

The Wisconsin Model Exterior Lighting Ordinance

March 2003

Introduction –

A lighting ordinance is how a community expresses its expectation for quality lighting. If it is well written, implemented and enforced, the amount of improvement that can be achieved for most communities is phenomenal. Effective shielding standards, as recommended in this model ordinance, can reduce the amount of light escaping into the sky by fifty percent or more, compared to typical unregulated lighting practice. In the majority of cases, these shielding standards will also virtually eliminate glare. In applications where over-lighting has become a common practice (e.g. service station canopies and parking lots), the overall lighting limits recommended in *The Wisconsin Model Exterior Lighting Ordinance*, expressed as “lumens per acre caps”, will reduce unnecessary lighting, glare and stray light by even greater amounts.

Quality lighting returns a sense of balance to the night, and gives a hospitable appearance to our towns and cities when the sun goes down. Quality lighting brings other substantial benefits as well. Lack of glare and excessive illumination improve visibility, especially to the aging eye. Elimination of wasted light saves money, energy and resources, and reduces air pollution, water pollution and carbon dioxide emissions caused by energy production and resource extraction.

Unlike other forms of pollution, the elimination of light pollution in all its forms actually saves money.

Quality lighting costs less than bad lighting, everyone wins when lighting is done right. All of us live under the sky, and all of us need quality exterior lighting. Careless use of exterior lighting damages the nighttime environment for everyone, often decreasing security and safety and creating hazards and distraction where none existed without the lighting.

Using the Wisconsin Model Exterior Lighting Ordinance –

The *Wisconsin Model Exterior Lighting Ordinance* does not intend to offer a single solution, appropriate for all communities or situations. It offers instead a guide describing issues relevant to the control of the obtrusive aspects of exterior lighting, and a list of effective regulatory language to mitigate these aspects. The Ordinance is intended for use by a community of any size seeking to write a new, or update an existing, lighting ordinance.

Before modifications are attempted to conform your existing ordinance to the *Model Ordinance* (or any other codes you may be using as guides) the ordinance must be understood. Any ordinance prescribing something as complex and diverse as lighting practices will naturally be somewhat complicated. Complicated ordinances can be difficult ordinances - difficult to understand and difficult to apply, demanding considerable and perhaps unexpected resources of communities.

Good lighting ordinances recognize these facts, and seek approaches to the issues that are as simple to understand and apply as is possible while maintaining effectiveness practicality, enforcement and cost. *The Wisconsin Model Lighting Ordinance* is intended as a guide to writing an ordinance suitable to your community. Issues and priorities will be different in every community, and the ordinance must be adapted to meet your community's needs and desires.

Ordinance Section Explanations

X-X-2 Purpose and Intent

This section sets out the purpose of the lighting ordinance, briefly describing the problems that are to be addressed. In some jurisdictions, this section has been used as an introduction to the general issues of light pollution. If there are explanations desired for the specific approaches or details within the ordinance, they may be worked in to this section.

X-X-3 Conformance with Applicable Codes

A lighting ordinance does not stand alone. Many other state and local codes and ordinances apply to the actions described within it. This section states that the lighting ordinance must be consistent with the provisions of those other codes and ordinances.

X-X-4 Applicability

This is an important section, defining the types of lighting the ordinance will apply to. For example, the ordinance also exempts public roadway lighting. An exemption for public roadway lighting is a practical issue related to the detailed specifications often used for such lighting, which are usually addressed by engineering standards.

The ordinance also exempts certain fixtures containing lamps below a specified output level. This provision seeks to simplify the application of the ordinance by avoiding restrictions and evaluation of such fixtures, which are regarded as having minimal obtrusive impacts even if they are poorly utilized. Existing lighting such lighting is said to be "grandfathered", though the ordinance does require conformance of all lighting after a period of ten years.

X-X-5 Shielding and Total Exterior Light Output Standards

This is the principle section defining lighting standards. Exterior lighting is tremendously diverse, with thousands of users and thousands of designs. Individuals have many ideas of how to light and what lighting is for, thus the ordinance is careful to regulate the impacts of lighting without restricting its use. Lumens per acre limits for commercial areas, or lumens per parcel limits for residential agricultural areas are used to control overall brightness.

