WATERFORD TOWNSHIP
ERIE COUNTY, PENNSYLVANIA

WATERFORD TOWNSHIP ZONING ORDINANCE

Ordinance #_____

An ordinance of Waterford Township, Erie County, Pennsylvania, to amend certain provisions of the Waterford Township Zoning Ordinance to include provisions for solar energy systems and uses not specifically regulated.

WHEREAS, the Board of Supervisors of Waterford Township, in the County of Erie, Commonwealth of Pennsylvania, ordained and enacted The Waterford Township Zoning Ordinance on or about November 23, 1971; and

WHEREAS, the Waterford Township Zoning Ordinance has been amended from time to time so as to further carry out the Statement of Community Development Objectives set forth in Section 102 of the Waterford Township Zoning Ordinance; and

WHEREAS, the Township desires to amend the Waterford Township Zoning Ordinance to include provisions for uses of land, watercourses and other bodies of water that are not specifically regulated by the Zoning Ordinance; and

WHEREAS, the Township desires to amend the Waterford Township Zoning Ordinance to provide for access to and use of solar energy systems; and

WHEREAS, it is the duty and function of the Waterford Township Planning Commission to prepare and recommend zoning regulations in Waterford Township; and

WHEREAS, the Waterford Township Planning Commission has determined that these amendments are necessary to establish procedures and standards for solar energy systems and to regulate uses of land, watercourses and other bodies of water that are not specifically regulated by the Waterford Township Zoning Ordinance; and

WHEREAS, on September 28, 2023, the Waterford Township Planning Commission recommended adoption of the Ordinance; and

WHEREAS, Waterford Township has received no substantial comments from the Erie County Planning Commission within thirty (30) days of submission of the Ordinance; and

WHEREAS, pursuant to public notice, the Board of Supervisors held a public hearing regarding the Ordinance on (Insert Date); and

WHEREAS, the Board of Supervisors, after consideration of comments received (or lack thereof, as the case may be), has determined that the Ordinance should not be substantially revised in whole or in part.

NOW, THEREFORE, BE IT ENACTED, by the Board of Supervisors of Waterford Township, Erie County, Pennsylvania, and by authority of same, that the Waterford Township Zoning Ordinance is hereby amended, as follows:

Part 4, Conditional Uses, shall be amended to add Section 430, Uses Not Specifically Regulated, to provide as follows:

Section 430 Uses Not Specifically Regulated

If a use clearly is not permitted by right, conditional use or as a special exception use by this Ordinance within any zoning district, the use is prohibited, except that the Board of Supervisors may permit such use as a conditional use if the applicant specifically proves to the clear satisfaction of the Board that all of the following conditions will be met:

A. Proposed use will be equal or less intensive in external impacts and nuisances than uses that are permitted in the zoning district, including, but not limited to the following:
    a. Traffic safety and generation (especially truck traffic)
    b. Noise, dust, fumes, vapors, gases, odors, glare, vibration, fire, hazardous substances and explosive hazards
    c. Amount and character of outdoor storage
    d. Late night and early morning hours of operation if the new use would be close to dwellings
    e. Compatibility with the character of surrounding uses.
B. Proposed use will be closely similar in impacts and character to uses permitted in that zoning district.
C. Use will meet all standards that apply under Section 404, Criteria for Approval of a Conditional Use.
D. Use is not specifically prohibited in that zoning district.

Part 4, Conditional Uses, shall be amended to add Section 431, Solar Energy Systems, to provide as follows:

Section 431 Solar Energy Systems

Subsection 431.01 Applicability and Effective Date

A. Section 431, Solar Energy Systems applies to solar energy systems to be installed and constructed after (insert effective date/adoption date of this amendment), and all applications for solar energy systems on existing structures or property.
B. Solar energy systems constructed prior to (insert effective date/adoption date of this amendment) shall not be required to meet the requirements of this section.

C. Any upgrades, modifications or changes that materially alter the size or placement of an existing solar energy system shall comply with the provisions of this section.

Subsection 431.02 Purpose

The purpose of Section 431 of this Ordinance is to provide for the land planning, installation and construction of solar energy systems in Waterford Township, subject to reasonable conditions that will protect the public health, safety and welfare.

