

Phillip H. Virden
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April 8, 2018

GMUG National Forests
Attn: Forest Plan Revision Team
2250 S. Main Street
Delta, CO 81416

To Whom It May Concern:

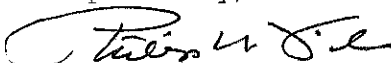
As a follow up to my August 17, 2017 letter concerning the importance of including light pollution policies into the future Gunnison National Forest management plan, I would like to add the following information:

- The Sawtooth National Forest has a Dark Sky Reserve designation. The Forest Service here supports the designation as part of its mandate to preserve natural and scenic qualities. It has reduced light pollution from its buildings and encourages the implementation of lighting guidelines as highlighted in www.darksky.org.
- In its recent plan, the Rio Grande Forest has included dark skies standards. Facility and infrastructure projects that require exterior lighting for safety must employ "dark sky preservation" techniques to reduce excess light pollution and preserve valued views of dark skies.
- The Gunnison National Forest's neighbor - Black Canyon of the Gunnison National Park is a designated Dark Sky Park.
- There is an ever-increasing interest in astronomy in the region as noted by the Black Canyon Astronomical Society, the Gunnison Valley Observatory, and, in Lake City, a portable planetarium.
- The International Dark Sky Association - www.darksky.org - provides a wealth of information about protecting our night skies from light pollution.

Once again, I encourage the Gunnison National Forest to take measures to preserve and protect the treasure of its night time environment, our nation's heritage of dark skies, and for Gunnison National Forest visitors to continue to enjoy viewing our incredible starry night universe.

I am happy to address any questions or comments you may have. Otherwise, I thank you for your serious consideration of my recommendation for the Gunnison National Forest to include dark sky measures in its future forest plan.

Respectfully,



Phillip H. Virden

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August 17, 2017

United States Forest Service
2250 South Main Street
Delta, CO 81416-2485

COPY

Re: Forest Plan Revision/Dark Sky Designation

To Whom It May Concern:

Because of light pollution, it is estimated that 80% of the North American population cannot witness the Milky Way galaxy. We are very fortunate in this area to have the incredible night skies of the Gunnison and Uncompahgre National Forests where we can view not only the Milky Way but so many other wonders of our universe.

I wish to propose that the Forest Service take measures to preserve this natural (and national) treasure. The International Dark Sky Association provides a way to preserve and protect the night time environment and our heritage of dark skies. The options of designation by the International Dark Sky Association are a dark sky park, a dark sky sanctuary, or a dark sky reserve.

I am currently with others from Lake City, Creede, and South Fork to have our region receive dark sky designation. Obviously, since most of land around is National Forest, having the Forest Service's support and cooperation on this endeavor would be critical to make this designation a reality.

For your reference, the Sawtooth National Forest in central Idaho is currently working on a Dark Sky Reserve designation. An example of their proposal is:

"A Dark Sky Reserve is essentially an area that possesses an outstanding and protected nighttime skyscape. More information can be found at darksky.org. Proponents of the Dark Sky Reserve are initiating the project to promote stargazing tourism and to protect the well-being of nocturnal wildlife species. While the designation of the reserve would not impose any regulations on property or land owners, it does strongly encourage those within the reserve to follow lighting guidelines as highlighted on darksky.org."

I am available to visit further with Forest Service representatives on this idea. In the meantime, I hope that the Forest Service will include this proposal for dark sky designation in the upcoming Forest Plan Revision.

Respectfully submitted,

Phillip H. Virden

Grand Mesa, Uncompahgre and Gunnison Forest Plan Revision #51806

Thank you for Your Comment.

Your comment has been received by our system on 8/17/2017

Your letter ID is **51806-2028-42**. Please save or print this page for your records.

Regards,

The Grand Mesa, Uncompahgre and Gunnison Forest Plan Revision Team

Artificial Lights Disrupt the World's Ecosystems

Plants and animals depend on Earth's daily cycle of light and dark to govern life-sustaining behaviors such as reproduction, nourishment, sleep and protection from predators. Scientific evidence suggests that artificial light at night has negative and deadly effects on many creatures, including amphibians, birds, mammals, invertebrates and plants.

Coral

More than 130 different species of coral on the Great Barrier Reef spawn new life by moonlight. Bright urban lights can mask the moon's phases, throwing the corals' biological clocks out of sync.



Sea Turtles

Sea turtles live in the ocean but hatch at night on the beach. Hatchlings find the sea by detecting the bright horizon over the ocean. Artificial lights draw them away from the ocean. In Florida alone, millions of hatchlings die this way every year.



Frogs and Toads

Glare from artificial lights can impact wetland habitats that are home to amphibians, such as frogs and toads, whose nighttime croaking is part of the breeding ritual. Artificial lights disrupt this nocturnal activity, interfering with reproduction, which reduces populations.