X-X-6 Outdoor Advertising Signs

Most civil regulations affecting signage will be contained in a Sign Ordinance, and coordinating the lighting aspects of signage addressed in the Exterior Lighting Ordinance with the Sign Ordinance is essential. It is a good idea to include a reference within the sign ordinance to this section of the lighting ordinance. Lighting of signs is an important lighting issue. After area lighting, commercial sign lighting is one of the largest sources of light in commercial districts. The uplift, glare, and aesthetic impacts of signage depend very strongly on the design of the sign and its lighting.

X-X-7 Shoreland Lighting

Many communities have commercial or residential development along bodies of water. This section provides language to control lighting for boater safety, and for the enjoyment of residents and other users.

X-X-8 Special Uses

These are relatively uncommon, mostly high-intensity lighting uses with large potential obtrusive impacts that justify special treatment. The *Model Wisconsin Exterior Lighting Ordinance* requires professional design for some, which can have cost implications. The temptation to include such technical and specific restrictions in the lighting ordinance for many uses should be resisted, since such a path can lead to inflexibility and the jurisdiction trying to specify, understand and enforce designs and specifications that professional lighting designers take years to learn.

The Ordinance requires that some special uses (athletic fields and display lots) be designed and certified after construction by a registered engineer. Though this requirement may have cost implications for such projects, the relative impact of the professional design on overall cost is usually small.

X-X-9 Submission of Plans and Evidence of Compliance

This section requires that all new and substantially altered lighting be improved prior to installation. The approval process compels the property owner to evaluate existing lighting, the impact of new lighting, and ensure conformance with the ordinance requirements for types of lighting and illumination levels.

X-X-10 Approved Materials and Methods of Construction or Installation/Operation

This section provides a method for addressing any lighting designs or developments that have not been addressed in the ordinance. It provides a no-cost approach for innovations that otherwise would have to be addressed through the jurisdiction's variance procedures. As written here, the local planning official is suggested as most appropriate, since an official employed by the community is charged with overseeing the community's interests in evaluating the proposal.

X-X-11 Prohibitions

Beyond the lighting standards detailed in the ordinance, it is useful to address some lighting applications that may arise to improve compliance, especially in situations where permits are required. The sale of non-conforming fixtures is prohibited, ensuring that local retailers offer only fixtures that conform to the community's standards for exterior lighting.

X-X-12 Temporary Exemption

Some users of temporary lighting cannot reasonably work within the constraints of the lighting ordinance. Examples are nighttime highway construction crews and carnivals. This section provides a way to address the issues that can be addressed (e.g. highway crews can exercise care in the direction they aim the floodlights), and a way of limiting the time-span for such lighting.

X-X-13 Other Exemptions

Individual communities may have specific preferences in either controlling or exempting lighting that is not explicitly addressed in this Ordinance. Common exemptions have been included in this section.

X-X-14 Definitions

Definitions in a lighting ordinance are the vocabulary of effective lighting control. The definitions included in the Wisconsin Model Exterior Lighting Ordinance have been taken from those commonly used in the lighting profession, and reflect the provision of the Ordinance.

EXTERIOR LIGHTING ORDINANCE

[This model ordinance has been modeled on several lighting ordinances enacted by Wisconsin communities. Both the UW-Extension and the International Dark Sky Association - Wisconsin Chapter support the efforts of communities to improve the quality of the nighttime environment and save energy through regulation of exterior lighting.]

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Sec. X-X-1 Title.

This Chapter shall be known as The [municipality name] Exterior Lighting Ordinance

Sec. X-X-2 Purpose and Intent.

It is the intent of this Ordinance to define practical and effective measures by which the obtrusive aspects of excessive and/or careless outdoor light usage can be minimized, while preserving safety, security and the nighttime use and enjoyment of property. These measures will curtail the degradation of the nighttime visual environment by encouraging lighting practices that direct appropriate amounts of light where and when it is needed, increasing the use of energy-efficient sources, and decreasing the wastage of light and glare resulting from over-lighting and poorly shielded or inappropriately directed lighting fixtures.

