



Crook County

Community Development Department
Planning Division

TO: Crook County Planning Commission

FROM: Katie McDonald, Sr. Planner

DATE: October 11, 2023

SUBJECT: Work Session – Lighting Criteria

This memorandum and the attached documents are provided in advance of the work session scheduled for October 11, 2023. The goal of the work session is to introduce potential code language to be adopted by Crook County for clear and objective standards regarding lighting.

The existing code language for lighting criteria varies from directors or commission direction to specific criteria. There have been Commission conditions of approval that have addressed downcast, shielded, motion activated lighting and other approvals which do not mention lighting restrictions. At a recent commission meeting we had a citizen testify and ask for guidance in addressing a neighboring residence with lighting that glares onto his adjoining property. There are no provisions in the current code to assist the citizen or compliance officer in this matter. Staff's intent is for the Planning commission to provide guidance and thoughtful recommendations for creating a clear and objective standard when addressing lighting.

The sections below are existing code language regarding lighting:

Exclusive Farm Zones 18.16 Farm Stand	(vii) All outdoor light fixtures shall be directed downward and have full cutoff and full shielding to preserve views of the night sky and to minimize excessive light spillover onto adjacent properties, roads and highways.
18.32 Rural Service Center	18.32.080 Site plan review. The planning director may require as a condition of approval: (1) An increase in the required yards. (2) Additional off-street parking. (3) Screening of the proposed use by a fence or landscaping. (4) Limitations on signs or lighting. (5) Limitations on the number and location of curb cuts. (6) Any other conditions considered necessary to achieve the purpose of this title. (Ord. 280 § 7 (Exh. G), 2015; Ord. 18 § 3.050(8), 2003)

	<p>In an RR(M)-5 zone, an outright use <u>except for single-family dwellings and farm use</u> permitted shall be subject to the provisions of this section. [...]</p> <p>The planning director may require as a condition of approval:</p> <ol style="list-style-type: none"> (1) An increase in the required yards. (2) Additional off-street parking. (3) Screening of the proposed use by a fence or landscaping. (4) Limitations on signs or lighting. (5) Limitations on the number, size and location of ingress, egress and other point of access. (6) Any other conditions considered necessary to achieve the purpose of this title.
Recreation Residential Mobile Zone, RRM-5 18.40.080 Site plan review.	
Recreation Residential RR-1RR-5 18.44.050 Signs.	(4) Signs shall be oriented in a manner not to cast direct light on adjacent or nearby residential dwellings.
	<p>In an L-C zone, a use permitted by CCC 18.56.010 and 18.56.020 shall be subject to the provisions of this section.</p> <p>Before a new building may be constructed or an existing building enlarged or substantially altered or a new use initiated under CCC 18.56.010, a site development plan shall be prepared and submitted to the planning department for review and approval. [...]</p>
18.56.030 Site plan review.	<p>The planning commission may require as a condition of approval:</p> <ol style="list-style-type: none"> (1) An increase in the required yards. (2) Additional off-street parking. (3) Screening of the proposed use by a fence or landscaping. (4) Limitations on signs or lighting. (5) Limitations on the number and location of curb cuts. (6) Any other conditions which it considers necessary to achieve the purpose of this title.
Light Industrial 18.68.020 Conditional uses.	(d) Generates any odor, dust, fumes, glare, flashing lights or noise, which is perceptible 500 feet from the property line of the subject use without instruments
Light Industrial 18.68.030 Use limitations.	(4) For any use permitted by this chapter on a lot adjacent to or across the street from a residential use or lot in a duly platted subdivision or residential zone, there shall not be any odor, dust, fumes, glare, flashing lights, noise, or other similar types of possible nuisances which are perceptible (without instruments) more than 200 feet in the direction of the affected residential use or lot.
Light Industrial 18.68.090 Additional requirements.	(3) Limitations on signs or lighting, time of operations, and points of ingress and egress.
Heavy Industrial 18.72.030 Use limitations.	(4) For any use permitted by this chapter on a lot adjacent to or across the street from a residential use or lot in a residential zone, there shall not be any odor, dust, fumes, glare, flashing lights, noise, or other similar types of possible nuisances which are perceptible (without instruments) more than 200 feet in the direction of the affected residential use or lot in a residential zone.
Heavy Industrial 18.72.090 Additional requirements.	(3) Limitations of signs or lighting, time of operations, and points of ingress and egress.

