

Woodstown-Pilesgrove Joint Environmental Commission

Statement on Model Light Pollution Ordinance

The draft light pollution ordinance was prepared by the Woodstown-Pilesgrove Joint Environmental Commission (WPEC). The purpose of this measure is to minimize problems associated with improperly designed and installed outdoor lighting, especially problems of glare, light trespass, compromised safety and security, inefficient energy consumption, and adverse environmental and aesthetic impacts.

This measure is consistent with the recommendations of the New Jersey Light Pollution Study Commission, issued in 1996. It incorporates elements of two models: the Model Outdoor Lighting Ordinance for Cities and Towns, prepared by New England Light Pollution Advisory Group and the Framework for Outdoor Lighting Improvement Ordinances, prepared by the Indiana Council on Outdoor Lighting Education. The WPJEC also reviewed light pollution ordinances from several New Jersey municipalities.

To support agricultural viability and right-to-farm measures, the draft ordinance safeguards agriculture by including broad exceptions from the requirements for farming activities, agricultural fairs and farm markets.

To support smart growth principles, this ordinance promotes implementation of several of the statewide goals and policies of the 2001 New Jersey State Development and Redevelopment Plan (The State Plan), specifically:

- **Biological Diversity , Policy 21 Dark Areas** – Designate areas determined to provide nocturnal benefits to flora and fauna or to be especially suitable for astronomical observations as “dark areas” where lighting is prohibited or limited. (Page 155
- **Design , Policy 15, Lighting** - In the interest of improved safety, energy conservation and maintenance of environmental integrity, outdoor roadway and area lighting should be designed, installed and maintained to minimize misdirected and upward light and optimize the use of the lighting system. (Page 178)
- **Design , Policy 16, Reducing the visual impacts of the Automobile** – Reduce the visual impacts of the automobile and its related facilities on the landscape.... downscale lighting systems and intensities,... (Page 179); and
- **Design, Policy 18, Redesigning Sprawl** – Reduce or eliminate signs of visual clutter including.... poorly directed lighting. (Page 180)

In addition to public safety and security considerations, the ordinance promotes lighting infrastructure that protects wildlife resources, including migratory waterfowl, songbirds and bats. Our community is fortunate to be situated along a major migratory flyway and to have thousands of acres of land devoted to wildlife conservation. Light pollution is known to diminish wildlife habitat quality and disrupt wildlife migration, orientation, feeding, breeding and biological rhythms.

**Woodstown -Pilesgrove Joint Environmental Commission
Light Pollution Ordinance**

**ARTICLE [number]
Outdoor Lighting**

§ [section number]. Statement of Need and Purpose

Good outdoor lighting at night benefits everyone. It increases safety, enhances the Community's night time character, and helps provide security. New lighting technologies have produced lights that are extremely powerful, and these types of lights may be improperly installed so that they create problems of excessive glare, light trespass, and higher energy use. Excessive glare can be annoying and may cause safety problems. Light trespass reduces everyone's privacy, and higher energy use results in increased costs for everyone. This ordinance recognizes the benefits of outdoor lighting and provides clear guidelines for its installation so as to help maintain and compliment the Town's character. Appropriately regulated, and properly installed, outdoor lighting will contribute to the safety and welfare of [Municipality's] residents. This ordinance is intended to reduce the problems created by improperly designed and installed outdoor lighting. It will help to eliminate problems of glare, minimize light trespass, and help reduce the energy and financial costs of outdoor lighting.

§ [section number]. Definitions.

For the purposes of this article, terms used shall be defined as follows:

ACRE or NET ACRE Any 43,560 contiguous square feet or total of portions thereof within the same parcel if dissected by existing roads or land dedicated for roads.

DIRECT LIGHT Light emitted directly from the lamp, off of the reflector or reflector diffuse or through the refractor or diffuser lens, of a luminaire.

FIXTURE The assembly that houses the lamp(s) or bulb (s) in a lighting system and can include all or some of the following elements designed to give light output: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror and/or a refractor or lens.

FLOOD or SPOTLIGHT Any light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

FOOTCANDLE Unit of illuminance (brightness) equal to one lumen per square foot.

FULLY SHIELDED LIGHTS or FULL CUTOFF Outdoor light fixtures shielded or constructed so that no light rays are emitted by the installed fixture at angles above the horizontal plane as certified by a photometric test report.

GLARE Light emitting from a luminaire with an intensity great enough to reduce a viewers ability to see; any annoyance visual impairment or discomfort experienced by an observer with a direct line of sight to a light source, or from high-angle lights emanating from a source.