Sec. X-X-3 Conformance with Applicable Codes.

All outdoor illuminating devices shall be installed in conformance with the provisions of this Ordinance, the Building Code, the Electrical Code, and the Sign Code of the jurisdiction as applicable, and under appropriate permit and inspection.

Sec. X-X-4 Applicability.

(a) **New Uses, Buildings and Major Additions or Modifications.** For all proposed new land uses, developments, buildings, and structures that require a permit, all outdoor lighting fixtures shall meet the requirements of this Ordinance. All building additions or modifications of twenty-five (25) percent or more in terms of additional dwelling units, gross floor area, or parking spaces, either with a single addition or with cumulative additions subsequent to the effective date of this provision, shall invoke the requirements of this Ordinance for the entire property, including previously installed and any new outdoor lighting. Cumulative modification or replacement of

outdoor lighting constituting twenty-five (25) percent or more of the permitted lumens for the parcel, no matter the actual amount of lighting already on a non-conforming site, shall constitute a major addition for purposes of this section.

- (b) **Minor Additions.** Additions or modifications of less than twenty-five (25) percent to existing uses, as defined in Section (a) above, and that require a permit, shall require the submission of a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting on the site shall meet the requirements of this Ordinance with regard to shielding and lamp type. The total outdoor light output after the modifications are complete shall not exceed that on the site before the modification, or that permitted by this Ordinance, whichever is larger.
- (c) **Resumption of Use After Abandonment.** If a property or use with non-conforming lighting is abandoned as defined below, then all outdoor lighting shall be reviewed and brought into compliance with this Ordinance before the use is resumed.
- (d) **Existing Uses and Buildings.** After a period of ten years from the date of enactment of this Ordinance, any lighting in place prior to the enactment date shall come under the provisions of the Ordinance.
- (e) **Roadways.** Municipal lighting for public roadways is exempt from the provisions of this Ordinance.

Sec. X-X-5 Shielding and Outdoor Lighting Standards.

- (a) All nonexempt outdoor lighting fixtures shall be fully shielded.
- (b) All nonexempt outdoor lighting fixtures shall be placed so as to not cause light trespass or glare beyond the property boundary.
- (c) Any lamp installed on a residential property must be shielded such that glare from the lamp is not directly visible from any other residential property.
- (d) All nonexempt outdoor lighting fixtures shall be of a type and placed so as to not allow any light above the horizontal, as measured at the luminaire.
- (e) Flood or spot lamps must be fully shielded and aimed no higher than 45 degrees above straight down (half-way between straight down and horizontal) when the source is visible from any off-site residential property or public roadway.
- (f) Seasonal decorations using typical unshielded low-wattage incandescent lamps shall be permitted from November 10 through January 30.
- (g) All lighting for commercial, industrial and any other non-residential activities, shall be extinguished between 11:00 p.m. (or when the business closes, whichever is later) and sunrise. Security lighting for these establishments shall conform with the other provisions of this ordinance.
- (h) Each residential single-family detached home or duplex is allowed up to 5,500 total lumens per parcel. Agricultural enterprises are allowed up to 25,000 lumens per parcel. Commercial/industrial or business uses shall not exceed 70,000 lumens per acre.
- (i) All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective as described herein for fully-shielded fixtures.
- (j) Beyond the shielding requirements of this Ordinance, all light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries.
- (k) Multi-use lighting must conform to the shielding and timing restrictions, if any, that apply to the most restrictive included use.

Sec. X-X-6 Outdoor Advertising Signs.