Rural Industrial 18.76.030 Use limitations.	(4) For any use permitted by this chapter on a lot adjacent to or across the street from a residential use or lot in a residential zone, there shall not be any odor, dust, fumes, glare, flashing lights, noise, or other similar types of possible nuisances which are perceptible (without instruments) more than 200 feet in the direction of the affected residential use or lot in a residential zone.
Rural Industrial 18.76.090 Additional requirements.	As a condition of approval of any use proposed within an R-M zone, the commission may require: (1) An increase in required setbacks. (2) Additional off-street parking and loading facilities. (3) Limitations of signs or lighting, time of operations, and points of ingress and egress. (4) Additional landscaping, screening and other improvements.
Rural Aviation Community Zone, RAC	(6) Signs shall be oriented in a manner not to cast direct light on adjacent or nearby residential dwellings.
18.80.100 Prohibitions.	(2) Any outdoor light that is not shielded and controlled by a motion sensor, or other timing device, excluding aviation lighting.
Airport Obstruction Overlay Zone, AO 18.104.030 Use restrictions.	Notwithstanding any other provisions of this chapter, no use may be made of land or water within any zone established by this chapter in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.
18.104.040 Nonconforming uses.	(2) Marking and Lighting. Notwithstanding the preceding provisions of this chapter, the owner of any existing nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the airport owner to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated, and maintained at the expense of the airport owner.
Nonconforming uses 18.104.050 Permits.	(5) Obstruction Marking and Lighting. Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this title and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to install, operate, and maintain, at the owner's expense, such markings and lights as may be necessary. If deemed proper by the planning commission, this condition may be modified to require the owner to permit the airport owner, at his own expense, to install, operate, and maintain the necessary markings and lights.
Exclusive Farm Use Zone, EFU-JA (Juniper Acres) 18.112.100 Lighting.	(1) Illumination of uses in the EFU-JA zone is allowed in a way that preserves rural vistas and is confined to the property from which it is generated. (2) All nonexempt outdoor lighting fixtures shall have shielding so the illumination is confined to the property on which the light is located. (3) Exceptions.

	<p>(a) All outdoor light fixtures lawfully installed prior to the adoption of the EFU-JA zone. All replacement of outdoor lighting fixtures, after the adoption of the EFU-4 zone, shall comply with this chapter.</p> <p>(b) Lights used for holiday decorations for no more than 45 days.</p> <p>(c) Temporary lights for agricultural uses.</p>
<p>18.120 Sensitive Bird Habitat Area</p> <p>(4) Site Plan Review Requirements.</p>	<p>(b) The site plan application shall provide the following information:</p> <p>(ii) Description of the operating characteristics of the proposed use including times when activity within the sensitive bird habitat area would generate noise, dust, vibration, lights, traffic, or be visible from the next site.</p>
<p>Sensitive Bird Habitat Area</p> <p>(7) Site Plan Review Criteria.</p>	<p>((vi) All exterior lighting, including security lighting, located within the designated sensitive habitat areas shall be sited and shielded so that the light is directed downward and does not shine on the subject site.</p>
<p>18.124.130</p> <p>Transportation facilities permitted outright.</p>	<p>Except where otherwise specifically regulated by this title, the following improvements are permitted outright:</p> <p>(2) Installation of culverts, pathways, medians, fencing, guardrails, lighting, and similar types of improvements within the existing right-of-way</p>
<p>18.124.110 Approval process – Transmission tower.</p>	<p>(vi) A site plan showing [...] proposed for the cell tower;</p> <p>(vii) A copy of the design specifications, including photographs or manufacturer's graphic representations of proposed colors, and an elevation of an antenna array proposed with the facility, and lighting, if any, for the facility;</p> <p>(ix) A copy of a letter of determination from the Federal Aviation Administration or the Oregon Department of Transportation – Aeronautics Division as to whether any requirements, including but not limited to aviation lighting</p>
<p>18.128.030 Design and improvement standards for parking lots.</p>	<p>(4) Artificial lighting, which may be provided, shall not shine or create glare in any residential zone or on any adjacent dwelling.</p>
<p>Chapter 18.136 Historic Buildings and Sites Protection</p>	<p>7. Signs, Lighting and Other Appurtenances. Signs, exterior lighting, and other appurtenances such as walls, fences, awning</p>
<p>Chapter 18.144 Aggregate Resource Sites</p>	<p>(6) In addition to all information required for a site reclamation plan by DOGAMI, the applicant shall submit the following information:</p> <p>(x) A security plan addressing the following issues:</p> <p>(A) Lighting;</p>
<p>Conditional Use</p> <p>18.160.030 General conditions.</p>	<p>In addition to the standards and conditions set forth in a specific zone, this chapter, and other applicable regulations, in permitting a new conditional use or the alteration of an existing conditional use, the planning director or planning commission may impose conditions which it finds necessary to avoid a detrimental impact and to otherwise protect the best interests of the surrounding area or the county as a whole. These conditions may include the following:</p> <p>(7) Limiting or otherwise designating the number, size, location, height and lighting of signs.</p> <p>(8) Limiting the location and intensity of outdoor lighting and requiring its shielding.</p>

