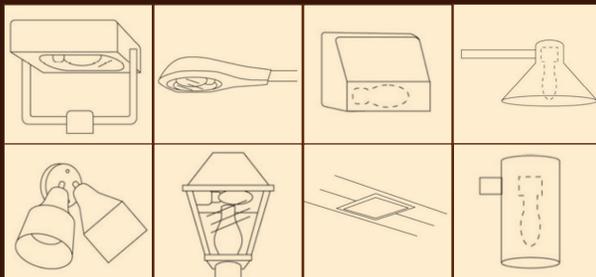


## What You Can Do To Help

Check the outdoor lighting where you live.

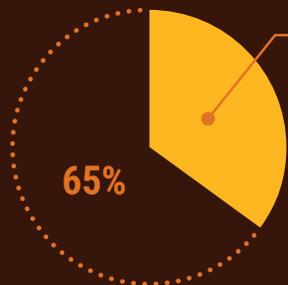
- ❖ Replace unshielded fixtures with shielded or partially shielded ones.



- ❖ Point light fixtures towards the ground at an angle less than 45 degrees.
- ❖ Replace old bulbs with energy-efficient, narrow-spectrum amber LED bulbs.
- ❖ Use manual switches, timers, and photo sensors to turn off lights when not required.
- ❖ Remove unnecessary or excessive outdoor lighting.
- ❖ Advocate for dark sky lighting policies and ordinances in your community.

## DID YOU KNOW?

15% of residential electricity used in the United States every year is for outdoor lighting. About 35% of that is wasted by unshielded and/or poorly aimed outdoor lighting.



**About 35%** of residential outdoor lighting is unshielded or poorly aimed, resulting in an annual average loss of **\$3 billion** in energy lost to sky glow.

Source: U.S. Department of Energy, 2011 data

## Additional Information

### International Dark-Sky Association

[www.darksky.org](http://www.darksky.org)

The International Dark-Sky Association is a recognized authority on light pollution and has resources on how to help reduce excess ambient outdoor light. The association provides information on:

- ❖ Additional ways to reduce light pollution at your home and in your community.
- ❖ Outdoor lighting and fixtures that meet dark sky standards.
- ❖ Lighting ordinances to use as a model for your community.

### CSRA Regional Commission

706.210.2000 | [www.csrarc.ga.gov](http://www.csrarc.ga.gov)

The CSRA Regional Commission supports planning initiatives, including reducing light pollution and the associated impacts across the region. They are actively involved in supporting Fort Gordon and its economic benefits for the region.

### Fort Gordon Public Affairs Office

706.791.6011

[www.home.army.mil/gordon/index.php/about/Garrison/public-affairs](http://www.home.army.mil/gordon/index.php/about/Garrison/public-affairs)

Fort Gordon | COMPATIBLE  
USE STUDY  
IMPLEMENTATION



Prepared by

  
Matrix

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## Central Savannah River Area DARK SKIES

## For Residential Properties

### Help Defend the Darkness

- ❖ Protect the Central Savannah River Area (CSRA) region's glorious night skies
- ❖ Save energy with approved fixtures
- ❖ Improve the quality of the nighttime environment at your home
- ❖ Enhance safety and security in the community

**You can make  
a difference!**

## Who Needs Dark Skies?

**YOU:** Dark skies reduce your home energy bill and have been shown to improve personal health.

**YOUR COMMUNITY:** Dark skies are a priceless contribution to quality of life and help improve the environment while reducing the carbon emissions associated with wasted energy.

**THE MILITARY:** Fort Gordon, home of the U.S. Army Cyber Center of Excellence, requires low levels of ambient outdoor light to conduct nighttime training and operations:

- ❖ Nighttime training is a critical capability for the U.S. Army.
- ❖ Fort Gordon conducts nighttime training to ensure military readiness.
- ❖ Use of night vision devices requires natural light and can be “washed out” by excess ambient outdoor light.
- ❖ Light pollution can negatively impact both ground and aviation training at Fort Gordon.

Fort Gordon is important for the CSRA region, with a \$2.4 billion annual impact on the local economy.

**TOURISTS:** Dark sky tourism is on the rise across the United States. Communities across the country are increasingly seeking designation as International Dark Sky Places to promote tourism.

**ASTRONOMERS:** Deerlick Astronomy Village and astronomy clubs in the CSRA region take advantage of dark skies to promote stargazing and astronomy education.

