

I) Lightscape Management Plan

The default policy of KPPSP will to *not* use a light unless a specific safety concern dictates otherwise. A 500 lumen limit for unshielded lighting will be adhered to as well a color temperature cutoff for future lighting installations of 4000 K. Ninety percent of the current lights at KPPSP will be changed to appropriate fixtures/lights within 5 years.

Buildings: All buildings will have full cut-off fixtures no higher than 2.5 meters from the door threshold if necessary, the illumination level cannot exceed 2 lux and where possible, and the color of the light should have a short wavelength. Dark time lighting curfews should apply. Dark Time is considered 2 hours after sunset.

Campgrounds: The Family and Equestrian campgrounds only have a total of 41 sites combined and are zoned to allow unshielded lights for access to this unique land by diverse people. While visiting here, the campers can pick up educational flyers/brochures about protecting the night sky. Inside the bathhouse there are friendly reminders to turn off the lights when not in use to help protect the dark skies and conserve energy (\$). There will be no other permanent lights within the campground other than the bathhouse.

Parking Lots: Parking lots will not have any illumination.

Roadways: Roadways will not be illuminated other than the front entrance gate (lock). The combination lock needs to be illuminated with a light that has a full cut-off fixture. Ideally the light will be no higher than 2 meters. Campers need to be able to see the combination clearly. The light should produce the least amount of light (amber LED and <2 Lux). A street light with a full cut-off fixture is the next best option.

Pathways: Pathways will not be illuminated. Campers can use flashlights or star/moon light. If for some reason a pathway needs be lit, the lights will be installed 1 meter or less from the ground and will be full cut-off fixtures with amber LED lights with a LUX of ~1.

Signage: No signs will be illuminated. The entrance sign and navigation signs (such as “office”, “campgrounds”, et cetera) are recommended be retro-reflective. If a light must be installed, the light will shine down and be a full cut-off fixture not standing more than 1-2 meters high and containing Amber LED lights with the lowest practical wattage to illuminate the surface to 1 lumen per square meter.

Light Pollution Beyond Park Boundaries: Local municipalities and others will be shown educational presentations about light pollution and the solutions. The goal would be to reduce glare and sky glow from within the protected DSP. KPPSP will contact neighbors whose lights produce unnecessary pollution and impact the night environment and ask them to shield, reduce brightness, or have them removed (if they are not using it).

Wilderness Areas- There is approximately 15,700 acres (or 28% of KPPSP) of wilderness area within the Preserve. It is located north of Military Trail and west of the Cattle Lease area. This area retains its raw character. There are no signs in this area. Bright flashlights (>300 lumens) are not preferred. Red or amber flashlights are a less disruptive form of light in this protected area. Temporary installation of portable outdoor lighting is prohibited unless a permit is obtained for special research.

Astronomy Pad – The Astro Pad is located away from the general camping areas and the potential light intrusions from campfires and camper lights. There will be no permanent light fixtures within the Astro Pad other than then service panel light. Flashlights should have a red filter on them after Dark Time.

Specific Areas and Lights in Need of Improvement

****Refer to H) Lighting Inventory and L) the Appendix – KPPSP Lighting Inventory Photos**

Office Area

It is recommended that in the future the steps in front of the office have a red LED light installed with a shielded fixture for the safety of the visitors at night when using the facilities. The office is in close proximity to the Astro Pad and poses potential light interference for astronomical activities.

Astronomical visitors use the bathroom facilities at the office/ visitor center.

A.1) This wall light is rarely used. It is a switch light that is usually only turned on for staff use while loading or unloading supplies at night (working late). The staff has painted the shield black as a temporary measure until a wall mounted canister fixture with a more appropriate bulb (PAR 4 Amber LED) can be purchased to replace the current one.

Astronomy Pad

B.1) This flood light has never been used since installing the Astro Pad sites. The original intention for this light was to illuminate the electrical panel at night if the panel needed to be worked on. It will be replaced with a fully shielded fixture. The fixture will be pointed in the direction of the panel.

Campgrounds

C and D) No permanent lights will be installed in either the Family or Equestrian campgrounds with the exception of the bathhouse(s) [see Bathhouse section]. Campers will be allowed to bring any light they wish into the campground. One option is for the Friends of Kissimmee Prairie Preserve to sell, rent, or give light shields to RV campers.

Bathhouse

The bathhouse can have full cut-off fixtures with red coverings over a CFL, LED, or halogen bulb. The illumination levels cannot exceed 2 lux. The lights in the interior of the bathhouse should be bug yellow or yellow color whenever possible and lighting levels should not exceed 10 lux (when horizontally measured from the floor).

E.1) This wall light is rarely used. It is a switch light that is usually only turned on for staff use at night (working late). The staff has painted the shield black as a temporary measure until a wall mounted canister fixture with a more appropriate bulb (PAR 4 Amber LED) can be purchased to replace the current one.

Pumphouse

F.2) This flood light is rarely used. Recommend removing fixture. The florescent tube lights under the roof of the pumphouse illuminate the area very well if needed.

Front Entrance

G.1) A reflective sign is recommended to replace the existing sign. The solar power could be diverted to an electric gate that is planned to be installed in the future. If a reflective sign cannot be attained, then a shielded fixture will be mounted to the top of the sign that points the light on the sign itself. A low wattage amber light should be used.

G.2) This light is maintained by Glades Electric Cooperative. It is recommended that the wattage on this shielded street light should be reduced. The fixture should be lowered or replaced with a light directly on or above the entrance gate to illuminate the gate and lock.

Shop / Pole Barn

I.1) The five lights on the enclosed shop building are rarely used. Employees tend to use these only when rehabbing equipment at night after a fire. These will be replaced with wall mounted canister fixtures and a more appropriate bulb (PAR 4 Amber LED) will be installed.

I.2) The 4 sets of flood lights on the enclosed shop building are for emergency use only. Fire operations can occur during any part of the day or night. Occasionally, fire crews may need more light to prepare burn equipment. Until new fixtures are needed, it is recommended to augment the current fixtures by applying a Parshield Flood Light Shield (see www.parshield.com)

I.3) The tube lights in the pole barn are used infrequently. Usually the burn crew turns them on to rehabilitate equipment after a burn. They are shielded by the roof of the pole barn and should not cause an issue.

I.4) The 1 set of flood lights in the pole barn is not operational. This fixture was recently removed.

Travel Trailer

J.1 - J.2) See Campgrounds Section. If light shields cannot be found for the travel trailer, then light shields will be made.

Residence 4 (Bldg 17)

”Black out” curtains will be purchased to block most indoor light from the residence due to the close proximity to the Astro Pad.

Residence 3 (Bldg 18)

”Black out” curtains will be purchased to block most indoor light from the residence due to the close proximity to the Astro Pad.

Residence 2

M.3) This flood light is not operational. This fixture was recently removed.

J) Interpretation Description and Night Sky Restoration

KPPSP has a huge sky. Many visitors enjoy the openness of the prairie and revel in the many sky phenomena that can be seen day and night. Some of the daytime sky spectacles that can be seen are marvelous sunsets (especially during the warm months), rainbows, fogbows, sundogs, rocket launches from Kennedy Space Center, the Belt of Venus, green flash, crepuscular and anti-crepuscular rays, halos, zodiacal light, super moons, mammatus clouds, and many other cloud formations. Other visitors may have a UV filter on their telescopes to view the sun and the ever changing sunspots and solar flares. The night offers a different realm of objects and events for the observer to admire.