Home Occupation <20 acres	(a) In all nonexclusive farm use zones and in the county's EFU 1 and 2 (exclusive farm use) zones on parcels 20 acres or less: (ix) For any use permitted by this section on a lot adjacent to or across the street from a residential use or lot in a residential zone, there shall not be any odor, dust, fumes, glare, flashing lights, noise, or other similar types of possible nuisances which are perceptible (without instruments) more than 200 feet in the direction of the affected residential use or lot in a residential zone.
Home Occupation >20 acres	(b) In the county's EFU 1 and 2 zones on parcels greater than 20 acres: (viii) For any use permitted by this section on a lot adjacent to or across the street from a residential use or lot in a residential zone, there shall not be any odor, dust, fumes, glare, flashing lights, noise, or other similar types of possible nuisances which are perceptible (without instruments) more than 200 feet in the direction of the affected residential use or lot in a residential zone.
Commercial Use[...]on a Lot Abutting or Across the Street from a Lot in a Residential Zone.	(10) Commercial Use or Accessory Use Not Wholly Enclosed Within a Building, Retail Establishment, Office, Service Commercial Establishment, Financial Institution or Personal or Business Service Establishment on a Lot Abutting or Across the Street from a Lot in a Residential Zone. In any zone, a commercial use or accessory use not wholly enclosed within a building or a retail establishment, office, service commercial establishment, financial institution, or personal or business service establishment on a lot abutting or across the street from a lot in a residential zone may be permitted as a conditional use subject to the following standards: (b) In addition to the requirements of the applicable zone, the planning director or planning commission may further regulate the placement and design of signs and lights in order to preserve the values of nearby properties; to protect them from glare, noise or other distractions; or to protect the aesthetic character of the neighborhood or vicinity.
(I) Parking Space Requirement.	(o) Lighting shall be installed along the access ways of the trailer park and the recreation area with lights of 100 watts or better not over 100 feet apart. Wires for service to light poles and trailer spaces shall be underground.
(14) Recreation Vehicle Park.	(k) Building spaces required by subsections (14)(i) and (j) of this section shall be lighted at all times of night and day, shall be ventilated, shall be provided with heating facilities which shall maintain a room temperature of 68 degrees Fahrenheit, shall have floors of waterproof material, shall have sanitary ceiling, floor and wall surfaces and shall be provided with adequate floor drains to permit easy cleaning.
(17) Transmission Towers.	An application for a wireless telecommunications facility will be approved upon findings that: (g) Any required aviation lighting is shielded from surrounding buildings to the maximum extent allowed by FAA and/or ODOT – Aeronautics regulations;

Discussion

There are many benefits associated with dark skies including preservation of the night sky for tourism (astro-tourism), better visibility, preservation of property values, and many benefits to wildlife. The image below is illustrative of a streetlamp, however there are many lights on houses and accessory structures (barns, garages, shops etc.) that have the same effect.



Too much and poorly shielded light causes glare which can obscure objects outside the area where the light is flooding.
Source: James Madison University, John C Wells Planetarium

The existing code language for different lighting regulations and limitations are rarely, if at all defined. This provides confusion for people to know what is allowed and no resources for our Code Enforcement Office to assist with complaints of light pollution. Other jurisdictions have taken various paths for lighting regulations, and they can vary by zoning, different allowed uses, and what kind of timing or trigger mechanisms are in place for including the regulation of lighting. Staff reviewed multiple jurisdictions and have attached those codes for reference. Some are long with a lot of background and research included, while others are examples of drafted or adopted code language. Each has a unique perspective with aspects to consider for our County.

- [City of Sisters](#) – “Proposed amendments to the Sisters Development Code:”
- Deschutes County – “[Chapter 15.10 OUTDOOR LIGHTING CONTROL](#)”
- [City of Portland](#) – “Dark Skies Strategies for Reducing Light Pollution in Portland”
- [City of Cannon Beach](#) – “Exterior Residential Lighting Guide”
 - [Cannon Beach Code](#) - Chapter 17.90.110 & Chapter 17.144.150
- [DarkSky Oregon](#)
- [City of Prineville](#) –
 - “153.082 ONSITE LIGHTING. (A) As part of any application for a development or any use within the City, all onsite lighting shall be designed, located, shielded or deflected, so as not to shine directly onto adjoining properties, impair the vision of a driver of any vehicle or be a hazard to aircraft operations within the area.”

Staff’s intent is to develop clear and objective standards in the code which address lighting and then to develop information and examples which can be added to the application checklist.

Below are next steps and options for the Commission to consider.

1) Addressing light pollution associated with new and existing development

Establish in the Crook County Code, clear and objective criteria for outdoor lighting associated with new construction and remodeling projects.

Creating a new title specific to outdoor lighting.

At a minimum add regulations for all outdoor lighting, including streetlights

Limit total light output

Require that exterior lighting be directed only where needed and not shine horizontally, upward, or onto adjacent properties

Require that exterior light fixtures be shielded and diffused

Limit the color temperature of outdoor lighting so that it does not exceed 3000 Kelvin, with lower temperature (2200K – 2700K) specified for environmentally sensitive areas and parks.

Require lighting control devices that allow dimming of interior and exterior lights when full output is not needed

Require that rooftop and other exterior architectural lighting be directed downward

Prohibit spotlights that direct lighting into the sky.

2) Address light pollution associated with signs

Establish in the Crook County Code, clear and objective criteria for signage.

Creating a new title specific to signage.

3) Address light pollution through public awareness, outreach, education and research

Providing handouts and information regarding where to find information about Darkskies.

Create a checklist for application submittal regarding what type of lighting is allowed.

Providing Code Compliance Officer resources

With clear and objective standards in the code, lighting can be added to the application checklist. Staff look forward to feedback from the public and Planning Commission to meet the Comprehensive Plan and the needs of our community.