

## ORDINANCE NO. 36

# Union County Outdoor Lighting Ordinance

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## SECTION 1

### 1.1 Recitals:

**WHEREAS**, in the New Mexico State Legislature passed the Night Sky Protection Act in 1999; and

**WHEREAS**, the Act was among the first laws of this kind passed in the United States, making dark skies a priority for the historical, cultural, industrial and economical benefit to New Mexico; and

**WHEREAS**, the Act requires all outdoor lighting in excess of 150 watts to be shielded and bans the use of mercury vapor lighting; and

**WHEREAS**, many cities and towns in New Mexico have placed further restrictions on the use of outdoor lighting; and

**WHEREAS**, this action is being taken to both restore the dark sky environment that was lost to light pollution and to preserve the dark skies prior to the erosion of dark sky resources; and

**WHEREAS**, rising energy prices are causing many towns and counties to seek ways to eliminate or reduce wasteful lighting practices as a means of reducing costs; and

**WHEREAS**, the ordinances being adopted throughout New Mexico provide for lighting that promotes public safety and security in a manner that reduces energy costs and unwanted light pollution that destroys our dark sky resources; and

**WHEREAS**, the economic benefits of eliminating wasted light can be gained with sensible regulation that results in reasonable transition costs to our residents, businesses, and energy providers and zero to minimal front end costs to those investing in our community; and

**WHEREAS**, the residents and visitors of Clayton and Union County have become increasingly interested in preserving our dark sky environment; and

**WHEREAS**, we are privileged to have the first New Mexico State Park with an observatory; and

**WHEREAS**, this facility, coupled with a welcoming community, draws groups from neighboring states to our town for star parties due to the light pollution in their home cities; and

**WHEREAS**, this facility provides our schools the rare opportunity to introduce students to the natural resources of the universe in their own backyard and the inspirations that may come from student visits to these night skies are endless; and

**WHEREAS**, this Outdoor Lighting Ordinance will allow Union County to both maintain and improve upon our dark sky environment by addressing the issues of light pollution, sky-glow,

glare and light trespass in a manner that reduces energy waste while maintaining effective lighting sources.

**THEREFORE**, be it ordained as follows:

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JOYCE ANN SOWERS, CLERK  
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BY CBM

### **1.2 Purpose:**

The purpose of this ordinance is to regulate outdoor lighting throughout Union County to:

- improve nighttime public safety and security;
- promote energy efficiency;
- reduce lighting that is detrimental to the environment or the use and enjoyment of public and private property; and
- preserve and promote the dark sky resources of Union County.

### **1.3 Definitions**

The terms used herein shall be defined as follows:

#### **Disabling glare:**

Glare or other lighting that impairs visibility and creates a potentially hazardous situation for either pedestrians or motorists.

#### **Fixture or Luminaire:**

A complete lighting unit including the lamps or bulbs together with the parts to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.

#### **Cutoff – Types of:**

##### **Full Cutoff:**

A classification for a luminaire designed and installed where no light is emitted at or above a horizontal plane running through the lowest light emitting part of the luminaire, and for which the luminous intensity (as measured in candela) emitted at any angle from eighty degrees (80°) up to ninety degrees (90°) cannot exceed a numerical value equal to ten percent (10%) of the lumen rating of the fixture, as reported in a photometric report from the manufacturer as produced by an independent lab.

##### **Semi-Cutoff**

A cutoff, or semi-cutoff design allows a restricted amount of light emitted above the horizontal and a non-cutoff provides no restriction for light emitted above the horizontal.

##### **Fully-shielded:**

A luminaire constructed, lamped, and installed in such a manner that all light emitted by it, 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 plane.

**Glare:**

Stray, unshielded light striking the eye that may result in:

- Nuisance or annoyance, such as light visible across property lines;
- Discomfort, such as bright light causing squinting of the eyes;
- Disability, such as bright light reducing the ability of the eyes to see into shadows and visual performance; or
- Distracting light which diverts the eye from a visual task.