Subsection 431.03 Definitions Specific to Solar Energy Systems

The following words, terms and phrases, when used in this Ordinance, unless the context indicates otherwise, shall have the following meanings ascribed to them:

Accessory Solar Energy System (ASES): An area of land or other area used for a solar energy system used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for on-site use. An accessory solar energy system consists of one (1) or more free-standing ground, or roof or wall mounted solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels.

Agrivoltaics: The co-development of the same area of land for both solar photovoltaic power and "Normal Farming Operations as defined by P.L. 454, No. 133 (1982), the Protection of Agricultural Operations from Nuisance Suits and Ordinances Act".

Glare: The effect produced by light with an intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

Ground Mounted Solar Energy System: A solar energy system that is anchored to the ground via a pole or other mounting system, detached from any other structure.

Non-Participating Landowner: Any landowner except those on whose property all or a portion of a solar energy system is located pursuant to an agreement with the solar energy system owner or operator.

Principal Solar Energy System (PSES): An area of land or other area used for a solar energy system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use. Principal solar energy systems consist of one (1) or more free-standing ground, or roof or wall mounted solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures.

Solar Energy: Radiant energy (direct, diffuse and/or reflective) received from the sun.

Solar Energy District: The area as shown on the Waterford Township Solar Energy District Map.

Solar Energy System: A solar photovoltaic cell, module/panels, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for collection, inversion, storage, and distribution of solar energy for electricity generation or transfer of stored heat.

1. **Solar Array:** A grouping of multiple solar modules with the purpose of harvesting solar energy.
2. **Solar Cell:** The smallest basic solar electric device which generates electricity when exposed to light.
3. **Solar Module:** A grouping of solar cells with the purpose of harvesting solar energy.
4. **Solar Panel:** That part or portion of a solar energy system containing one or more receptive cells or modules, the purpose of which is to convert solar energy for use in space heating or cooling, for water heating and/or for electricity.

Solar Energy System Owner (PSES Owner): The individual, group, entity or entities having an equity interest in the solar energy system, including their respective successors and assigns.

Solar Project Area: The total area of land including the solar energy system, the space between solar arrays, stormwater management area, access drives, fencing and internal access roads. The solar project area does not include any area set aside exclusively for agricultural uses and designed to be adequate for the maneuverability of typical farm equipment.

Solar Related Equipment: Items including a solar photovoltaic cell, module, panel, or array, or solar hot air or water collector device panels, lines, pumps, batteries, mounting brackets, framing and possibly foundations or other structures used for or intended to be used for collection of solar energy.

Subsection 431.04 Accessory Solar Energy Systems (ASES)

Accessory Solar Energy Systems (ASES) shall be subject to the following criteria:

A. Regulations Applicable to All Accessory Solar Energy Systems:
   1. Accessory solar energy systems shall be a permitted use in all zoning districts.
   2. Exemptions
      a. ASES with an aggregate collection and/or focusing area of 100 square feet or less are exempt from this Ordinance.
      b. ASES constructed prior to (insert effective date/adoption date of this amendment) shall not be required to meet the terms and conditions of this Ordinance. Any physical modification to an existing ASES whether or not existing prior to (insert effective date/adoption date of this amendment) that materially alters the ASES shall require approval under this Ordinance. Routine maintenance or like-kind replacements do not require a permit.
   3. The ASES shall be located, designed, and installed as per the manufacturer's specifications, as well as all zoning, building code, utility requirements, and in accordance with the National Electric Code (latest version adopted in Pennsylvania).
   4. Upon completion of installation, the ASES shall be maintained in good working order in accordance with the standards of the applicable codes under which the ASES was constructed. Failure of the property owner to maintain the ASES in good working order is grounds for appropriate enforcement action by the municipality.
   5. All on-site utility, transmission lines, and plumbing shall be placed underground to the extent feasible.

