

# Top of the Pines, Ouray County, Colorado

## LIGHTING MANAGEMENT PLAN, Final v1.0, February 22, 2021

### 1. Purpose and Policy

Top of the Pines (TOP) Lighting Management Plan (LMP) is intended to guide the selection, placement, installation and operation of all current, new, and replacement/retrofitted lighting in the recreation area in order to preserve the **pristine dark skies above TOP and the surrounding area**. The LMP function is to regulate the use of artificial light at night at TOP in a way that prioritizes the safety of visitors and staff while minimizing the impact of such light on protected outdoor spaces, viewsheds and wildlife. It is TOP's policy to maintain the pristine nightscape at TOP and to limit or minimize additional exterior lighting according to policy and requirements defined in this LMP. All current and, if needed, additional exterior lighting at TOP will adhere to the principle that exterior lighting should be deployed only: (1) when it is strictly needed for visitor safety; (2) where it is needed; (3) in the appropriate amount for a specific task; and (4) with the appropriate spectrum or color temperature.

### 2. Definitions

***Adaptive controls:*** Any device that, when used in conjunction with outdoor lighting, limits the duration, intensity or area illuminated by the lighting. Examples include automatic switches, timers, and motion sensors.

***Camper and Campground Host Lighting:*** Temporary lighting owned and operated by tent campers and or the campground host.

***Correlated color temperature (CCT):*** A specification of the color appearance of the light emitted by a lamp, relating its color to the color of light from a reference source when heated to a particular temperature, measured in degrees kelvin (K). (CCT is typically labeled on LED bulbs and or packaging.)

***Fully shielded fixture:*** An outdoor light fixture that is designed and mounted such that the shielding directs all light downward below the horizontal plane.

***Lamp lumens:*** The number of lumens of light emitted by a lamp when new, not accounting for depreciation due to age. Initial lamp lumens are specified by manufacturers on the product, packaging, or in data sheets. For comparison a 60-watt incandescent bulb is approximately 800 lumens and is equivalent to about a 9-watt LED bulb.

**Light painting:** The use of portable lighting directed at landscape features for illumination typically during long-exposure landscape photography.

**Light Trespass:** Light falling where it is not intended to illuminate property, grounds, or buildings in an objectionable manner

**Lumens per Net Acre:** The amount of light specified in lumens that is allocated to the developed portion (net acre) of the gross size of a lot parcel

**TOP Lighting:** Lighting owned and operated by TOP.

**Visitor Lighting:** Temporary lighting owned/rented and operated by visitors to TOP. Visitors typically can be event related, campers, campground host, and other short-term day or night visitors.

### **3. Applicability**

All Top lighting shall conform to the requirements of Ouray County Land Use Code, plus requirements specified by this LMP as of **February 22, 2021** approved by the TOP Board of Directors. The following types of outdoor lighting installations shall be permitted at TOP and are not subject to the regulations of this LMP:

1. Lighting installations required by Ouray County, State of Colorado, or Federal legal jurisdiction.
2. Lighting installations required temporarily for the safe performance of nighttime construction tasks related to TOP repairs or improvements.
3. Temporary lighting required in emergency situations.
4. Vehicle head and parking lights used for safety and travel on designated roads subject to regulations within provision #13 Visitor Lighting and listed sub-items.
5. Camp fires that are authorized according to TOP and local regulations

In the event that regulations within this LMP are at conflict with applicable local, state, or federal regulations, the more restrictive regulations shall take precedent.

### **4. Warranting of outdoor lighting installations**

The installation of new outdoor lighting at TOP is permitted only in instances where the TOP Board of Directors determines that a public safety hazard exists that can only be mitigated through the use of outdoor light at night. Where light at night is required for the safe performance of tasks or safe transit between locations, it will be used; otherwise, the default policy of TOP is to **not** add lighting. Vehicle parking area lighting shall be prohibited.

## **5. Shielding**

All outdoor lighting fixtures shall be fully shielded so that all light rays emitted by the installed fixture shall be at angles 5 degrees or more below the horizontal plane.

## **6. Light Trespass**

To the greatest possible extent, TOP will endeavor to limit the inadvertent or incidental emission of light from indoor spaces to the outdoors through the reasonable use of window coverings, indoor lighting timers/switches, curfews, and other appropriate policy and or technology measures.

## **7. Spectrum and Color Temperature**

Outdoor lighting fixtures at TOP shall be chosen to minimize the amount of short-wavelength light emitted into the nighttime environment. TOP will prefer amber and similar colors for exterior and indoor lighting, and avoid white light wherever practically possible unless a demonstrated need for color rendition exists. In no case shall the Correlated Color Temperature (CCT) of any TOP lamp indoors or outdoors exceed 2700 degrees Kelvins.

## **8. Lamp Selection, Lumen Intensity, Lighting Density**

In all applications, outdoor lighting deployed throughout TOP will use energy-efficient lamp technology that minimizes the emission of short-wavelength light (blue thru white colors) into the nighttime environment. Each fixture shall be limited to 800 lumens. Lighting density in the immediate area of TOP exterior lighting shall be limited to 2400 lumens per net acre.

## **9. Illuminated Signs**

Illuminated signs shall be prohibited at TOP.

## **10. Lighting Curfew**

Dusk-to-dawn lighting shall be prohibited at TOP. All TOP outdoor lighting shall be extinguished between the hours of one hour after sunset and one hour before sunrise, except in cases where visitor or staff presence or event traffic dictates otherwise.

In all cases all outdoor lighting including TOP exterior lighting, camper and campground host exterior lighting, and all visitor lighting in temporary event related structures shall be

extinguished by 10:00 pm local time. All TOP inside lighting shall be extinguished by 10:00 pm local time.

### **11. Adaptive Controls**

To the practical extent possible, all new TOP lighting will make appropriate use of adaptive controls to limit the duration, intensity, spectrum, and/or extent of outdoor lighting. The use of adaptive controls shall not exempt any exterior lighting at TOP, including TOP, Camper, Campground Host, other visitor lighting from other requirements within this LMP.

### **12. Temporary Lighting**


Allowable installations of outdoor lighting at TOP for temporary purposes, as exempted above, shall be limited to the minimum number of nights required to complete the task that the lighting illuminates. Staff responsible for such installations will follow these guidelines to the greatest practical extent, and will endeavor to limit as much as possible off-site impacts of such lighting.

### **13. Visitor Lighting – Event related, Campers, and Campground Host, Recreational Visitor**

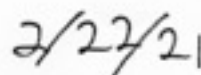
Exterior lighting of vehicles, tents, and other personal/rented property belonging to TOP visitors or temporary event related shall be regulated by TOP in such a way as to provide for reasonable use while maintaining the natural “wild” character of TOP and avoiding the creation of nuisance for other visitors. All external visitor lighting shall be restricted in intensity and extent to provide for the legitimate needs of visitors at their campsites, and shall be extinguished no later than the general TOP curfew hour as specified in Section 10 Lighting Curfews, except for personal lighting such as headlamps or lighting associated with educational events. Inappropriate, high-intensity light painting of TOP landscapes and the use of searchlights are prohibited. All social event related, camper lighting, and recreational visitor lighting shall be limited to 450 lumens per lamp and be operated by easily portable batteries. All event related temporary lighting can be powered by connection to limited TOP AC power.

1. Visitor lighting requiring or operated by generators or vehicles shall be prohibited.
2. The use of aftermarket vehicle lighting shall be prohibited.

Approved by the TOP Board of Directors



Brad Wallis, President



Date