**Grandfathered fixtures:**

Outdoor lighting not conforming to this ordinance that was legally in place at the time this ordinance went into full force and effect, not to include replacements or fixtures that have been relocated.

**Height of fixture:**

The height of a fixture shall be the vertical distance from the ground directly below the centerline of the fixture to the lowest light emitting part of the fixture.

**Lamp or bulb:**

The generic term for an artificial light source, to be distinguished from the whole assembly (see "fixture"); commonly referred to as the "light bulb".

**Light – Types of:**

**Accent lighting:**

Directional lighting which illuminates a particular object or draws attention to a particular area.

**Direct light:**

Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens of a fixture.

**Indirect light:**

Light that has been reflected or has scattered off of other surfaces.

**Outdoor lighting:**

Equipment which is intended to illuminate an outside area or object by any man-made device located outdoors that produces light by any means. For purposes of this ordinance, any interior lighting that is intended to project light outdoors is considered outdoor lighting.

**Light pollution:**

Any adverse effect of man-made light including but not limited to glare, light trespass, sky glow, visual clutter, wasted energy due to excessive or unnecessary lighting, or any man-made light that unnecessarily diminishes the ability to view the night sky or is disruptive to flora and fauna

**Light trespass:**

Light emitted by a fixture that shines beyond the property on which the fixture is installed. Light levels shall not exceed a maximum of 0.05 foot candles measured at any point on the property line between residences; and a maximum of 0.1 foot candles between commercial properties. Light trespass measurements shall be made at the property line with the meter held normal to a line between any offending light source(s) and the light meter.

**Lumen:**

A unit used to measure the actual amount of light that is produced by a bulb. The lumen quantifies the amount of light energy produced by a lamp at the lamp, not by the energy input, which is indicated by the wattage. For example, a 75-watt incandescent lamp can produce 1,000 lumens while a 70-watt high-pressure sodium lamp produces 6,000 lumens. Lumen output is listed by the manufacture on the light bulb packaging. For the purposes of this chapter, the lumen output values shall be the initial lumen output rating of the bulb. "Initial" refers to the manufacturer's stated rating for a new bulb.

**Luminaire:**

See fixture.

**Luminous tube:**

A glass tube filled with a gas or gas mixture (including neon, argon, mercury or other gasses), usually of small diameter (10-15 millimeters), caused to emit light by the passage of an electric current and commonly bent into various forms for use as decorations or signs. A "neon" tube does not include common fluorescent tubes. Neon signs shall be treated as internally illuminated signs for the purposes of this ordinance.

**Nuisance glare:**

Glare or other lighting that creates a nuisance, annoyance, or aggravation but does not create a potentially hazardous situation.

**Repair of a luminaire or sign:**

Any service normally provided by a licensed electrician upon a luminaire or sign. Repair shall be considered to include replacement or modification or any of the following: poles, mounting arms, housings, hardware, wiring, ballasts, lenses, reflectors, diffusers, baffles, shields, sensors, switches, relays, poser supplies, and lamp replacement modules which contain any of the items listed above. Replacement of a user-serviceable lamp will not by itself be considered a repair.

**Sky glow:**

The overhead glow from light emitted sideways and upwards, including light reflected upward from the ground or other surfaces. Sky glow is caused by the reflection and scatterings of various forms of light by dust, water, and other particles suspended in the atmosphere. Among other effects, sky glow reduces one's ability to view the night sky. Different sources of light, in equal quantities, can contribute differently to sky glow.

**Spotlight or floodlight:**

Any light fixture or bulb that incorporates a reflector or a refractor to spread the light output in a particular direction.

**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 not more than seven (7) days and that occurs only once within a one hundred eighty day time period.

**1.4 Applicability**

1.4.1 The provisions of this chapter shall apply to all outdoor light fixtures used for illumination or advertisement.

1.4.2 All outdoor lighting fixtures existing and legally installed and operative before the effective date of this ordinance are exempt from these requirements until the end of the grandfather period or upon repair, replacement or relocation.

1.4.3 All light fixtures that are replaced or relocated, including grandfathered fixtures, shall be subject to all the provisions of this ordinance.