GRANDFATHERED LUMINAIRES Luminaires not conforming to this section that were in place at the time this section was voted into effect. When an ordinance grandfathers a luminaire, it means that such already existing outdoor lighting does not need to be changed unless a specific period is specified for adherence to the section.

HEIGHT Of LUMINAIRE The vertical distance from the ground directly below the center line of the luminaire to the lowest direct-light-emitting part of the luminaire.

HIGH INTENSITY DISCHARGE LIGHTING A family of bulb type including mercury vapor, metal halide and high pressure or low pressure sodium, which glow when an electric current is passed through a gas mixture inside the bulb.

HORIZONTAL OR VERTICAL FOOTCANDLES The amount of light striking a vertical or horizontal plane.

INDIRECT LIGHT Direct light that has been reflected or has scattered off of other surfaces

INVENTORY OF LIGHTING A list of lamps indicating the bulb type, bulb wattage and manufacturer through which the rated lumens can be determined.

LAMP The component of a luminaire that produces the actual light.

LIGHT SOURCE The bulb and lens, diffuser, or reflective enclosure

LIGHT TRESPASS Light projected by a luminaire beyond the boundaries of the property on which it is located.

LUMEN A unit of luminous flux. One footcandle is one lumen per square foot. For the purposes of this section, the lumen-output values shall be the initial lumen output ratings of a lamp.

LUMINAIRE This is a complete lighting system, including a lamp or lamps and a fixture.

NON-CUTOFF A light fixture which does not cut off all upward transmission of light

OUTDOOR LIGHTING The nighttime illumination of an outside area or object by any man-made device located outdoors that produces light by any means.

TEMPORARY OUTDOOR LIGHTING The specific illumination of an outside area or object by any man-made device located outdoors that produces light by any means for a period of less than seven days, with at least 180 days passing before being used again.

§ [section number]. Regulations.

- (1) All public and private outdoor lighting installed in the [Municipality] shall be in conformance with the requirements established by this section. All previous language in [Municipality] bylaws and ordinances regarding outdoor lighting is replaced with this section.

- (2) The style of the light and the light standard shall be consistent with the architectural style of the principal building.
- (3) Control of glare; luminaire design factors (except in the Highway Commercial Zoning Districts).
 - (a) Any luminaire with a lamp or lamps rated at a total of more than 1,800 lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than 900 lumens, shall not emit any direct light above a horizontal plane through the lowest direct-light-emitting part of the luminaire.
 - (b) Any luminaire with a lamp or lamps rate at a total of more than 1,800 lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than 900 lumens, shall be mounted at a height equal to or less than the value $3 + (D/3)$, where D is the distance in feet to the nearest property boundary. The maximum height of the luminaire may not exceed 25 feet.
- (4) Light Trespass
 - (a) The maximum illumination at five feet inside an adjacent residential parcel or public right-of-way, or beyond, from light emitted from a light source, other than light sources from sports and recreational facilities, is .1 horizontal footcandles and .1 vertical footcandles.
- (5) Exceptions to control of glare.
 - (a) Any luminaire with a lamp or lamps rated at a total of 1,800 lumens or less, and all flood or spot luminaires with a lamp or lamps rated at 900 lumens or less, may be used without restriction to light distribution or mounting height, except that if any spot of flood luminaire rated 900 lumens or less is aimed, directed or focused such as to cause direct light from the luminaire to be directed toward residential buildings on adjacent or nearby land, or to create glare perceptible to persons operating motor vehicles on public ways, the luminaire shall be redirected or its light output controlled as necessary to eliminate such conditions.
 - (b) Luminaires used for public roadway illumination may be installed at a maximum height of 25 feet and may be positioned at that height up to the edge of any bordering property.
 - (c) All temporary emergency lighting needed by the Police or Fire Departments or other emergency or municipal services, as well as all vehicular luminaires, shall be exempt from the requirements of this section.
 - (d) All hazard warning luminaries required by federal regulatory agencies are exempt from the requirements of this section, except that all luminaires used must be red and must be shown to be as close as possible to the federally required minimum lumen output requirement for the specific task.