6. The owner of an ASES shall provide the Municipality written confirmation that the public utility company to which the ASES will be connected has been informed of the customer's intent to install a grid connected system and approved of such connection. Off-grid systems shall be exempt from this requirement.
7. The display of advertising is prohibited except for reasonable identification of the manufacturer of the system.
8. Glare
    a. All ASES shall be situated to prevent concentrated glare onto nearby structures or roadways. Exterior surfaces shall have a non-reflective finish.
    b. The applicant and/or operator has the burden of proving that any glare produced does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.
9. Decommissioning
    a. Each ASES and all solar related equipment shall be removed within twelve (12) months of the date when the use has been discontinued or abandoned by the system owner and/or operator, or upon termination of the useful life of same.
    b. The ASES shall be presumed to be discontinued or abandoned if no electricity is generated by such solar collector for a period of twelve (12) continuous months.
10. Permit Requirements
    a. Zoning /building permit applications shall document compliance with this Ordinance and shall be accompanied by drawings showing the location of the system on the building or property, including property lines. Permits must be kept on the premises where the ASES is constructed.
    b. Prior to the issuance of a zoning or land use permit, ASES applicants shall acknowledge in writing that the issuing of said permit shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself;
        i. The right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or
        ii. The right to prohibit the development on or growth of any trees or vegetation on such property.
    c. The zoning/building permit shall be revoked if the ASES, whether new or pre-existing, is moved or otherwise altered, either intentionally or by natural forces, in a manner which causes the ASES not to be in conformity with this Ordinance.
    d. The ASES shall be properly maintained and be kept free from all hazards, including but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare. Failure of the property owner to maintain the ASES in compliance with the foregoing provisions is grounds for appropriate enforcement actions by the municipality.

B. Roof Mounted and Wall Mounted Accessory Solar Energy Systems:
    1. A roof mounted or wall mounted ASES may be located on a principal or accessory building.

2. Notwithstanding the height limitations within the underlying zoning district:
    a. For ASES installed on a sloped roof, the highest point of the system shall not exceed the highest point of the roof to which it is attached.
    b. For a roof-mounted system installed on a flat roof, the highest point of the system shall be permitted to extend up to six (6) feet above the roof to which it is attached.
3. Wall mounted ASES that are mounted on a principal building or structure shall comply with the setbacks for principal structures in the underlying zoning district. Wall mounted ASES that are mounted on an accessory building or structure shall comply with the setbacks for accessory structures in the underlying zoning district.
4. Solar panels shall not extend beyond any portion of the roof edge.
5. Roof mounted solar panels shall be located only on rear or side-facing roofs as viewed from any adjacent street unless the applicant demonstrates that, due to solar access limitations, no location exists other than the street-facing roof, where the solar energy system can perform effectively.
6. The owner shall provide evidence certified by an appropriately licensed professional that the roof or wall-mounted system complies with the Uniform Construction Code and that the roof or wall is capable of holding the load of the ASES.

C. Ground Mounted Accessory Solar Energy Systems:
1. Within the A-1 Conservation, A-2 Agricultural, R-1 Residential and R-2 Residential Districts ground mounted ASES with a solar project area greater than 5,000 square feet shall comply with the requirements of Subsection 431.05, Principle Solar Energy Systems.
2. Within the B-1 Business, M-1 Industrial and M-1A Light Industrial Districts ground mounted ASES with a solar project area greater than one half (½) acre shall comply with the requirements of Subsection 431.05, Principle Solar Energy Systems.
3. Setbacks:
    a. A ground mounted ASES shall not be located in the required front yard setback.
    b. The minimum yard setbacks from side and rear property lines shall be shall comply with the setbacks for accessory structures in the underlying zoning district.
4. Ground mounted ASES are prohibited in front yards, between the principal building and the public street, unless authorized by the Board of Supervisors. The Board of Supervisors may authorize the installation of a ground mounted ASES in front of the principal building, outside the required front yard, if the applicant demonstrates that, due to solar access limitations, no location exists on the property other than the front yard where the solar panel can perform effectively.
5. Height:
    a. Within the R-1 Residential and R-2 Residential Districts freestanding ground mounted ASES shall not exceed 15 feet in height above the ground elevation surrounding the system.
    b. Within the A-1 Conservation, A-2 Agricultural, and B-1 Business Districts ground mounted ASES shall not exceed 20 feet in height above the ground elevation surrounding the system.

c. Within the M-1 Industrial and M-1A Light Industrial Districts ground mounted ASES shall comply with the maximum height regulations for accessory structures in the underlying zoning district.

