

City of Dripping Springs, Texas

Report to the International Dark Sky Association

Oct 2015 - Oct 2016



Outreach Above and Beyond!

The City of Dripping Springs, a city of less than 2,000 residents, joined forces with the Texas Section of IDA and the Hays County Chapter Texas Master Naturalist to conceive and host the first Texas Night Sky Festival®.

"Amazing event!" That was the comment heard most from the attendees during the event. Every age group had fun. Delight, intense interest, joy, amazement, concentration, laughter, dancing, and a growing appreciation for the night were all exhibited by attendees. It was exciting to see so many young and not-so-young strengthening their appreciation for the night sky and for the animals and plants that depend on an environment illuminated only with the stars and the moon.



Planetarium shows, stories of the night sky from ancient traditions, activities exploring each facet of light pollution, hands-on eclipse models, learning how to join the Globe at Night citizen science project, earning the Dark Sky Patch, viewing the sun, listening to Paul Bogard present *The End of Night* in words and images, learning how to earn the Be A Star Award, dancing or swaying to the Hot Texas Swing Band, feasting at the wonderful food trucks, cheering the winners of the student art contest, designing a light shield, taking your

picture with a Star Wars Stormtrooper, buying a work of art inspired by the night sky, finding out where to visit the Dark Sky Places are in Texas, experiencing a simulated walk through

the solar system, delighting in the entries to the Night Sky Photo Contest, learning how bats, birds, plants, pollinators, mammals, and almost every living thing on this planet needs natural darkness at night were some of the day-time adventures.

Wow, that was incredible! Then, the night sky itself drew flocks of people out of doors to the observing field where astronomers helped them see a wonderful view of the stars as they listened to celestial music.

When the final tallies were made, it showed that the many volunteers who worked on the Festival treated over 2,800 people from all over Texas to an engaging fun educational outreach event.



We will never know the full impact this will make as more and more people take time to enjoy the sights and sounds of the out-of-doors at night or turn off lights that illuminate nature or pause before they automatically replace their old light with a bigger brighter fixture and instead choose a shielded light. One thing is known for sure, at least one neighboring community was so inspired by the Festival that they are pursuing recognition as an International Dark Sky Community.



Arts and Culture

A photo and a student art competition were run in conjunction with the 2016 Texas Night Sky Festival®. The 2017 Festival will again have both the photo and student art competitions and will add a writing contest soliciting entries of short essays and poems inspired by the night sky.

Margaret Fraser, a 10th grade Wimberley High School student took the Grand Prize in the student art competition with the entry pictured on the right.



Current Outreach Project

The Texas Night Sky Festival® was a roaring success! The attendance and the community demanded that it be continued. The city has committed \$10,000 in Hotel Occupancy Tax funds to support the 2017 Festival. Plans for future Festivals are underway with dates reserved at the City's Event Center through 2020. Numerous volunteers and professional event coordinators are at work preparing for the next Festival to be held on March 18, 2017.

Community Growth

The City continues to grow by leaps and bounds. Building permits and sign applications come in a continuous stream. Sky Quality Meters readings continue to be in the 19.2 to 20.4 range on nights or times when the local sports lights are not illuminated.

Our Milky Way as captured here by local photographer, Jerry Moreno, is treasured.

The community recognizes that illumination at the grandfathered sports fields create the majority of the light pollution issues in the area. A team has recently formed with representation from the organizations that operate the local sports fields to address replacement of the current lighting systems with the most shielded, controlled sports lighting available. The city is very hopeful that the funds can be secured to replace the aging non-shielded sports field fixtures.



Updated Outdoor Lighting Ordinance (OLO)

The City of Dripping Springs enacted an updated OLO in August. The most exciting news is that a Sunset Clause was part of the update!

The language of the Sunset Clause is as follows:

Outdoor lighting on property used for commercial purposes that is not in conformance with this article shall be brought into conformance with this article within ten (10) years from the date of adoption of this article. For property annexed into the city limits after September 2016, the ten-year period established by this subsection shall commence upon the effective date of the annexation. Nothing in this subsection may be construed to allow light trespass or any other form of nuisance from outdoor lighting. A new purchaser of property may request a three year extension to come into compliance if property is purchased within ten (10) years of the enactment of this ordinance.

Another exciting feature added to the OLO limits most fixtures to a maximum rating of 3000 Kelvin. A few well-shielded existing fixtures producing a reasonable amount of light are allowed to remain in place even though they are rated up to 4000K.



The language for that limit is as follows:

Luminaires rated at more than 3000 Kelvin (K) are prohibited with the exception of luminaires installed prior to the enactment of this revised article rated no more than 4000K, which are shielded on every side so that the source of light is not visible from any other property and the combination of all such fixtures within any ten-foot by ten-foot area does not produce more than 4100 lumens for a pole mounted fixture or 2050 lumens for a wall mounted fixture. Luminaries with a higher Kelvin ratings are permitted if the Scotopic-to-Photopic (S/P) ratio is no greater than 1.2.