- (e) Luminaires used primarily for sign illumination may be mounted at any height to a maximum of 25 feet, regardless of lumen rating.
 - (f) The illumination of the American flag is excluded from the provisions of this section and is expressly permitted.
 - (g) Luminaires used during and for the planting, protection, treatment, harvesting, packing and direct marketing of crops, feeding and tending of livestock and other periodic agricultural activities are permitted
 - (h) Law governing conflicts. Where any provision of federal, state, county or town statutes, codes, or laws conflicts with any provision of this section, the most restrictive shall govern unless otherwise regulated by law.
- (6) Outdoor advertising signs.
- (a) Top-mounted fixtures required. Lighting fixtures used to illuminate an outdoor advertising sign shall be mounted on the top of the sign structure when such lighting is greater than 100 watts per side. All such fixtures shall comply with the shielding requirements of Subsection B(2). Bottom-mounted outdoor advertising sign lighting shall not be used except in the Highway Commercial Zoning Districts or for lighting less than 100 watts.
 - (b) Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding. Dark backgrounds with light lettering or symbols are preferred to minimize detrimental effects. In no event shall a sign be placed or illuminated so as to permit the illumination therefrom to be directed upon any adjacent right-of-way or public or private premises so as to cause glare that may constitute a nuisance or traffic hazard.
 - (c) Illuminated on-site advertising signs shall be turned off after 10:30 p.m. or upon closing if after 10:30 p.m.
 - (d) Compliance limit. Existing outdoor advertising structures shall be grandfathered unless and until such sign is modified, moved or changed in a significant way. At such time, said sign shall be brought into compliance with these regulations.
- (7) Sports and recreational facilities. Any light source permitted by this section may be used for lighting of outdoor recreational facilities (public or private), such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts or show areas, provided all of the following conditions are met:
- (a) All fixtures used for event lighting shall be fully shielded to minimize uplighting spill light and glare and may exceed 25 feet in height as necessary, but shall not exceed 75 feet in height.
 - (b) All outdoor sporting or entertainment events shall be scheduled so as to complete before, or as near 10:30 p.m. as practical, but under no circumstance shall any illumination of the playing or event area be permitted after 11:00 p.m. This requirement does not apply to agricultural fairs and shows.

- (c) No recreational facility lighting shall be located within 100 feet of any residence
- (8) All-night lighting.
- (a) Outdoor lighting at places of business or public venues, except for security, shall be turned off no later than one hour after closing. Such lights should be confined to that needed for basic security. The lights of vacant parking lots shall not remain lighted except for illuminating entryways by the fixtures closest to building entrances.
- (9) Prohibitions.
- (a) Laser source lights and searchlights. The use of laser source light or the operation of a searchlight or any similar high-intensity light for outdoor advertising or entertainment, when projected above the horizontal, is prohibited without the approval of the [Municipal Governing Body].
 - (b) Flashing lights and signage. No flashing, pulsating, animated, moving or strobe-type lighting or signage that creates a hazard or public nuisance is permitted.
 - (c) Outdoor Advertising Off -Site Signs. Electrical illumination of outdoor advertising off-site signs is prohibited between 10:30 p.m. and sunrise.
 - (d) Communications tower lighting. The nighttime use of white lighting or white strobe lighting is prohibited, unless the applicant can demonstrate that the Federal Aviation Administration requires such lighting
- (10) Temporary outdoor lighting.
- (a) The temporary use of low wattage or low voltage lighting for public festivals, celebrations and the observation of holidays are exempt, except where they create a hazard or nuisance from glare. Light Trespass requirements set forth in § [section number], subsection (4)(a) remain in effect .
 - (b) Any temporary outdoor lighting that conforms to the requirements of this section shall be allowed. Nonconforming temporary outdoor lighting may be permitted by the Planning Board after considering:
 - [1] The public and/or private benefits that will result from the temporary lighting;
 - [2] Any annoyance or safety problems that may result from the use of the temporary lighting; and
 - [3] The duration of the temporary nonconforming lighting.

- (c) The applicant shall submit a detailed description of the proposed temporary nonconforming lighting to the Planning Board, which shall consider the request at a duly called meeting of the Planning Board. Prior notice of the meeting of the Planning Board shall be given to the applicant. The Planning Board shall render its decision on the temporary lighting request within two weeks of the date of the meeting. A failure by the Planning Board to act on a request within the time allowed shall constitute a denial of the request.

§ [section number]. Effective date and grandfathering of nonconforming luminaires.

- (1) This section shall take effect immediately upon approval by the [Municipal Governing Body] of the [Municipality] at a regularly scheduled meeting and shall supersede and replace all previous ordinances pertaining to outdoor lighting.
- (2) All luminaires lawfully in place prior to the date of the section shall be grandfathered. However, any luminaire that replaces a grandfathered luminaire, or any grandfathered luminaire that is moved, must meet the standards of this section.
- (3) Grandfathered luminaires which do not comply with this section and provide for re-aiming of the fixture shall be aimed in compliance with this ordinance
- (4) Grandfathered luminaires that direct light toward streets or parking lots that cause disability glare to motorists or cyclists should be either shielded or redirected within 90 days of notification so that the luminaires do not cause a potential hazard to motorists or cyclists.
- (5) Any applicant seeking any approvals from the Planning Board or seeking a zoning or construction permit shall be required to replace or otherwise modify any nonconforming luminaries on the parcel of land to meet the requirements of this section.