6. Stormwater Management: Stormwater runoff from a ground mounted ASES shall be managed in accordance with the requirements of the Waterford Township Stormwater Management Ordinance.
7. Coverage: The total surface area of the solar arrays of ground mounted ASES on the property shall not exceed the maximum building coverage limitations in the underlying zoning district, but in no case shall they be more than 15 percent (15%) of the lot area.
8. Screening: Ground mounted ASES shall be screened from any adjacent property that is residentially zoned or used for residential purposes. The screen shall consist of plant materials which provide a visual screen. In lieu of a planting screen, a decorative fence meeting requirements of the zoning ordinance may be used.
9. Appropriate safety/warning signage concerning voltage shall be placed at ground mounted electrical devices, equipment, and structures. All electrical control devices associated with the ASES shall be locked to prevent unauthorized access or entry.
10. Ground-mounted ASES shall not be placed within any legal easement or right-of-way location, or be placed within any storm water conveyance system or in any other manner that would alter or impede storm water runoff from collecting in a constructed storm water conveyance system.

Subsection 431.05 Principal Solar Energy Systems (PSES)

Principal Solar Energy Systems (PSES) shall be subject to the following criteria:

A. Regulations Applicable to All Principal Solar Energy Systems (PSES):
   1. Principal Solar Energy Systems (PSES) shall be permitted as a conditional use only within the Solar Energy District, as shown on the Waterford Township Solar Energy District Map.
   2. Exemption: PSES constructed prior to (insert effective date/adoption date of this amendment), shall not be required to meet the terms and conditions of this Ordinance. Any physical modification to an existing PSES whether or not existing prior to (insert effective date/adoption date of this amendment) that materially alters the PSES shall require approval under this Ordinance. Routine maintenance or like-kind replacements do not require a permit.
   3. The PSES layout, design and installation shall conform to applicable industry standards, such as those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM),), Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electrical Testing Laboratory (ETL), Florida Solar Energy Center (FSEC) or other similar certifying organizations, and shall comply with the PA Uniform Construction Code and with all other applicable fire and life safety requirements. The manufacturer specifications for the key components of the system shall be submitted as part of the application.

4. All on-site utility, transmission and plumbing lines shall be placed underground to the extent feasible.
5. Upon completion of installation, the PSES shall be maintained in good working order in accordance with the standards of the applicable codes under which the PSES was constructed. Failure of the property owner to maintain the PSES in good working order is grounds for appropriate enforcement action by the municipality.
6. The owner of a PSES shall provide the municipality written confirmation that the public utility company to which the PSES will be connected has been informed of the customer's intent to install a grid connected system. The written confirmation shall include a statement of capacity and approval of the proposed connection.
7. No portion of the PSES shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the PSES provided they comply with the prevailing sign regulations.
8. Glare
    a. All PSES shall be situated to prevent concentrated glare onto nearby structures or roadways. Exterior surfaces shall have a non-reflective finish.
    b. The applicant and/or operator has the burden of proving that any glare produced does not have a significant adverse impact on neighboring or adjacent uses either through siting or mitigation.
9. A noise management plan that addresses noise produced during construction and during the facilities operation, to be approved by the municipality, shall be included with the application. The plan, at a minimum, shall separately address noise during construction and facility operations and include mitigation, an assessment of the noise that will emulate at the perimeter fence, and the contact information for the individual(s) who is responsible for implementation and compliance both during construction and operations. The volume of sound inherently and recurrently generated shall be controlled so as not to cause a nuisance to adjacent uses. During operation of the PSES, audible sound shall follow best management practices regarding sound, as measured at the property line on a non-participating landowner's property.
10. Use of Public Roads
    a. The applicant shall identify all state and local public roads to be used within the municipality to transport equipment and parts for construction, operation or maintenance of the solar energy system.
    b. The municipal engineer, or a qualified third party engineer hired by the municipality and paid for by the applicant shall document road conditions prior to construction. The engineer shall document road conditions again within thirty (30) days after construction is complete or as weather permits.
    c. The municipality may require that the developer bond the road in compliance with state and local regulations.
    d. Any road damage caused by the applicant or its contractors shall be promptly repaired at the applicant's expense.