- (a) External illumination for signs shall conform to all provisions of this Ordinance. All upward-directed sign lighting is prohibited.
- (b) Internally illuminated and neon signs.
 - (1) Outdoor internally-illuminated advertising signs must either be constructed with an opaque background and translucent text and symbols, or with a colored (not white, off-white, light gray, cream or yellow) background and generally lighter colored text and symbols. Lamps used for internal illumination of such signs shall not be counted toward the lumen cap.
 - (2) Neon signs shall be treated as internally illuminated signs for the purposes of this Ordinance, and shall not have their luminous outputs counted toward the lumen cap. Neon lighting extending beyond the area considered to be the sign area (as defined in the appropriate Sign Code) shall conform to all provisions of this Ordinance. In particular, such lighting shall be treated as decorative lighting and shall conform to the lumen cap.
 - (3) Other internally-illuminated panels or decorations not considered to be signage according to the appropriate sign code (such as illuminated canopy margins), shall be considered decorative lighting, and shall be subject to the standards applicable for such lighting, including but not limited to the lamp source, shielding standards and lumens per acre cap.
- (c) Illumination for all advertising signs, both externally and internally illuminated, shall be turned off at the curfew times listed herein or when the business closes, whichever is later. Signs subject to curfews are required to have functioning and properly adjusted automatic shut-off timers. Light background (white, off-white, light gray, cream or yellow) internally illuminated signs, installed legally before enactment of this Ordinance, may continue to be used and illuminated but must conform to the curfews as indicated below.

ILLUMINATED SIGN CURFEWS

<u>Sign Type and Land Use Zone (1)</u>	<u>Time</u>
Commercial and Industrial Zoning	
Opaque Background	12 a.m.
Colored Background	12 a.m.
Light Background	10 p.m.
All Residential Zoning	
Opaque Background	11 p.m.
Colored Background	11 p.m.
Light Background	8 p.m.

Sec. X-X-7 Shoreland Lighting.

The purpose of this section is to minimize light pollution of the shoreland environment without significantly inhibiting safety and security.

- (a) This section applies to all lighting on berthing structures, piers or docks or designed to illuminate those structures. Light fixtures which do not conform to these provisions may be allowed with a conditional use permit upon a showing of special circumstances affecting safety, security, or general public interest. Non-conforming lighting in existence on the effective date of this section must be brought into compliance within five (5) years.

- (1) Flashing and rotating lights are prohibited.
- (2) Lighting inside a boathouse and intended to illuminate its interior is permitted.
- (3) Lighting on exteriors of berthing structures, piers or docks shall be fitted with opaque shields to prevent direct visibility of the lamp to persons on public waters or adjacent lands more than 50 feet beyond the berthing structure.
- (4) Lighting not mounted on a berthing structure, piers or docks but designed to illuminate such a structure or its immediate vicinity shall comply with subparagraph 3 above.
- (5) Lighting installed on, or intended to illuminate, seasonally-used berthing structures, piers or docks shall be turned off when not required for safety or security.
- (6) Public marinas may install illuminated signs with opaque shaded or shielded lighting that provide information pertaining to applicable federal state or municipal rules and regulations relating to electrical, fueling, waste and sewage disposal or other safety and environmental matters. Such sign illumination shall not be visible from off the berth structure, piers or docks.

Sec. X-X-8 Special Uses.

(a) Recreational Facilities.

- (1) Lighting for outdoor athletic fields, courts or tracks shall be exempt from the lumens limits of this Ordinance.
- (2) Shielding: Fully shielded lighting is required for fields designed for Class III or IV levels of play (e.g. amateur or municipal league, elementary to high school, training, recreational or social levels). Facilities designed for Class I and II levels of play (e.g. college, semi-professional, professional or national levels) shall utilize luminaires with minimal uplight consistent with the illumination constraints of the design. Where fully shielded fixtures are not utilized, acceptable luminaires shall include those which:
 - a. Are provided with internal and/or external glare control louvers or lenses and installed so as to minimize uplight and offsite light trespass and glare, and;
 - b. Are installed and maintained with aiming angles that permit no greater than five percent (5%) of the light emitted by each fixture to project above the horizontal.
- (3) Illuminance: All lighting installations shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA RP-6).
- (4) Off-site spill: The installation shall also limit off-site spill (off the parcel containing the sports facility) to the maximum extent possible consistent with the illumination constraints of the design. For Class III and IV levels, a design goal of 5 lux (0.5 fc) at any location on any non-residential property, and 1 lux (0.1 fc) at any location on any residential property, as measurable from any orientation of the measuring device, shall be sought. For Class I and II levels, a design goal of 7.5 lux (0.75 fc) at any location on any non-residential property, and 1.5 lux (0.15 fc) at any location on any residential property, as measurable from any orientation of the measuring device, shall be sought.
- (5) Certification: Every such lighting system design and installation shall be certified by a registered engineer as conforming to all applicable restrictions of this Ordinance.
- (6) Curfew: All events shall be scheduled so as to complete all activity no later than 10:30 p.m. Illumination of the playing field, court or track shall be permitted after the curfew only to conclude a scheduled event that was unable to conclude before the curfew due to unusual circumstances. Field lighting for these facilities shall be turned off within 30 minutes after the last event of the night.

