows:

AYEs: Franzel, Coats, Ross

NAYs: Cambridge

I further certify that said Ordinance No. 2022-01 adopted by the Township Board on January 4, 2022 was published once in the Tribune Recorder Leader, a paper circulated in the Township of Watertown, County of Sanilac on January 12, 2022. This being the first and final day of publication of this ordinance.

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Tammy Ross, Clerk, Watertown Township