



## D – Lighting Management Plan

### Purpose

This Lighting Management Plan (LMP) is the adopted and published lighting policy at the Jackson Hole Airport (JAC or Airport) and sets forth conditions under which outdoor spaces are illuminated in addition to providing guidance on how existing retrofits and future light fixtures are to be selected, located, and operated at the Airport. This LMP was developed to support the safety of Airport users and staff while minimizing the impacts of artificial light on the night sky.

This LMP establishes the policies and operating procedures for existing and future installations of both exterior and interior lighting associated with airport expansion and terminal improvements. While interior lighting is not within the purview of DarkSky relative to certification, the Airport is taking a holistic approach to developing an airport wide lighting policy. This includes the terminal building and other facilities, as the Airport recognizes the importance of minimizing light spillage.

### Background

The Airport is committed to protecting the night sky and developed this LMP on the basis of embracing DarkSky's five principles for responsible outdoor lighting:

1. **Useful:** Outdoor lighting should have a clear purpose with consideration given to impacts on the surrounding area, including wildlife activity and habitat.
2. **Targeted:** Focus on using direct lights only where needed and use shields to aim light downwards.
3. **Low Level:** Keep lights no brighter than necessary to both save resources and reduce glare where possible.
4. **Controlled:** Use timers or motion detectors to ensure light availability only when needed.
5. **Warm-Colored:** Limit blue-violet light to the minimum required and use warm, amber-toned lights where needed to reduce skyglow effects.

The Lighting Inventory and an accompanying lighting inventory narrative are provided in **Section E** of the DarkSky application.

### Applicability

The Airport must comply with federal requirements related to lighting for safe aircraft operations at the Airport; therefore, airfield and aircraft apron lighting are exempt from the LMP. The LMP is focused on exterior landside lighting and miscellaneous exterior lighting on the airside that is not



associated with the safe operation of aircraft.<sup>1</sup> For instance, the existing commercial aircraft apron lighting will remain as installed currently (non-conforming) in order to comply with FAA regulations and support safe operating procedures at the Airport.

## Lighting Management Plan Compliance Commitment

As part of the lighting inventory conducted for the DarkSky application, DarkSky compliant replacement lighting was identified for and installed at certain locations to meet the initial 67% LMP compliance requirement. Many existing light fixtures were replaced with full cut-off type fixtures in order to comply with the LMP.

At the time of the DarkSky application submission, over 67% of exterior lights conform to the guidance outlined in this LMP. Compliance is documented in **Section E - Lighting Inventory**. The Airport is fully committed to bringing 90% of outdoor lighting into compliance with this LMP within five years of receiving DarkSky certification, and 100% compliance within 10 years of DarkSky designation.

## General Lighting Requirements

This LMP conforms to local ordinances, complies with the International Energy Conservation Code (IECC), and establishes the following general guidelines for lighting at the Airport, which apply to existing outdoor lights and future installations:

1. **General Use:** Lights will be used only where needed during the times needed at appropriate lighting levels given the use and ambient lighting conditions.
2. **Shielding and Controls:** Outdoor lighting fixtures will be fully shielded and controlled by motion sensors or timers unless there is a special purpose or safety exemption. Lighting levels will be reduced at nighttime where lights cannot be fully extinguished for safety purposes. Lights will be controlled when possible with motion sensors and dimmed to at least 30% after 5 minutes of no movement detected.
3. **Special Purpose Fixtures:** Fixtures with lamps emitting 500 lumens or less may be left unshielded for special purposes.
4. **Short Wavelength Light Emission:** Minimizing short-wavelength light emission into the nighttime environment is achieved through one of the following:
  - a. The Correlated Color Temperature (CCT) may not exceed 3000 Kelvins (K) unless safety reasons or regulations necessitate a higher CCT and fixtures can be fully shielded and controlled by timers or motion sensors; OR
  - b. A light cannot emit more than 25% of its total spectral power at wavelengths <550 nanometers; OR

---

<sup>1</sup> Landside refers to areas of the Airport that are accessible to the public, while airside refers to secure areas of the Airport, including the Air Operations Area (AOA), that are not open to the public.