§ [section number]. New subdivision and site plan construction.

- (1) Submission contents. The applicant for any permit required by any provision of the laws of this jurisdiction in connection with proposed work involving outdoor lighting fixtures shall submit (as part of the application for permit) evidence that the proposed work will comply with this section. The submission shall contain but shall not necessarily be limited to the following, all or part of which may be part or in addition to the information required elsewhere in the laws of this jurisdiction upon application for the required permit:
 - (a) Plans indicating the location on the premises and the type of illuminating devices, fixtures, lamps, supports, reflectors and other devices.
 - (b) Description of the illuminating devices, fixtures, lamps, supports, reflectors and other devices and the description may include, but is not limited to, catalog cuts by manufacturers and drawings (including sections where required).
 - (c) Photometric data, such as that furnished by manufacturers or similar, showing the angle of cutoff or light emissions.

- (2) Additional submission. The above required plans, descriptions and data shall be sufficiently complete to enable the plan examiner to readily determine whether compliance with the requirements of this section will be secured. If such plans, descriptions and data cannot enable this ready determination by reason of the nature or configuration of the devices, fixtures or lamps proposed, the applicant shall additionally submit as evidence of compliance to enable such determination such certified reports of tests as will do so, provided that these tests shall have been performed and certified by a recognized testing laboratory.
- (3) Subdivision plat certification. If any subdivision proposes to have installed street or other common or public area outdoor lighting, the final plat shall contain a statement certifying that the applicable provisions of the [Municipality] outdoor lighting section will be adhered to.
- (4) Lamp or fixture substitution. Should any outdoor light fixture, or the type of light source therein, be changed after the permit has been issued, a change request must be submitted to the Building Official for his approval, together with adequate information to assure compliance with this section, which must be received prior to substitution.

§ [section number]. Development lighting standards.

- (1) Streetlights. Streetlights shall be provided at all road intersections, street curves and cul-de-sac as deemed necessary by the approving authority for the protection of health, safety and welfare. The developer shall be responsible for the provision of streetlighting in accordance with § [section number].
- (2) Lighting for nonresidential uses. Outdoor lighting shall be provided on the building and in parking areas for security and safety purposes. A minimum illuminance of 1.5 footcandles shall be provided at intersections and 1.0 footcandles shall be provided for the entire parking area. Average illuminance shall not exceed 2.5 footcandles. Where a project site abuts a residential use or zoning district, the Planning Board may waive the minimum parking area illuminance requirement to a minimum of 0.5 footcandles for the entire parking area. Light Trespass requirements set forth in § [section number], subsection (4)(a) remain in effect .

§ [section number]. Notification requirements.

- (1) The [Municipality] building permit shall include a statement asking whether the planned project will include any outdoor lighting.
- (2) Within 30 days of the enactment of this section, the [Municipality] shall send a copy of the outdoor lighting section, with cover letter, to [Atlantic City Electric Company] and to all electricians within [Salem and Gloucester] Counties

§ [section number]. Violations, legal actions and penalties.

- (1) Violation. It shall be a civil infraction for any person to violate any of the provisions of this section. Each and every day during which the violation continues shall constitute a separate offense.

- (2) Violations and legal actions. If, after investigation, the Code Enforcement Officer finds that any provision of the section is being violated, he shall give notice by hand delivery or by certified mail, return receipt requested, of such violation to the owner and/or to the occupant of such premises, demanding that violation be abated within 30 days of the date of hand delivery or of the date of mailing of the notice. If the violation is not abated within the thirty-day period, the Code Enforcement Officer may institute actions and proceedings, either legal or equitable, to enjoin, restrain or abate any violations of this section and to collect the penalties for such violations.
- (3) Penalties. A violation of this section, or any provision thereof, shall be punishable by a civil penalty of not less than \$50 nor more than \$1,000 for any individual (and not more than \$10,000 for any corporation, association or other legal entity) for each violation. The imposition of a fine under this section shall not be suspended. Each day of violation after the expiration of the thirty-day period provided in Subsection 2 shall constitute a separate offense for the purpose of calculating the civil penalty.
- (4) All other ordinances and parts of ordinances of [Municipality] heretofore adopted that are inconsistent with any of the terms and provisions of this section, including by description but not limitation, are hereby repealed to the extent of inconsistency.
- (5) Severability. If the provisions of any section, subsection, paragraph, subdivision or clause of this section, or other ordinance enacted together with this section shall be judged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of same and, to this end, the provisions of each section, subsection, paragraph, subdivision or clause of this section, and the ordinances reenacted together with this section, are hereby declared to be severable.