1.4.4. All governmental agencies, federal, or state which operate within the limits of Union County are encouraged to comply with the provisions of this ordinance.

**1.5 General Standards and Provisions**

The following general standards and regulations shall apply to all outdoor lighting installed after the effective date of this ordinance with the exception of lighting which is exempt pursuant to the section addressing grandfathering.

1.5.1 Residential and commercial outdoor light fixtures and devices shall be fully-shielded and aimed downward.

1.5.2 Wall mounted fixtures shall be limited to a maximum rated output of 3,000 lumens (e.g. a 150 watt incandescent bulb).

1.5.3 Wall mounted fixtures shall be fully shielded and limited to one fixture per every 400 square feet of wall surface.

1.5.4 Pole mounted fixtures shall be fully shielded and limited to a maximum of 9,500 lumens (e.g. a 100 watt high pressure sodium bulb) and the number of said fixtures shall be limited to one per every 8,000 square feet of ground surface area.

1.5.5 Fully shielded condition can be accomplished for fixtures rated no greater than 60 watts by using a surrounding architectural structure. Opaque awnings can be used to meet this condition.

1.5.6 If a motion sensor is used, a single unshielded light fixture per structure may be allowed up to 1800 total lumens per fixture regardless of the number of lamps, provided that the lights do not remain on longer than 10 minutes after being triggered, are aimed at least 45 degrees below the horizontal and the lamp is not visible from the adjacent property.

1.5.7 Any light shining onto an adjacent property or street which results in light trespass, nuisance glare or a disabling glare shall not be permitted.

1.5.8 Lighting, other than street lights, mounted on poles or structures shall not exceed a mounting height of 15 feet. Additional shielding shall be added to the light fixture to eliminate light trespass and disabling glare as necessary.

1.5.9 Existing fixtures may be adapted to comply with this chapter by adding a properly designed fully shielded structure.

1.5.10 Lighting for signs shall be directed downward onto the sign's surface and not toward the sky or adjacent properties. Such lighting shall be limited to a maximum of 1800 initial lumens (e.g. a 100 watt incandescent bulb) per every 15 square feet of sign surface.

1.5.11 Uplighting on landscaping and foliage shall be limited to 900 initial lumens (e.g. a 40 watt incandescent bulb) with a limit of one lamp fixture per each 900 square feet of landscaped area.

1.5.12 Uplighting for architectural illumination is permitted provided that the total output is less than 5,400 initial lumens per 3,000 square feet of wall surface area and less than 1,800 initial lumens per fixture (e.g. a 100 watt incandescent bulb). No illumination may project beyond the highest point of the structure or beyond the structure's edges. Side shielding shall be used to avoid light trespass or glare.

1.5.13 Flag illumination is limited to 900 initial lumens (e.g. a 40 watt incandescent bulb) and when possible shall originate from a fixture at the top of the pole and project light downward. Flags are encouraged to be raised in the morning and lowered at night per tradition to avoid artificial illumination.

1.5.14 Internally illuminated signs shall be constructed so that the top of the sign does not allow light to emit directly towards the sky and so that the light is encased all the way around.

1.5.15 Any light source permitted by this chapter may be used to light 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:

1.5.15.1 All fixtures used for event lighting shall be full cutoff as defined in this chapter, and designed with or provided with sharp cut-off capability so as to minimize uplight, spill light, light trespass and glare.

1.5.15.2 All events shall be scheduled so that all activity is complete before or as near to 11:00 PM as practical. Under no circumstances shall any illumination of the playing field,

court or track be permitted after 11:30 PM except to conclude a scheduled event that was in progress before 11:00 PM and circumstances prevented conclusion by 11:00 PM.

1.5.16 In order to comply with "The New Mexico Night Sky Protection Act" mercury vapor lamps shall not be sold, re-lamped, or installed in Union County. A suggested replacement is high pressure or low pressure sodium lights.

1.5.17 Parking lot lighting shall be shut off by 11:00 PM unless a specific scheduled event requires parking lot lighting to be left on until the event is finished. In this situation, the lights shall be shut off within a reasonable period of time following the event.