11. Decommissioning
    a. The PSES owner is required to notify the municipality immediately upon cessation or abandonment of the operation. The PSES shall be presumed to be discontinued or abandoned if no electricity is generated by such system for a period of twelve (12) continuous months. The PSES is not presumed to be discontinued or abandoned if the PSES owner has temporarily ceased its operation, but is in the process of transferring ownership and management of the PSES.
    b. If it is determined that the PSES has permanently ceased it operation, or has been abandoned, the PSES owner shall then have twelve (12) months in which to dismantle and remove the PSES including all solar related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, roads, foundations and other associated facilities from the property.
    c. To the extent possible, the materials shall be re-sold or salvaged. Materials that cannot be re-sold or salvaged shall be disposed of at a facility authorized to dispose of such materials by federal or state law.
    d. Any soil exposed during the removal shall be stabilized in accordance with applicable erosion and sediment control standards.
    e. Any access drive paved aprons from public roads may remain for future use unless directed otherwise by the landowner.
    f. The PSES site area shall be restored to its pre-existing condition, suitable for its prior use, except the landowner may authorize, in writing, any buffer landscaping or access roads installed to accommodate the PSES to remain.
    g. Any necessary permits, such as Erosion and Sedimentation and NPDES permits, shall be obtained prior to decommissioning activities.
    h. At the time of issuance of approval for the construction of the PSES, the owner shall provide financial security in the form and amount acceptable to the municipality and in favor of the municipality, to secure its obligations under this Ordinance.
        i. The PSES developer shall, at the time of the zoning application, provide the municipality with an estimate of the cost of performing the decommissioning activities required herein. The solar project owner shall provide financial security of 110% of the estimated cost of decommissioning. The estimate may include an estimated salvage and resale value, discounted by a factor of 10%. The decommissioning cost estimate formula shall be: gross cost of decommissioning activities minus 90% credit of salvage and resale value equals the decommissioning cost estimate.
        ii. On every 5th anniversary of the date of providing the decommissioning financial security, the PSES owner shall provide an updated decommissioning cost estimate, utilizing the formula set forth above with adjustments for inflation and cost and value changes. If the decommissioning security amount increases, the PSES owner shall remit the increased financial security to the

municipality within 30 days of the approval of the updated decommissioning security estimate by the municipality. If the decommissioning security amount decreases by greater than 10%, the municipal owner shall release from security any amounts held in excess of 110% of the updated decommission cost estimate.

iii. Decommissioning security estimates shall be subject to review and approval by the municipality, and the PSES developer/owner shall be responsible for administrative, legal, and engineering costs incurred by the municipality for such review.

iv. The decommissioning security may be in the form of cash deposit, surety bond, irrevocable letter of credit, cashier's check, or escrow amount from a federal or Commonwealth chartered lending institution in the amount of 110% of the total proposed decommission cost estimate and in a form satisfactory to the municipality and their solicitor.

v. Prior to final approval of any plans for a PSES, the PSES developer shall enter into a decommissioning agreement with the municipality outlining the responsibility of parties under this agreement as to the decommissioning of the PSES.

12. Plan Requirements

a. The PSES application shall include a site plan as required by Section 402 of the Waterford Township Zoning Ordinance.

b. Additional Site Plan Requirements: In addition to the requirements of Section 402, the site plan shall contain the following:

i. A narrative describing the proposed PSES, including an overview of the project; the project location; the approximate generating capacity of the PSES; the approximate number, representative types and height or range of heights of the panels or other solar related equipment to be constructed or installed, including their generating capacity, dimensions and respective manufacturers, and a description of ancillary facilities.

ii. An affidavit or similar evidence of agreement between the landowner(s) of the real property on which the PSES is to be located and the PSES owner, demonstrating that the PSES owner has the permission of the landowner(s) to apply for necessary permits or approvals for construction and operation of the PSES.

