# CHAPTER 8.30 OUTDOOR LIGHTING

### **Sections:**

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#### 8.30.010 Purposes, Applicability and Definitions.

- A. <u>Purposes</u>. This chapter is adopted to promote and protect the public health, safety and welfare, the visual aesthetic setting of the City of Mosier in the Columbia River Gorge National Scenic Area and the quality of life of its citizens by preserving a dark night sky. This chapter establishes standards for exterior light that reduce glare, light pollution, incidental light and "skyglow." The specific purposes of this chapter are:
  - 1. To provide safe roadways for motorists, cyclists and pedestrians and ensure that sufficient, but not excessive, lighting is provided where needed for safety and security;
  - 2. To minimize the effects of glare and excessive lighting on people and property;
  - 3. To protect a dark nighttime sky, the use and enjoyment of property, and to curtail the degradation of the nighttime visual environment;
  - 4. To prevent light trespass in all areas of the City;
  - 5. To allow for flexibility in the style of lighting fixtures;
  - 6. To define practical and effective measures by which the obtrusive aspects of outdoor light can be minimized; and
  - 7. To provide assistance to property owners in reducing nighttime light pollution, light trespass, glare and skyglow by bringing nonconforming lighting into conformance with this chapter.
- B. <u>Applicability</u>. This chapter applies to exterior lighting associated with new development, and a review for compliance with this chapter's substantive requirements shall be completed as part of the City's review of a design or site plan, conditional use permit, subdivision, planned unit development, right-of-way permit and building permit. Exterior light existing on the effective date of this chapter may remain, but as preexisting light fixtures are replaced, repaired and modified, they shall be brought into compliance with the requirements of this chapter. Figure 8.1 provides a general illustration of the chapter's requirements.



Figure 8.1

Replace This...



with This...

- C. <u>Definitions</u>. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application. For purposes of this chapter, the following terms shall have the following meanings:
  - 1. <u>City</u> means the City of Mosier as represented by city planner or other designated representative charged with the implementation or enforcement of this code.
  - 2. Exterior lighting means temporary or permanent lighting that is installed, located or used in such a manner to cause light rays to shine outdoors. Fixtures that are located indoors but intended to light something, and in fact do light something, outside are considered exterior lighting.
  - 3. <u>Flood light</u> means a lamp designed to flood a well-defined area with light.
  - 4. <u>Full cut-off fixture</u> means a fixture designed and installed where no light is emitted at or above a horizontal plane running through the lowest point on the fixture. Full Cut Off" fixtures are defined by the lighting industry. Full cut off fixtures are designated per the Illuminating Engineering Society of North America (IESNA) defined standard. *See* <a href="http://www.darksky.org">http://www.darksky.org</a> or ask local electrical suppliers for "full-cut off" light fixtures. *See* Figure 8.2.

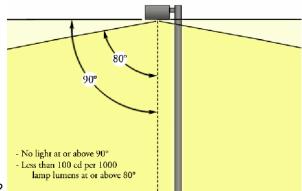


Figure 8.2

5. <u>Fully shielded</u> means a light that incorporates a solid barrier (the shield), which permits no light to escape through the barrier. Some uplighting may occur due to reflection off supporting portions of the light. (Figure 8.3)

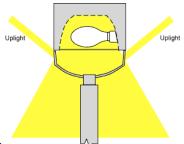


Figure 8.3

6. Glare means any stray, unshielded light striking the eye that may result in (a) nuisance or annoyance glare, such as light shining into a window; (b) discomfort glare such as bright light causing squinting of the eyes; (c) disabling glare such as bright light reducing the ability of the eyes to see into shadows or (d) reduction of visual performance. See Figure .4.

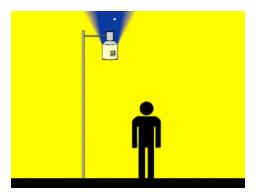


Figure 8.4

- 7. <u>Holiday lighting and low wattage lighting</u> mean strings of individual lamps in which the lamps are at least three inches apart and where output per lamp is no greater than 15 lumens. Holiday or Low Wattage Lights include 12-volt direct current lights or individual lamps less than 0.25 watts each strung together within a translucent or transparent plastic cover.
- 8. <u>Light</u> means the form of radiant energy acting on the retina of the eye to make sight possible.
- 9. <u>Light pollution</u> means any adverse effect of manmade light including, but not limited to, discomfort to the eye or diminished vision due to glare, light trespass, uplighting, the uncomfortable distraction to the eye, or any manmade light that diminishes the ability to view the night sky.
- 10. <u>Light trespass</u> means light falling on the property of another or the public right-of-way when it is not required to do so.