1.5.18 Light emitted from inside of a structure to the outside of the structure shall be subject to control by this chapter if it is determined that such light constitutes a nuisance glare, a nuisance light trespass or a disabling glare as defined by this chapter, and should therefore be treated as if it were outdoor lighting.

## 1.6 Further Restrictions

Prohibited lighting and fixtures: searchlights, unless permitted by Union County; aerial lasers; flashing, blinking or tracing lights, metal halide, mercury vapor, and commercial lighting that has not received a permit per this ordinance.

Union County reserves the right to further restrict outdoor lighting, including but not limited to pole height and level of illumination when it is deemed to be in the best interests of the public and in keeping with the stated purpose of this ordinance.

## 1.7 Exemptions:

The following are exempt from the provisions of this ordinance.

1.7.1 Unshielded outdoor light fixtures located within five feet of an active doorway, single or multiple, provided that such lighting does not exceed a total light output of 800 lumens (e.g. a 40 watt incandescent bulb).

1.7.2 Traffic control signals and devices.

1.7.3 Temporary emergency municipal lighting (e.g. fire, police, repair workers, etc.).

1.7.4 Motor vehicle lights.

1.7.5 Navigation lights (e.g. airports, heliports, radio/television towers).

1.7.6 Fossil Fuel Light. Fossil fuel light produced directly or indirectly by the combustion of natural gas or other utility-type fossil fuels.

1.7.7 Seasonal decorations with individual lights in place no longer than 60 days in a calendar year.



1.7.8 Other special situations approved by Union County for temporary or periodic events (e.g. rodeos, revivals, fairs, fiestas, carnivals, night-time construction, etc.).

## 1.8 Grandfathering

1.8.1 All lighting installations, including grandfathered fixtures, must be brought into compliance with the provisions of this ordinance within ten (10) years of its effective date.

1.8.2 This grandfathering provision does not apply to the following:

1.8.2.1 Lighting on an existing building with a change of use, roofline or building size or accompanying structures, including parking lots, exceeding twenty-five percent (25%) due to renovations or remodeling, shall be brought into full compliance before reoccupation or reuse.

1.8.2.2 Fixtures that are replaced or relocated. Such fixtures shall be brought into full compliance at the time of replacement or relocation.

1.8.2.3 Existing fixtures that direct light toward streets or parking lots and that cause disabling glare to motorists or cyclists may be ordered to be removed or extinguished at any time.

## 1.9 Submittals

1.9.1 Applications for building permits, including new construction and remodeling, or applications for subdivisions which include the installation of outdoor lighting fixtures for any purpose shall provide evidence of compliance with the requirements of this chapter. The submittal shall contain the following information and be submitted as part of the site plan to Union County for approval:

1.9.1.1 Plans indicating the location, type and height of luminaires, planned and existing, including both building and ground mounted fixtures;

1.9.1.2 A description of the luminaires, including lamps, poles or other supports and shielding devices, which may be provided as catalogue illustrations from the manufacturer;

1.9.1.3 Photometric data, such as that furnished by the manufacturer, showing the angle of light emission for fixtures with an output of 3000 lumens or more; and

1.9.1.4 Additional information as may be required by Union County in order to determine compliance with this ordinance. For large projects, Union County may require a lighting plan with foot-candle renderings from all sources of light in five foot grids. It is recommended that these light levels not exceed the Illuminating Engineering Society of North America's Recommended Practices for Exterior Lighting and Parking Lots (RP 33-99 and RP-20).

1.9.2 The above required plans and descriptions shall be sufficiently complete to enable Union County to readily determine whether compliance with the requirements of this Ordinance will be met. If such plans and descriptions cannot enable this ready determination by reason of the nature or configuration of the devices, fixtures or lamps proposed, the applicant shall submit evidence of compliance by certified test reports as performed by a recognized testing lab.

### **1.10 Variances and Temporary Exemptions**

1.10.1 Variance from the provisions of this ordinance shall not be permitted unless specifically authorized in writing by Union County prior to installation or use of any non-compliant fixture.