- c. The scotopic-to-photopic (S/P) ratio of allowed lighting may not exceed 1.3.
5. **Appropriate Fixture and Lamp Selection:** Fixtures and lamps will be selected with the goal of maximizing energy efficiency while minimizing impacts to the nocturnal ecology. The lighting inventory identifies existing lamps and retrofits where necessary that specify the spectrum, color, energy efficiency, technology, and type of fixture to be used in each area. Any new lighting, such as that for a new building or parking lot, should follow these prescriptions according to the type of application. DarkSky International Certified fixtures could also be considered when selecting new fixtures.
  6. **Illuminated Signs:** Since the Airport is open 24 hours a day, lighted signs may remain on after dusk. Signs are required to be a single color on a dark background and comply with Grand Teton National Park signage standards. Luminance of signs may not exceed 100 nits (100 candelas per square meter, cd/m<sup>2</sup>) after sunset.
  7. **Exemptions:** Lights that are controlled with motion activating switches that limit the duration of illumination to less than five minutes after activation are exempt from other guidelines described above. Also, lighting required by law, federal regulation, local ordinances, or existing Airport agreements is exempt from the guidelines described above.
  8. **Visitor Lighting:** Search lights are not permitted at the Airport unless they are being used for an emergency. Vehicle lights, other than those on emergency vehicles, shall be turned off while the vehicle is parked. Flashlights must be pointed down towards the ground if used outside of emergencies.
  9. **Terminal Building Indoor Lighting and Limiting Light Intrusion:** With the Airport's full commitment to limit light intrusion from indoor lighting and to preserve dark skies, standards for quality interior lighting and operation have been developed to minimize terminal building light spillage to the outside.<sup>2</sup> The Airport will focus on improving outdoor lighting first and continually work towards indoor lighting improvements to reduce light spillage. For example, the Airport will continue the ongoing, systematic replacement of all interior fluorescent and metal halide lamping with modern technology modular LED fixtures along with associated dimming and time of day basis controls.

## Exemptions and Approved Special Uses

In addition to the exemptions discussed above, the outdoor lighting located in the following locations and/or instances is permitted at the Airport for the safe operation of aircraft, safety and security, approved special uses, temporary uses, or by regulation(s):

1. Airside lighting, including airfield and aircraft apron lighting, are exempt by FAA Regulations.
2. Entrance "Battle of the Wills" statue lighting (see **Figure 13**) is an approved special use conforming to the LMP requirements with fixtures having less than 500 delivered lumens and 3000K CCT. This sculpture is a character defining feature of the Airport. The Jackson Hole Airport also has a pre-existing agreement with the artist of the statue that requires the

---

<sup>2</sup> Note that indoor lighting standards may be overridden in the case of irregular operations (e.g., flight delays), safety needs or emergencies.

statue to be illuminated. These lights will be programmed to be extinguished not later than midnight.

*Figure 13 - Entrance sculpture illuminated at nighttime*



3. Entrance sign lighting (see **Figure 14**) must remain on throughout the night because the Airport is open 24 hours a day and it is an important identifying feature of the facility. It complies with the LMP requirements to be a single color on a dark background and for luminance not to exceed 100 nits (100 candelas per square meter,  $\text{cd}/\text{m}^2$ ) after sunset. Note that **Figure 14** is a long-exposure photo and that there are no other up lights or landscape lighting in the area surrounding the backlit sign.

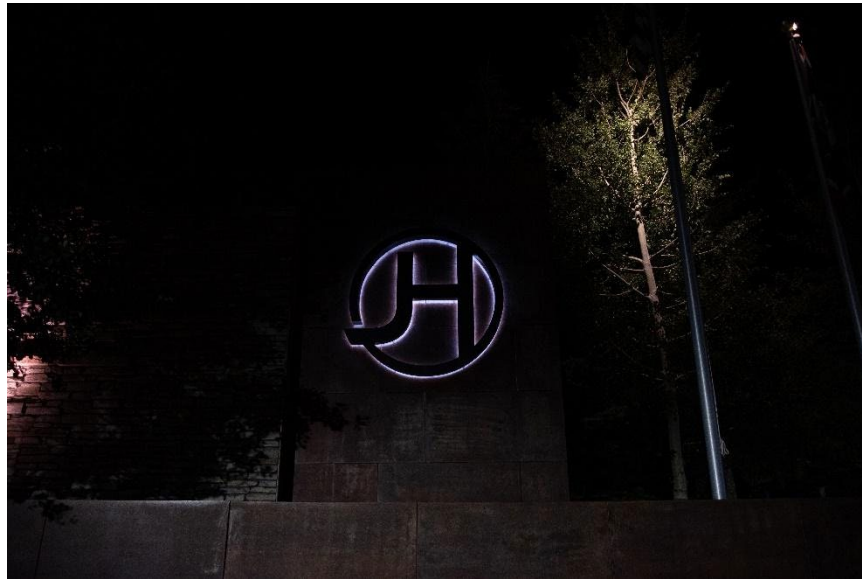
*Figure 14 - Entrance sign illuminated at nighttime*