iii. Identification of the property, properties or portions thereof on which the proposed PSES will be located, and the properties adjacent to where the PSES will be located.

iv. A site plan showing the planned location of solar related equipment, property lines, setback lines, access road and turnout locations, substation(s), electrical cabling from the solar energy system to the substation(s), ancillary equipment, buildings, and structures, including associated distribution

and/or transmission lines, and layout of all structures within the geographical boundaries of any applicable setback.

v. The PSES owner shall provide written confirmation that the public utility company to which the PSES will be connected has been informed of the PSES owner's intent to install a grid connected system, and has approved such connection.

vi. The PSES owner shall provide the name and phone number of a person responsible for the public to contact with inquiries and complaints related to the PSES. The PSES owner shall make reasonable efforts to respond to the public's inquiries and complaints.

vii. An affidavit by the PSES owner shall be included on the site plan, acknowledging that approval of the site plan shall not and does not create in the property owner(s), its, his, her or their successors and assigns in title or, create in the property itself: (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

viii. Documents related to decommissioning, including a decommissioning agreement with the municipality, a schedule for the decommissioning, and financing security.

ix. Other relevant studies, reports, certifications and approvals as may be reasonably requested by the municipality to ensure compliance with this Ordinance.

13. Permit Requirements

a. Zoning /building permit applications shall document compliance with this Ordinance and shall be accompanied by drawings showing the location of the PSES on the building or property, including property lines. Permits must be kept on the premises where the PSES is constructed.

b. The PSES applicant shall submit an approved stormwater management plan that demonstrates compliance with the Waterford Township Stormwater Management Ordinance.

c. The installation of PSES shall be in compliance with all applicable permit requirements, codes, and regulations.

d. Participating Landowner Agreement: The Permit application shall include an affidavit or similar evidence of agreement between the landowner(s) of the real property on which the PSES is to be located and the PSES owner, demonstrating that the PSES owner has permission of the landowner(s) to apply for necessary permits or approvals for construction and operation of the PSES.

e. Prior to the issuance of a zoning or land use permit, PSES applicants shall acknowledge in writing that the issuing of said permit shall not and does not create in the property

owner, its, his, her or their successors and assigns in title or, create in the property itself;

i. The right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or
ii. The right to prohibit the development on or growth of any trees or vegetation on such property.

This acknowledgement shall be submitted to the municipality and placed on any required subdivision and/or land development plans.

f. Routine maintenance or like-kind replacements do not require a permit.
g. The PSES owner and/or operator shall repair, maintain and replace the PSES and related solar equipment during the term of the permit in a manner consistent with industry standards as needed to keep the PSES in good repair and operating condition.

B. Roof Mounted and Wall Mounted Principal Solar Energy Systems:
1. PSES mounted on roofs or walls of any building shall be subject to the maximum height regulations of the underlying zoning district.
2. Notwithstanding the height limitations within the underlying zoning district, roof mounted and wall mounted PSES shall comply with the following height limitations:
a. For PSES installed on a sloped roof, the highest point of the system shall not exceed the highest point of the roof to which it is attached.
b. For a roof-mounted system installed on a flat roof, the highest point of the system shall be permitted to extend up to six (6) feet above the roof to which it is attached.
3. For roof and wall mounted systems, the applicant shall provide evidence that the plans comply with the Uniform Construction Code and that the roof or wall is capable of holding the load imposed on the structure. Applications for roof mounted PSES shall be accompanied by engineer stamped plans that demonstrate the structural sufficiency of the roof to hold the weight of the PSES.