(b) **Outdoor Display Lots.**

- (1) Lighting for display lots shall be exempt from the lumens per acre limits of this Ordinance.
- (2) Shielding: All display lot lighting shall utilize fully shielded luminaires that are installed in a fashion that maintains the fully shielded characteristics.
- (3) Display light lighting shall be installed such that glare from the luminaire is not visible from residential properties.
- (4) Illuminance: the display lot shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA Rp-33).
- (5) Off-site spill: the display lot shall limit off-site spill (off the parcel containing the display lot) to a maximum of 5 lux (0.5 fc) at any location on any non-residential property, and 0.5 lux (0.05 fc) at any location on any residential property, as measurable from any orientation of the measuring device.
- (6) Certification: Every display lot lighting system design and installation shall be certified by a registered engineer as conforming to all applicable restrictions of this Ordinance.
- (7) Curfew: Display lot lighting exceeding 70,000 lumens per acre (Sec. X-X-5 (h)) shall be turned off no later than 11:00 p.m., or within thirty minutes after closing of the business, whichever is later. Lighting in the display lot after this time shall conform to all applicable restrictions of this Ordinance, including the lumens restrictions.

(c) **Service Station Canopies and Parking Structures.**

- (1) Shielding: All luminaires mounted on or recessed into the lower surface of service station canopies and Parking Structures shall be fully shielded and utilize flat lenses.
- (2) Total Under-Canopy Output: The total light output used for illuminating service station canopies, defined as the sum of all under-canopy initial bare-lamp outputs in lumens, shall not exceed 215 lumens per square meter (twenty lumens per square foot) not limited to luminaires mounted on the lower surface or recessed into the lower surface of the canopy, any lighting within signage or illuminated panels over the pumps, and is to be included toward the total at full initial lumen output.
- (3) The lumen output of lamps mounted on or within the lower surface of a canopy is included toward the lumens per acre according to the method defined in above. Other lighting located under a canopy but not mounted on or within the lower surface is included toward the lumen caps at full initial output.
- (4) Illuminance levels for the interior of parking structures, where interior lighting is visible from outside the structure, shall conform to the IESNA recommendations (RP-20)

- (d) **Generally.** All lighting not directly associated with the special use areas above shall conform to the lighting standards described in this Ordinance, including but not limited to the lamp type and shielding requirements and the lumens limits.

Sec. X-X-9 Submission of Plans and Evidence of Compliance.

