

Why Is It So Dark Here?

(rev 4/15/2025)

With a number of newcomers to our HOA and to Green Valley, this is a good time to review "Why is it so dark here?"

The more waggish among us might think it's because we don't want to pay for streetlights. The truth of the matter is that it's by design, and driven by the Dark Sky Initiative. Most of our Homeowners are aware of it and conform to the recommendations. However, if you look for outdoor lighting at local and big box hardware stores, they are filled with outdoor fixtures and bulbs that run counter to HOA and County codes for outdoor lighting. Obviously, this can be confusing, if not confounding.

It is also a bit simplistic to say "So we can see the stars"; that's only part of the reason. The International Dark Sky Association lists a number of adverse effects of light pollution on wildlife, as well as on each other. But when it comes down to regulations, much centers around the needs of nearby observatories.

While our HOA has a restriction on certain types of lighting, Pima County's Outdoor Lighting Code is much more detailed, especially regarding how much outdoor light is allowed and where.

In the Code, various zones are identified based upon the proximity to major observatories and national parks. In our case, the San Ignacio Heights HOA is in one of the most restrictive zones, falling within 12 miles of the Whipple Observatory on Mt Hopkins.

Our 2007 CC&R's conform in some part to the 2012 Pima County Outdoor Lighting Code, but there are some other considerations if you are planning to change outdoor lighting fixtures or bulbs.

These considerations include **light shielding, light intensity and light color.**

1) Our CC&R's specify that light fixtures are to be "down-shielded only with no horizontal diffusion". The technical term is "fully shielded". The light bulb should be fully inside the shield. If you stand at the edge of your property & can see the bulb (or it's behind a translucent shield), it's not fully shielded.

2) Light intensity is rated in Lumens. By County Code, outdoor lighting on residential properties in our zone have a cap of 4 - 550 Lumen bulbs (40 watt incandescent equivalents), with no unshielded fixtures. That's a total of 2200 lumens, including the light that illuminates your house number, security lighting and garden lighting. Considering the size of most of our lots, that's still a lot of light. Consider where, when and why you need light.

3) Light Color is measured in Kelvins. The higher the Kelvin, the more blue in the light; the lower the Kelvin, the more yellow. "Daylight" bulbs are rated as 5000K; "Warm/Soft White" are usually rated at 2700-3000K. The International Dark Sky Association recommends 3000K or less. In a private discussion with the Dark Skies Coordinator at the Whipple Observatory, we learned they prefer a maximum of 2700K for outdoor lighting.

A quick drive-through of our HOA reveals that there are a good number of carriage style fixtures, jelly jar fixtures and unshielded wallpacks (similar to Jelly Jars). These fixtures were probably installed when the homes were first built in the 90's. It is **NOT** our intention or desire to demand those fixture be replaced. Nor is it our intention to enforce County Code. These fixtures can still be used wisely, keeping in mind the Dark Sky recommendations to use light when you need it & where you need it. Lighting the way for arriving or departing guests is a very different use than leaving the fixture on all night as a "security" light.

As far as the HOA is concerned, we are mostly concerned with how you use an unshielded exterior light fixture, how much it impacts your neighbors or the common area, and if you plan to change your outdoor lighting fixtures. If the latter, please submit an Architectural Request form identifying a fixture that conforms to Code. If you meet code, you'll meet HOA requirements.

There are a couple of other lighting issues to address:

First, holiday lights. These are almost always unshielded. Our CC&R's are vague about their use: "Seasonal or holiday lighting is permitted so long as the operation thereof does not interfere with the enjoyment of neighboring Lots." The County Code is much more specific:

"401.6 Seasonal Decorations. Seasonal decorations using unshielded low-wattage lamps (not exceeding 7 watts each) shall be exempted from the Lumen Caps of Table 401.1 from Thanksgiving to the 15th of January each year. This exemption is not applicable to Lighting Area E1a."

That last line is important. We are in Lighting Area E1a and unshielded lamps are not allowed by County Code, & seasonal decorations (e.g., Christmas lights) are not exempt. It is not our intent, nor does it seem to be a priority for the County, to enforce that part of the Code, especially if the use is limited to the dates specified. However, seasonal lighting used for year-round garden lighting ceases to be seasonal decoration and subject to the regular outdoor lighting restrictions in our CC&R's & County Code regarding unshielded lamps.

Second, Indoor Lighting and Light Trespass. This is not addressed in our CC&R's or County Code, so put this down as being a "Good Neighbor." Here's a webpage from Dark Sky Texas on how to review your own outdoor light pollution from indoor lighting: <https://darkskytexas.org/lighting-inside-your-home/>

For your consideration:

If you are using a light bulb with high Lumen (Wattage equivalent), consider replacing it with a lower Wattage equivalent. A "100-Watt" bulb may be no more effective than a "40-Watt" bulb as a security deterrent, or even for safety while using your patio. If you install a security flood, add a shield, and direct it down, not out. Our CC&R's state that a 40 or 60 Watt bulb be used for the house number fixture, but a 25 Watt-equivalent is satisfactory.

If you are considering replacing incandescent bulbs with LEDs, be especially mindful of the color. Most LEDs are higher in Kelvins, but there are LED bulbs available with a "Warm/Soft White" rating.

Utah State Parks distributes a useful guide for Homeowners; you can find it online at: <https://stateparks.utah.gov/wp-content/uploads/sites/13/2018/03/Dark-Sky-Manual-for-HomeOwners.pdf>). Check out Page 6 for examples of acceptable and discouraged fixtures.

You might also find the following useful or interesting:

<https://darksky.org/what-we-do/advancing-responsible-outdoor-lighting/home/>

<https://darksky.org/what-we-do/darksky-approved/darksky-approved-luminaires-program/luminaires/#!/Residential/c/12499367>

<https://www.kgun9.com/absolutely-az/why-the-popes-telescope-is-in-southern-arizona>

<https://findstarlink.com/> (for sighting the "string of pearls")

For night sky viewing, useful apps for your phone include Sky Map and Sky Tonight.

(The actual Pima County Outdoor Lighting Code can be found at: <https://gis.pima.gov/data/layers/litecode/>)

Don Julien, President, San Ignacio Heights HOA

Jan 12, 2022, rev Apr 16, 2025