1.10.2 Request for Temporary Exemption. Any person may submit a written request for a temporary exemption from the provisions of this Ordinance. A request for a temporary exemption shall contain the following information:

- Specific exemptions requested;
- Type and use of exterior light involved;
- Duration of time for requested exemption;
- Type of lamp and calculated lumens;
- Total wattage of lamp or lamps;
- Proposed location of exterior light;
- Previous temporary exemptions, if any; and
- Physical size of exterior light and type of shielding provided.

### **1.11. Enforcement**

1.11.1 Duty to Enforce. It shall be the duty of the persons designated by the governing body of Union County to enforce the regulations contained in this ordinance.

1.11.2 Notice of non-compliance and abatement. The town may issue a written notice of non-compliance directed to the owner of record of the property on which the non-compliant lighting fixture(s) or installation(s) exist or to the occupant or tenant of the property, or both. The notice shall describe the violation and shall establish a reasonable time limit for abatement which shall be not less than ten (10) days or more than ninety (90) days after service of the notice. The notice may be served either personally or by registered mail at the owner's last known address.

1.11.3 Complaint: In the event the owner or occupant of the property where the non-compliant lighting fixture(s) or installations(s) exist has failed to abate the violation within the prescribed time, then the town shall file a complaint in the municipal court charging violation(s) of this ordinance.

1.11.4 This ordinance does not grant to any party other than Union County the right to enforce this ordinance or to bring any suit in any court for violation of this ordinance. Under no circumstances shall this ordinance be interpreted as creating a private cause of action.

UNION COUNTY, NM  
JOYCE ANN SOWERS, CLERK  
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**1.12 Penalties for Violation**

1.12.1 Any person, firm or corporation or any officer or employee thereof, who violates the provisions of this chapter shall be deemed guilty of a petty misdemeanor and upon conviction may be punished, for each separate offense, by a fine of not more than \$500.00 or imprisonment for not more than ninety (90) days, or both.

1.12.2 Each 24 hour period during any portion of which any violation of this chapter is committed or continues to exist shall constitute a separate offense.

**Section 2. Severability**

2.1 Should any section, paragraph, clause or provision of this ordinance be held to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph, clause or provision shall not affect any of the remaining provisions of this ordinance.

**Section 3. Repealer**

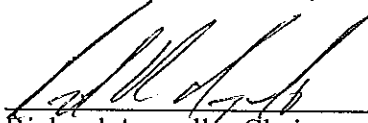
3.1 All ordinances or resolutions or parts thereof, inconsistent with the provisions of this ordinance are hereby repealed to the extent only of such inconsistency or conflict. This repealer shall not be construed to revive any ordinance or resolution or part thereof, heretofore repealed.

**Section 4. Effective date**

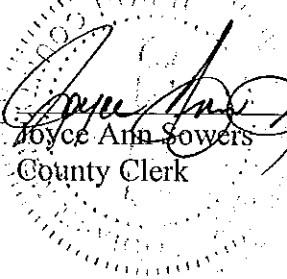
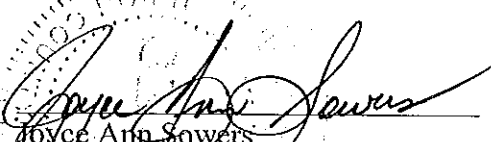
4.1 This ordinance shall be in full force and effect five (5) days after its approval, adoption and publication as provided by law. Where any provisions of local, county, state, or federal laws conflict with any provisions of this ordinance, the more restrictive shall govern unless otherwise regulated by law.

**PASSED, APPROVED and ADOPTED** this 14<sup>th</sup> day of October, 2008.

**BOARD OF COUNTY COMMISSIONERS  
OF UNION COUNTY, NEW MEXICO**

  
\_\_\_\_\_  
Richard Arguello, Chairman

**ATTEST  
SEAL**

  
  
\_\_\_\_\_  
Joyce Ann Sowers  
County Clerk

  
\_\_\_\_\_  
Justin Bennett, Vice Chairman

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Van Robertson, Member

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