- (a) **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 Ordinance. Even should no other such permit be required, the installation or modification (except for routine servicing and same-type lamp replacement) of any exterior lighting shall require submission of the information described below. 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:
- (1) Plans indicating the location on the premises of each illuminating device, both proposed and any already existing on the site;
 - (2) Description of all illuminating devices, fixtures, lamps, supports, reflectors, both proposed and existing. The description may include, but is not limited to catalog cuts and illustrations by manufacturers (including sections where required);
 - (3) Photometric data, such as that furnished by manufacturers, or similar showing the angle of cut off of light emissions.
- (b) **Additional Submission.** The above required plans, descriptions and data shall be sufficiently complete to enable the designated official to readily determine whether compliance with the requirements of this Ordinance will be secured. If such plans, descriptions and data cannot enable this ready determination, 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.
- (c) **Subdivision Plats.** If any subdivision proposes to have installed street or other common or public area outdoor lighting, submission of the information as described herein shall be required for all such lighting.
- (d) **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 designated official for approval, together with adequate information to assure compliance with this Ordinance, which must be received prior to substitution.
- (e) **Plan Review.** If the designated official determines that the proposed lighting does not comply with this Ordinance, the permit shall not be issued or the plan approved.
- (f) **Certification.** For all projects where the total initial output of the proposed lighting equals or exceeds 70,000 lamp lumens, certification that the lighting, as installed, conforms to the approved plans shall be provided by a certified engineer before the certificate of occupancy is issued. Until this certification is submitted, approval for use of a Certificate of Occupancy shall not be issued for the project.

Sec. X-X-10 Approved Materials, Construction, Installation and Operation.

The provisions of this Ordinance are not intended to prevent the use of any design, material, or method of installation or operation not specifically prescribed by this Ordinance, provided any such alternate has been approved by the designated official. The designated official may approve any such proposed alternate providing he/she finds that it:

- (1) Provides at least approximate equivalence to that applicable specific requirements of this Ordinance.
- (2) Is otherwise satisfactory and complies with the intent of this Ordinance.

Sec. X-X-11 Prohibitions.

- (a) **Sale of Non-Conforming Fixtures and Lamps.** The installation, sale, offering for sale, lease or purchase of any outdoor lighting fixture or lamp the use of which is not allowed by this Ordinance is prohibited.
- (b) **Laser Source Light.** The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal, is prohibited.
- (c) **Searchlights.** The operation of searchlights for advertising purposes is prohibited.
- (d) **Outdoor Advertising Off-Site Signs.** Illumination of outdoor advertising off-site signs is prohibited.

Sec. X-X-12 Temporary Exemption.

- (a) **Request; Renewal; Information Required.** Any person may submit, on a form prepared by the jurisdiction, to the designated official, a temporary exemption request. The request shall contain the following information:
 - (1) Specific Ordinance exemption(s) requested;
 - (2) Duration of requested exemption(s);
 - (3) Proposed location on premises of the proposed light fixture(s);
 - (4) Purpose of the proposed lighting;
 - (5) Information for each luminaire and lamp combination as required herein;
 - (6) Previous temporary exemptions, if any, and addresses of premises thereunder;
 - (7) Such other data and information as may be required by the designated official.
- (b) **Approval; Duration.** The designated official shall have five (5) business days from the date of submission of the request for temporary exemption to act, in writing, on the request. If approved, the exemption shall be valid for not more than thirty (30) days from the date of issuance of the approval. The approval shall be renewable upon further written request, at the discretion of the designated official, for a maximum of one (1) additional thirty (30) day period. The designated official is not authorized to grant more than one (1) temporary permit and one (1) renewal for a thirty (30) day period for the same property within one (1) calendar year.
- (c) **Disapproval; Appeal.** If the request for temporary exemption or its extension is disapproved, the person making the request will have the appeal rights provided by the municipality.

Sec. X-X-13 Other Exemptions.

- (a) **Nonconformance.**
 - (1) Bottom-mounted or unshielded outdoor advertising sign lighting shall not be used beginning five years after enactment of this Ordinance.
 - (2) All other outdoor light fixtures lawfully installed prior to and operable on the effective date of this Ordinance are exempt from all requirements of this Ordinance. There shall be no change in use or lamp type, or any replacement (except for same type and same-output lamp replacement) or structural alteration made, without conforming to all applicable requirements of this Ordinance. Further, if the property is abandoned, or if there is a change in use of the property, the provisions of this Ordinance will apply when the abandonment ceases or the new use commences.
- (b) **State and Federal Facilities.** Compliance with the intent of this Ordinance at all State and Federal facilities is encouraged.
- (c) **Emergency Lighting.** Emergency lighting, used by police, firefighting, or medical personnel, or at their direction, is exempt from all requirements of this Ordinance for as long as the emergency exists.
- (d) **Swimming Pool and Fountain Lighting.** Underwater lighting used for the illumination of swimming pools and fountains is exempt from the lamp type and shielding standards provided herein, though it must conform to all other provisions of this Ordinance.