4. Terminal building exterior lighting is required to be illuminated during normal business hours. Terminal building signage provides airport users wayfinding and directional inputs.
  - a. Building mounted Airport Logo Sign (see **Figure 15**): These are internally illuminated with flexible LED strips with 5000K CCT (manufacturer and LM/FT<sup>2</sup> information is unknown). This sign backlit and programmed to be extinguished at midnight. The sign is installed at approximately 12-15 feet above grade. No measurable light levels have been registered within 10 feet of the sign.

*Figure 15 - Building mounted Airport logo signage illuminated at nighttime*



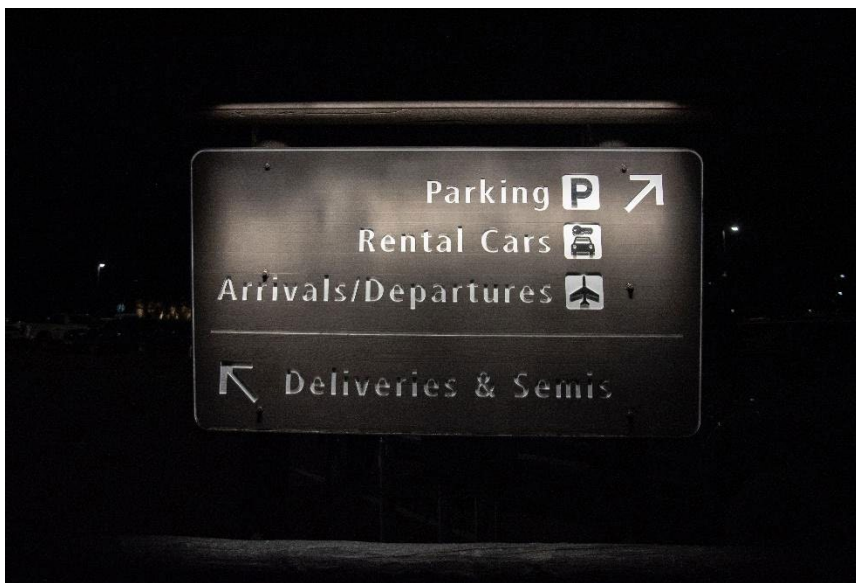
- b. Terminal building rock wall landscape lighting (see **Figure 16**) was replaced in 2025 with new fixtures that produce half the lumens (870 lumens) versus the original fixtures (1400 lumens) to reduce the impacts of these lights on the night sky. While these lights are directed towards the rock wall, some light escapes in an upward direction. However, these lights are controlled by a timer and are extinguished at midnight. The reflection of these lights provides illumination for pedestrians to safely use the sidewalk near the terminal building. The Airport intends to replace these lights with fully DarkSky compliant fixtures as resources become available.

Figure 16 - Rock wall lighting outside terminal building



5. Free standing directional parking lot signage includes several custom-made wooden free-standing signs with a linear metal shroud and LED strip illuminating directional information on the signs (see **Figure 17**). The current LED strips are 4000 K CCT and controlled by the PC ON/OFF. These will be replaced with 3000 K CCT lights. Directional signs are lit throughout the night, as signage must remain illuminated to provide direction to drivers.

Figure 17 - Free standing directional sign example



6. Temporary lighting installations required for maintenance or construction activities as prescribed by the Executive Director of the Airport are permissible.



7. Unshielded, low intensity, seasonal decorative lighting when the use is limited to specific events or time periods (i.e., mid-November to mid-January) as prescribed by the Executive Director of the Airport is permissible. One example is the low intensity, color changing string lighting wrapped on the elk antler sculpture at the airside terminal entrance that welcomes visitors to Jackson. These lights operate seasonally (mid-November to mid-January) and are operate on a timer, which extinguishes these lights at midnight.