C. Ground Mounted Principal Solar Energy Systems:
1. Minimum Lot Size: The PSES shall meet the minimum lot size requirements of the underlying zoning district.
2. Setbacks:
a. PSES shall comply with the setbacks of the underlying zoning district for principal structures, unless specified otherwise.
b. PSES shall be located a minimum of 250 feet from adjacent residential districts.
c. PSES shall be located a minimum of 250 feet from any residential dwelling or occupied building located on a non-participating landowner's property. Property owners of non-participating properties may waive this setback requirement by signing a waiver that sets forth the applicable setback provision(s) and the proposed changes. However, in no case shall setbacks from the non-participating property lines be less

than the required setbacks for a principal structure within the underlying zoning district.

d. Required fences shall be considered principal structures for purposes of setbacks.
e. No side or rear setback shall be required where a PSES spans across lot lines, provided each landowner has signed a written waiver of the lot line setback.
f. Noise generating equipment, including but not limited to electricity storage equipment, inverters and transformers shall be located a minimum of 150 feet from all road rights-of-way and property lines of a non-participating landowner's property. Property owners of non-participating properties may waive this setback requirement by signing a waiver that sets forth the applicable setback provision(s) and the proposed changes. However, in no case shall setbacks from the non-participating property lines be less than the required setbacks for a principal structure within the underlying zoning district.

3. Height: Ground mounted solar related equipment shall not exceed 20 feet in height above the ground elevation surrounding the systems, except that there shall be no maximum height restrictions for structures that support the electric conveyance lines which connect the solar energy system to the high-voltage electric interconnection grid.
4. Solar Related Equipment shall not be located in or on the following:
    a. Floodways, as identified in the FEMA FIRM mapping.
    b. Regulated natural and man-made drainage corridors, extending twenty-five (25) feet from the centerline of any such drainage feature, unless the Board of Supervisors at time of plan approval determines a lesser setback would create less impacts to the overall project.
    c. Wetlands.
    d. Riparian buffers extending twenty-five (25) feet from any wetland or body of water, unless the Board of Supervisors at the time of plan approval determines a lesser setback would create less impacts to the overall project.
    e. Slopes in excess of fifteen percent (15%), unless the Board of Supervisors at the time of plan approval determines location in an area in excess of 15% would create less impacts to the overall project.
    f. Legal easements and rights-of-way.
5. Woodland areas: If the removal of trees is necessary in order to create a PSES, such removal shall be as limited as possible. Every mature tree removed shall be replaced by the Applicant at a location approved by the municipality at a ratio of two (2) new trees for every one (1) mature tree removed. The new trees shall be a similar species to the trees that have been removed.
6. Stormwater Management:
    a. Stormwater runoff from a ground mounted PSES shall be managed in accordance with the requirements of the Waterford Township Stormwater Management Ordinance.
    b. Where Solar Panels are mounted above the ground surface allowing for vegetation below the panels, the horizontal area of the panel may be considered a Disconnected Impervious Area (DIA), and therefore, will have no increase from the pre-

development to post-development runoff coefficient (pervious surface). The horizontal area of the panel can only be considered a DIA if the following conditions apply:

i. Where natural vegetative cover is preserved and/or restored utilizing low impact protection techniques from the Pennsylvania Department of Environmental Protection Stormwater Best Management Practices Manual, including, but not limited to the following: minimizing the total disturbed area, minimizing soil compaction in disturbed areas, and re-vegetating and re-foresting disturbed areas using native species.

ii. Where the vegetative cover has a minimum uniform 70% perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation.

1. For panels located on slopes of 0 to 15% a minimum 4" height of vegetative cover shall be maintained.
2. Panels located on slopes greater than 15% cannot be considered a DIA.
3. Vegetated areas shall not be subject to chemical fertilization or herbicide/pesticide application, except for those applications necessary to establish the vegetative cover or to prevent invasive species and in accordance with an approved erosion and sedimentation control plan.
4. Agrivoltaics may be used provided that:
    a. only shade tolerant crops are used;
    b. a written erosion and sediment control plan is developed for agricultural plowing or tilling activities or a portion of the overall farm conservation plan identifies BMPs used;
    c. any grazing, cutting or mowing of the agricultural crop is limited to the accepted best management practice height for that crop;
    d. application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs of the crop(s);
    e. if the property will be used for grazing of livestock, and/or manure application to crop land, a manure management plan must be developed.

iii. Where the Solar Panels within a Solar Array are arranged in a fashion that:

1. allows the passage of runoff between each solar panel, thereby minimizing the creation of concentrated runoff; and/or
2. allows for the growth of vegetation beneath the panel and between the solar arrays.