Birds

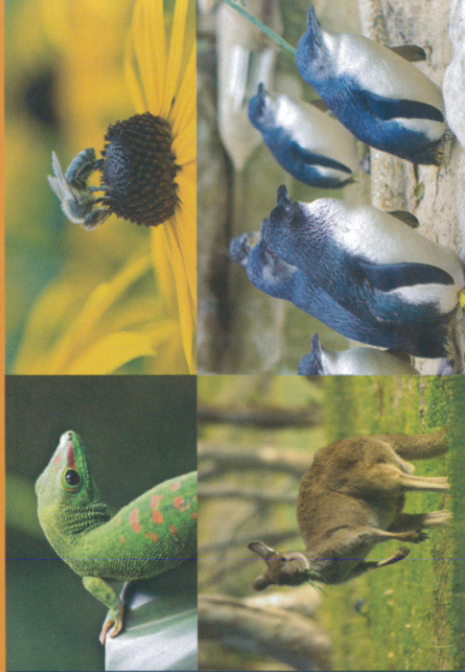
Birds that migrate or hunt at night navigate by moonlight and starlight. Artificial lights can cause them to wander off course towards dangerous nighttime landscapes of cities. Every year millions of birds die colliding with needlessly illuminated buildings and towers.



Other Wildlife Harmed by Light Pollution

We are only just beginning to understand the negative effects of artificial light at night on wildlife. Every year new research adds even more wildlife to the list of animals affected by too much light, including:

- Hummingbirds
- Monarch butterflies
- Bats
- Wallabies
- Atlantic salmon
- Owls
- "Little" penguins
- Zooplankton
- Mice
- Zebrafish
- European perch
- Insects
- Sweat bees
- Songbirds
- Seabirds'
- Peahens
- Geckos
- Fireflies



Solutions

- Use only fully shielded, dark sky friendly fixtures for all outdoor lighting, so lights shine down, not up.
- Use only the right amount of light needed. Too much light is wasteful, harms wildlife and creates glare.
- Install timers and dimmer switches and turn off lights when not in use. If you must have security lighting, use motion sensors.
- Turn off lights in office buildings and homes when not in use.
- Use only lighting with a color temperature of 3000K and below. This means that there is less blue (cool) light that is more harmful to many animal species.
- Work with your neighbors and local governments to ensure outdoor lighting isn't harming the wildlife in your area.

Visit darksky.org and join IDA for resources and more information.



Life on Earth Needs the Natural Rhythm of Light and Dark



For billions of years, life has evolved with Earth's predictable rhythm of light and dark controlled by the length of the day. In fact, it's encoded in the DNA of all plants and animals. Unfortunately, humans have radically disrupted this cycle by lighting up the night.

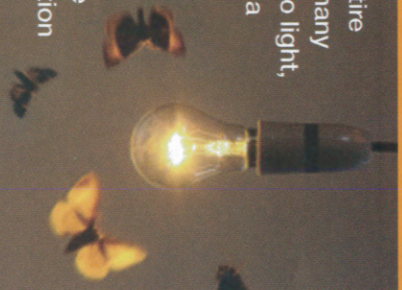
It used to be that when the sun went down, celestial sources like the moon, stars, planets and Milky Way lit the sky. Life learned to operate under the glow of the night sky. For many animals, a natural night sky signals when to eat, sleep, hunt, migrate and even when to reproduce. It is estimated that half of all life on earth start their "daily" activities at sundown.

"Near cities, cloudy skies are now hundreds, or even thousands of times brighter than they were 200 years ago. We are only beginning to learn what a drastic effect this has had on nocturnal ecology."

— Christopher Kyba, light pollution research scientist

Ecosystems: Everything is Connected

Light pollution can affect entire ecosystems. For example, many insects are naturally drawn to light, but artificial light can create a fatal attraction. Declining insect populations negatively impact all species that rely on insects for food or pollination. Some predators exploit this attraction to their advantage, affecting food webs in unanticipated ways.



About IDA

The International Dark Sky Association, a 501(c)(3) nonprofit organization based in Tucson, Ariz., is dedicated to preserving the natural nighttime environment by educating policymakers and the public about night sky conservation and promoting eco-friendly outdoor lighting.

Our Mission

To preserve and protect the nighttime environment and our heritage of dark skies through environmentally responsible outdoor lighting.

Our Goals

- Advocate for the protection of the night sky
- Educate the public and policymakers about night sky conservation
- Promote environmentally responsible outdoor lighting
- Empower the public with tools and resources to help bring back the night

Light Pollution Can Harm Wildlife



ida INTERNATIONAL DARK-SKY ASSOCIATION
www.darksky.org