- (e) **Residential Fixtures.** Outdoor light fixtures attached to residential buildings and located below the eave and less than 2000 lumens are exempt from the provisions of this Ordinance. Light fixtures 2000 lumens and over are not exempt. Outdoor fixtures above the eave, or attached to buildings or poles separate from the residence are not exempt. All spot or flood lights shall be fully shielded to prevent glare and light trespass beyond the property boundary, and directed no more than 45 degrees above straight down.

The acceptability and shielding restrictions applicable to a particular lamp are decided by its initial lumen output, not wattage; check manufacturer's specifications. Examples of lamp types of 2000 lumens and less are:

- 100 Watt Standard Incandescent
- 15 Watt Cool White Fluorescent
- 15 Watt Compact Fluorescent
- 18 Watt Low Pressure Sodium

- (f) **Flags, Lighted.** United States, and State of Wisconsin flags are exempt from the provisions of this Ordinance. All other outdoor lighted flags, such as, but not limited to, decorative and commercial flags shall conform to the provisions of this Ordinance.
- (g) **Holiday lighting.** Holiday lighting is exempt from the provisions of this Ordinance from November 10 until January 30 of the following year.
- (h) **Towers.** Legally required safety lighting for towers shall be exempt from this Ordinance.
- (i) **Airfields and Airports.** These facilities, both commercial and non-commercial, shall be exempt from the provisions of this Ordinance where lighting is used for air safety reasons. All other lighting shall conform to this Ordinance.

Sec. X-X-14 Definitions.

As used in this Ordinance, unless the context clearly indicates otherwise, certain words and phrases used in this Ordinance shall mean the following:

- (a) **Development Project.** Any residential, commercial, industrial or mixed use subdivision plan or development plan which is submitted to the Town for approval.
- (b) **Diffuse.** To spread or scatter widely, or thinly.
- (c) **Direct Illumination.** Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent signs or reflected from other surfaces such as the ground of building faces.
- (d) **Display Lot or Area.** Outdoor areas where active nighttime sales activity occurs and where accurate color perception of merchandise by customers is required. To qualify as a display lot, one of the following specific uses must occur: automobile sales, boat sales, tractor sales, building supply sales, gardening or nursery sales, assembly lots, swap meets. Uses not on this list must be approved as display lot uses by the municipality.
- (e) **Flood Lamp.** A specific form of lamp designed to direct its output in a specific direction (a beam) but with a diffusing glass envelope: Such lamps are so designated by the manufacturers and are typically used in residential outdoor area lighting.
- (f) **Footcandle.** Unit of illuminance equal to one lumen per square foot. It is the luminous flux per unit area in the Imperial system. One footcandle equals approximately 0.1 (0.093) lux.
- (g) **Full Cutoff Light Fixture.** A luminaire light distribution where no light is emitted above the horizontal, and where the intensity at 80 degrees from nadir is no greater than 100 candela per 1000 lamp lumens.
- (h) **Fully Shielded Light Fixture.** A lighting fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding must be permanently affixed.