- 11. <u>Lighting</u> means all parts of a light fixture that function to produce light.
- 12. <u>Lumen</u> means the unit used to quantify the amount of light energy produced by a lamp at the lamp (light bulb). Lumen output of most lamps is listed on the packaging. For example, a 60-watt incandescent lamp produces 950 lumens while a 55-watt low-pressure sodium lamp produces 8000 lumens.
- 13. <u>Non-essential lighting</u> means lighting that is not necessary for an intended purpose after the purpose has been served, and does not include lighting used for public safety or as part of a traffic control signal.
- 14. <u>Partially shielded</u> means a fixture incorporating a translucent barrier, i.e., the "partial shield" around the lamp that allows some light to pass through the barrier while concealing the lamp from the viewer.
- 15. <u>Skyglow</u> means the overhead glow from light emitted sideways and upwards. Skyglow is caused by the reflection and scattering of light by dust, water vapor and other particles suspended in the atmosphere. Skyglow reduces one's ability to view the night sky.
- 16. <u>Temporary lighting means</u> lighting that is intended to be used for a special event for seven days or less.
- 17. <u>Uplighting</u> means fully shielded lighting that is directed in such a manner as to shine light rays above the horizontal plane.

#### 8.30.020 Outdoor Lighting Standards.

- A. General Standards. The following general standards apply to all exterior lighting:
  - 1. All exterior lighting shall be designed, located and lamped so as to prevent:
    - a. Overlighting
    - b. Energy waste
    - c. Glare
    - d. Light Trespass
    - e. Skyglow
  - 2. The City encourages residents to turn off all non-essential exterior, commercial and residential lighting after business hours and when not needed. Exterior lights should be equipped with timers, and outdoor security lighting should be equipped with motion sensors.
  - 3. Canopy lights, such as service station lighting shall be fully recessed or fully shielded so as to ensure that no light source is visible from, or causes glare on, public rights-of-way or adjacent properties.

- 4. Area lights. All area lights shall be full cut-off type fixtures.
- 5. The local electric utility shall not install any fixtures after the effective date of this chapter that light the public right-of-way without first receiving concurrence on any such proposal by the City.
- B. <u>Types of Fixtures</u>. All exterior lighting shall use full cut-off fixtures with the light source downcast and fully shielded, with the following exceptions:
  - 1. Fixtures that have a maximum output of 400 lumens, regardless of the number of lamps (equal to one 40 watt incandescent light), may be left partially shielded provided the fixture has an opaque top or is under an opaque structure.
  - 2. Fixtures that have a maximum output of 1,000 lumens, regardless of number of lamps (equal to one 60 watt incandescent light) must be fully shielded so that the lamp is not visible. The fixtures are not required to be full cut off fixtures so long as the fixture has an opaque top or is under an opaque structure.
  - 3. Holiday and low wattage lighting. Flashing holiday lights are discouraged. The City encourages residents to turn off string lights by 11:00 p.m. each night.
  - 4. Sensor activated fixtures, provided:
    - a. They are located so as to prevent glare and light trespass onto other properties or a public right-of-way;
    - b. The fixture is set to only go on when activated and to go off within five minutes after activation has ceased;
    - c. The fixture is not triggered by activity on any adjacent property.
  - 5. Uplighting for flags provided the maximum lumen output is 1,300 lumens. Flags should but are not required to be taken down at sunset instead of lighting them.
  - 6. Lighting of radio, communication and navigation towers where the Federal Aviation Administration (FAA) has required a light that does not meet the requirements of this chapter.
  - 7. Neon Lights. Neon lights allowed pursuant to the City's Sign Code.
- C. Placement and Height of Fixtures.
  - 1. Parking area fixtures shall be full cut off fixtures, no taller than 20 feet from ground to the tallest point. Parking area lights should be greater in number, lower in height and lower in light level, as opposed to fewer in number, higher in height and higher in light level.