c. The horizontal area of a solar panel or solar array that cannot meet all the conditions to be considered a DIA shall be treated as impervious area. These areas shall be included in the pre-development to post-development runoff analysis as impervious

area to determine the need for Post-Construction Stormwater Management (PCSM) best management practices.

i. Use of gravel is permissible under a panel or in the receiving downhill flow path; however, the use of gravel would not allow the horizontal area of the solar panel or solar array to be considered as a DIA.

ii. All impervious areas associated with the PSES such as roadways and support buildings cannot be considered as DIAs and shall follow normal protocols when performing the PCSM stormwater analysis.

7. Buffer and Screening Requirements: Ground mounted solar energy facilities shall be buffered and screened from adjacent residential zoning districts, residential uses on surrounding properties, platted residential lots, and public roads in accordance with the following requirements:

   a. Vegetative buffering shall be installed to screen and buffer adjacent residential zoning districts, residential uses on surrounding properties, platted residential lots, and public roads from the PSES. The Board of Supervisors may waive or modify this requirement in areas where it determines that the retention of existing trees within the vegetative buffering area may constitute the required vegetative buffer or where the Board determines that the solar panels cannot be viewed from adjacent residential zoning districts, residential uses on surrounding properties, platted residential lots, and public roads.

   b. The vegetative buffering shall be installed along the exterior side of the fencing. All required vegetative buffering shall be located within fifty (50) feet of the required fencing.

   c. Vegetative buffering should be designed to emulate the mix of native species and appearance of existing tree lines, hedge rows, and wooded areas already in existence within the landscape where the PSES is proposed. The Applicant shall access the species mix and characteristics found in existing tree lines, hedge rows, and wooded areas surrounding the PSES and document that the vegetative buffering is designed to emulate these characteristics.

   d. Vegetative buffering shall be selected to provide year-round buffering and shall be of sufficient height, density, and maturity to screen the facility from visibility, as set forth herein within thirty-six (36) months of the installation of the PSES.

   e. A combination of natural topography and vegetation may serve as a buffer, provided that the PSES will not be visible from adjacent residential zoning districts, residential uses on surrounding properties, platted residential lots, and public roads. Earthen berms may not be created to serve as a buffer.

8. Ground-mounted PSES shall not be placed within any legal easement or right-of-way location, or be placed within any storm water conveyance system or in any other manner that would alter or impede storm water runoff from collecting in a constructed storm water conveyance system

9. Access
    a. Stabilized access drives, with a dust-free surface, shall be installed from a state or local road in order to allow maintenance and emergency management vehicles to access the PSES site. The minimum cartway width shall be fourteen (14) feet. The PSES developer shall obtain a permit from the appropriate jurisdiction for the construction of the access road.
    b. Solar arrays and other solar related equipment shall be setback a minimum of twenty (20) feet from the inside perimeter fencing to allow for maintenance and emergency vehicles.
    c. Spacing between solar array rows shall allow access for maintenance and emergency vehicles.
10. Public Safety:
    a. The applicant shall provide a copy of the project summary and site plan to local emergency services, including paid or volunteer fire department(s).
    b. Upon request, the applicant shall cooperate with emergency services to develop and coordinate implementation of an emergency response plan for the solar energy system.
    c. Ground mounted solar energy systems shall be enclosed by a fence, barrier or other appropriate means to prevent or restrict unauthorized persons or vehicles from entering the property.
    d. A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence surrounding the PSES informing individuals of potential voltage hazards.
11. The ground mounted PSES shall not be artificially lighted except to the extent required for safety or by an applicable federal, state, or local authority. Any lighting shall be directed downward so as to minimize negative impacts to adjacent uses.

The Waterford Township Solar Energy District Map, attached hereto, is made a part hereof this Ordinance.

Effective Date: This Ordinance shall become effective immediately upon adoption.

ENACTED AND ORDAINED, this _____day of _____, 2023.

WATERFORD TOWNSHIP
BOARD OF SUPERVISORS

_____

Flory Kondzielski, Chair

_____

David Senger

_____

Darren Smith

Attest:_____