## What Prevents Dark Skies?

**LIGHT POLLUTION:** There are four primary causes of light pollution:

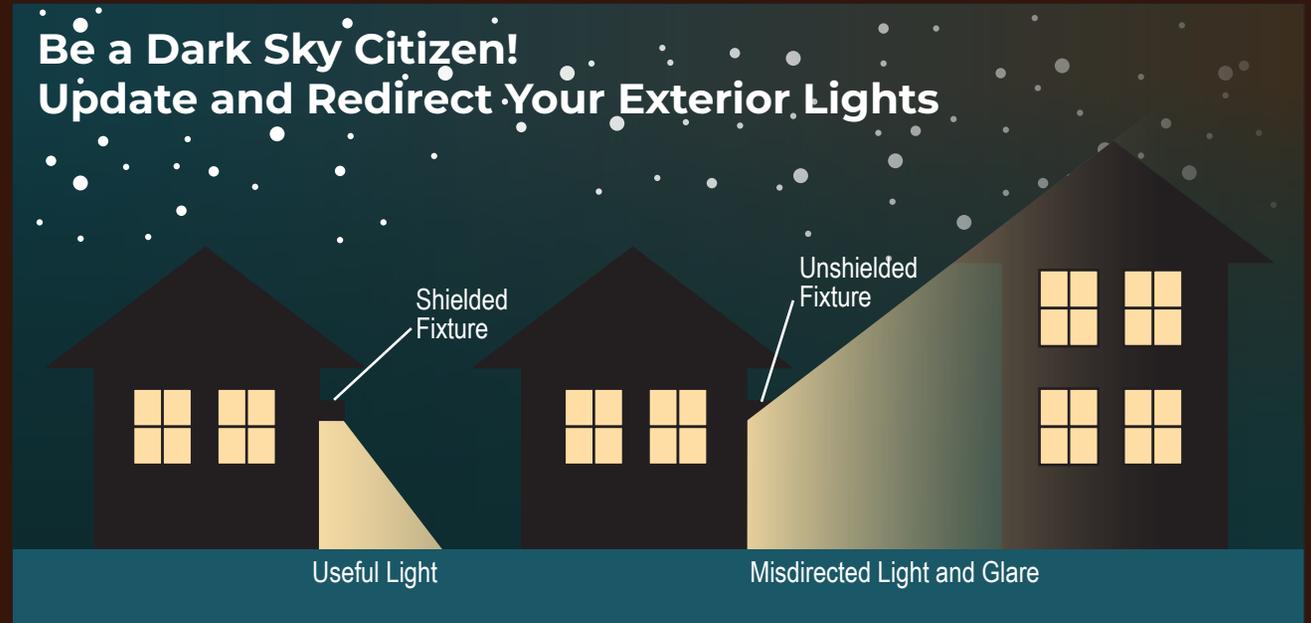
**Excessive and misdirected light** – Excessive light or light shining in the wrong directions – directly into the sky or into your eyes – wastes energy and creates glare and sky glow.

**Light Trespass** – When light illuminates areas where it is unneeded or unintended, as when your neighbors’ light shines into your house, the result is unwanted illumination and wasted energy.

**Glare** – Excessively bright or unshielded lights shine directly into your eyes, actually decreasing your ability to see.

**Visual Clutter** – Large numbers of poorly shielded and overly bright lights create a cluttered appearance, often making it difficult to find what you need to see.

### Be a Dark Sky Citizen! Update and Redirect Your Exterior Lights



## The Effects of Light Pollution



### ENVIRONMENT

Nocturnal wildlife is impacted. Predators are not able to see, and prey have difficulty hiding. Sleeping, eating, reproduction, and migration patterns are thrown off, reducing wildlife vitality.



### ENERGY

Energy is wasted when lights are left on or too much light is being used. Financial costs and the costs to the environment increase from improper lighting.



### HEALTH

Humans can suffer from misguided circadian rhythms leading to melatonin imbalances that increase the risk of obesity, depression, certain cancers, diabetes, and immune system problems.



### CRIME

Data show that crime does not actually decrease as light increases. Effective lighting design utilizing fully shielded fixtures can enhance security while using less energy and lowering impact.



### SAFETY

Bright, unshielded white lights may reduce safety and adversely affect drivers in particular by creating dark shadows and blinding glare.

## DID YOU KNOW?

Replacing unshielded porch or garage lights with shielded fixtures helps dark skies, keeps your light on your property, and makes your lighting more neighbor-friendly!