Figure 8.5 Full cut off fixture supported by Pacificorp, the local utility that maintains city streetlights per the Manager of Street Lighting policy with Pacificorp.

- 2. Freestanding fixtures on private property in residential zones shall not exceed 15 feet from ground level to the top of the fixture and shall be directed downward to prevent light trespass onto adjacent properties.
- 3. Where underground utilities are available full cut off fixtures such as Figure 8.5 shall be mounted at a maximum of 20 feet from the ground to the top of the fixture whenever practicable. New streetlights used on arterial roads may exceed 20 feet in height only as a modification of these standards, and only with a finding that exceeding the 20-foot height limit is necessary to protect the safety of the residents of Mosier.
- 4. Fixtures used for athletic playing fields shall be exempt from the height restriction, provided that all other provisions of this chapter are met and the lights are used only while the field is in use.
- 5. No existing or new exterior lighting will be allowed to cause light trespass. Exterior lighting (including existing fixtures) shall be directed or shielded to protect adjacent properties from glare and excessive lighting.

## D. <u>Luminance and Type of Lamp</u>.

- 1. Luminance levels for commercial, public, or semi public parking lots, sidewalks, and other walkways affected by side-mounted building lights, and freestanding sidewalk lights (not streetlights) shall not exceed luminance levels listed in the most current IESNA Recommended Practices. Not every such area, however, will require lighting.
- 2. Streetlights shall be low-pressure sodium or high-pressure sodium unless the City determines in consultation with the local utility or other experts that another type of lamp is more efficient or better suited to a specific location and lighting objective.
- 3. Use of High Pressure Sodium is required unless the light is motion sensor activated, in which case incandescent or instant start compact fluorescent bulbs can be used. Metal Halide bulbs (due to its higher costs, including energy use, impact on the environment, and greater contribution to "sky

glow") are allowed only upon the approval of a modification to this standard.

4. Mercury Vapor bulbs are prohibited.

#### 8.30.030. Procedures.

- A. Review of Exterior Lighting in Conjunction with Land Use Permits. The City shall review any new exterior lighting or any existing exterior lighting on a property that is part of an application for design or site plan review, conditional use permit, planned unit development, subdivision approval, or building permit, to determine whether the exterior lighting complies with the standards of this chapter. All permit or development applications that require land use review shall include exterior lighting plans showing location, type, height, wattage and lumen output of all proposed lighting in sufficient detail to demonstrate compliance with the provisions of this chapter. The City Planner will provide a determination of compliance with this chapter and shall require any modifications necessary to meet the standards of this chapter as conditions of approval.
- B. <u>Modifications and Replacement of Existing Exterior Lighting</u>. Modification or replacement of existing exterior lights and light fixtures shall comply with the standards of this chapter. City staff will assist property owners by providing guidance on how to comply with this chapter's requirements and policy objectives.
- C. <u>Modification of Standards</u>. The standards of this chapter may be modified if the property owner or owner of the light fixture submits a written request to the City that includes the following:
  - 1. A complete and detailed statement of what is requested.
  - 2. Identification of which standard the applicant seeks to modify, how and to what degree,
  - 3. A justification of why the standard cannot be met or should not apply due to unusual or extraordinary characteristics of the property or its surroundings,
  - 4. An explanation of how the requested alternative to the standard comes as close as possible to meeting the standard and achieving the purposes of this chapter.

A modification to the standards of this chapter may be approved by the City Planner if the Planner determines that the modification request is sufficiently justified, due to unusual or extraordinary characteristics of the property or its surroundings, and demonstrates that the requested alternative comes as close as possible to meeting the standard and achieving the purposes of this chapter.

**8.30.040. Violations and Enforcement**. Violations of this chapter shall be deemed a nuisance and a civil infraction subject to civil enforcement under MMC chapter 2.10. Any person, firm, association or corporation found guilty of violating a requirement or prohibition of this chapter shall be guilty of a civil infraction and subject to a civil penalty

of no more than \$300 per violation. infraction.	Each day of violation shall be a separate civil