- (l) **Glare** A light ray emanating directly from a lamp, reflector or lense such that it falls directly on the eye of the observer.
- (j) **Installed.** The attachment, or assembly fixed in place, whether or not connected to a power source, of any outdoor light fixture.
- (k) **Light Pollution.** Any adverse effect of manmade light.
- (l) **Light Trespass.** Light falling where it is not needed or wanted, typically across property boundaries.
- (m) **Lumen.** Unit of luminous flux; used to measure the amount of flight emitted by lamps.
- (n) **Luminaire.** The complete lighting assembly, less the support assembly. For purposes of determining total light output from a luminaire, lighting assemblies which include multiple unshielded or partially shielded lamps on a single pole or standard shall be considered as a single unit.
- (o) **Lux.** Unit of illuminance equal to one lumen per square meter. It is the luminous flux per unit area in the metric system. One lux equals approximately 10 (10.8) foot candles.
- (p) **Multi-class or Multi-use Lighting.** Any outdoor lighting used for more than one purpose, such as security and decoration.
- (q) **Opaque.** Opaque means that a material does not transmit light from an internal illumination source. Applied to sign backgrounds, opaque means that the area surrounding any letters or symbols on the sign either is not lighted from within, or allows no light from an internal source to shine through it.
- (r) **Outdoor Light Fixture.** An outdoor illuminating device, outdoor lighting or reflective surface, lamp or similar device, permanently installed or portable, used for illumination or advertisement. Such devices shall include, but are not limited to lights used for:
 - (1) Parking lot lighting;
 - (2) Roadway lighting;
 - (3) Buildings and structures;
 - (4) Recreational areas;
 - (5) Landscape lighting;
 - (6) Billboards and other signs (advertising or other);
 - (7) Product display area lighting;
 - (8) Building overhangs and open canopies.
- (s) **Outdoor Light Output, Total.** The maximum total amount of light, measured in lumens, from all outdoor light fixtures. For lamp types that vary in their output as they age (such as high pressure sodium, fluorescent and metal halide), the intimal output, as defined by the manufacturer, is the value to be considered.
- (t) **Outdoor Recreation Facility.** An area designed for active recreation, whether publicly or privately owned, including, but not limited to, baseball diamonds, soccer and football fields, golf courses, tennis courts and swimming pools.
- (u) **Person.** Any individual, tenant, lessee, owner, or any commercial entity including, but not limited to firm, business, partnership, joint venture or corporation.
- (v) **Sign, Externally Illuminated.** A sign illuminated by light sources from the outside.
- (w) **Sign, Internally Illuminated.** A sign illuminated by light sources enclosed entirely within the sign cabinet and not directly visible from outside the sign.
- (x) **Sign, Neon.** A sign including luminous gas-filled tubes formed into text, symbols or decorative elements and directly visible from outside the sign cabinet.
- (y) **Spot Lamp.** A specific form of lamp designed to direct its output in a specific direction (a beam) and with a clear or nearly clear glass envelope; such lamps are so designated by the manufacturers, and typically used in residential outdoor area lighting.
- (z) **Temporary Lighting.** Lighting which does not conform to the provisions of this Ordinance and which will not be used for more than one thirty (30) day period within a calendar year, with one thirty (30) day extension. Temporary lighting is intended for uses which by their nature are of limited duration, for example, holiday decorations, civic events or construction projects.

- (aa) **Translucent.** Permitting light to pass through but diffusing it so that persons, objects, etc., on the opposite side are not clearly visible.
- (bb) **Use, Abandonment of.** The relinquishment of a property, or the cessation of a use or activity by the owner or tenant for a period of six months, excluding temporary or short term interruptions for the purpose of remodeling, maintaining, or otherwise improving or rearranging a facility. A use shall be deemed abandoned when such use is suspended as evidenced by the cessation of activities or conditions which constitute the principle use of the property.

Sec. X-X-15 Enforcement, Penalties and Remedies.

- (a) **Violations.** It shall be unlawful for any person to violate any provision of this Ordinance or the Wisconsin Statutes. Each day that the violation continues after notification of non-compliance shall constitute a separate offense. The municipality may institute appropriate action or proceedings to enjoin violations of this Ordinance or applicable Wisconsin Statutes.
- (b) **Penalties.** Any person who fails to comply with the provisions of this Ordinance shall, upon conviction thereof, forfeit no less than One Hundred Dollars (\$100) nor more than Five Hundred Dollars (\$500), and also pay the costs of prosecution for each violation, including the municipality's reasonable and actual attorney fees and disbursements incurred in the prosecution of such violations.

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 An EEO/AA employer, University of Wisconsin-Extension provides equal opportunities in employment and programming, including Title IX and ADA requirements