Technical updates were added to the OLO to re-state regulations using the B-U-G fixture rating system that mirrored the existing regulations. As an example, this code continues the city's control for glare as well as uplight:

(3) Shall be rated and installed with the Glare component no more than G0 unless four sided external shielding is provided so that the luminous elements of the fixture are not visible from any other property.

To the right is a sample LED fixture with glare shields that are in common use in the City.

Permitting required of all except the smallest projects involving new lighting was added.



Up to 180 lumens per fixture for up to 10% of the allowed lumens is allowed in uplight as long as the source of the light may not be seen from any other property.

A small number of low-output string lights utilizing lights rated at 2800 Kelvin or below are now allowed.

The language for the string lights is as follows:

(10) Festoon type low-output lamps, limited to small individual bulbs on a string with a maximum output of 56 lumens within any square foot. The bulbs must have a rating of no more than 2800 Kelvin, may not be located within three (3) feet of a reflective surface such as a light colored or metal wall, and the bulbs may not be visible from any residential property within 50 feet of the installed lights. The lumen output from these lamps shall be doubled for inclusion in the total outdoor light output calculations and that doubled lumen value shall not exceed 20% of the total outdoor light output allowed for the property.

(11) Low-intensity mini-lights or rope-type lights in amber, gold, yellow, cream, red, orange, or warm white wrapped on a tree, post, or other similar object provided the layers are at least six (6) inches apart. The output from these mini-lights shall not exceed 2% of the total outdoor light output allowed for the property and will be included in the lumens calculation for the total outdoor light output allowed.

News and Media Attention

The city staff recently printed a stack of articles related to work being done in the City of Dripping Springs to protect the night sky. Even when compressed, the stack was over an inch high. This web page lists a few of the ones that are connected to the Texas Night Sky Festival®, the city's huge outreach event:

<http://www.cityofdrippingsprings.com/preview.aspx?name=dsctns.news>

On the following pages you will find a recent article in a regional magazine that is mailed to everyone in the area and available at local outlets.

Reclaiming the Night

hillcountryview.com/2016/07/reclaiming-the-night/

By Rebecca L. Bennett



Dark skies initiative preserves hill country's starry nights

"We can see the Milky Way from Dripping Springs, but lights in Austin steal a piece of our sky," Cindy Luongo

Cassidy says, looking out from the viewing deck of her personal observatory to the starry horizon. Nearby, her husband John tinkers with his large aperture Dobsonian telescope—an obsession of his.

“See that glow over there?” Cindy asks, pointing northeast. “That’s Austin.”

Cindy runs a consulting business that helps communities, landowners, developers, and officials make smart and considerate outdoor lighting choices. She also serves as section leader for the Texas chapter of the International Dark-Sky Association, an organization whose mission is to protect the night sky for present and future generations.

Light pollution is a phenomenon caused by excessive artificial lighting. It’s most prevalent in metropolitan sprawls where large, powerful street lamps illuminate every roadway, park bench, and city block, and where every street ripples with a steady stream of headlights. But smaller communities can also be plagued by misdirected security lights, luminous service stations, and parking lots whose overkill lighting creates painful glare and disorienting light clutter.



Astronomers bemoan light pollution because it greatly diminishes one’s visibility of cosmic objects and events. However, as Cindy explains, excess artificial light destroys more than stargazing potential. Research shows it suppresses production of certain hormones in humans, flora, and fauna and hinders key natural processes such as sleep, healing, growth, and reproduction.

“Almost every living thing on this planet needs natural darkness to be healthy,” Cindy says. “Every cell in your body pays attention to the light around you and does what it’s supposed to be doing based on the time of day.”

In 2014, Dripping Springs became the first “International Dark-Sky Community” in Texas and the sixth in the world, thanks in large part to locals’ eagerness to participate in conservation efforts and events Cindy leads—star parties, the Better Lights for Better Nights Conference, and the Texas Night Sky Festival, which drew almost 3,000 visitors during its first run in March.

“Residents appreciate the night sky here, and many understand that part of our responsibility as landowners is to be good stewards of the land, and part is to be considerate neighbors,” says Cindy. “Using shielded lighting, so that you can’t see the bulb or other source of light from another property, fulfills both responsibilities.”



As development creeps west from Austin, many hill country communities are looking to protect their piece of the night sky by following Dripping Springs’ example of enacting a lighting ordinance that requires all new lighting to conform to specific standards. City ordinance mandates that each newly installed light source be shielded and emit a restricted number of lumens according to the size of the area requiring illumination.

Cindy also advises people looking to take extra steps toward reducing their light pollution footprint to select “warmer” bulbs with low Kelvin ratings, recess light sources wherever possible, and direct lights so that the light comes down at a 65-degree angle in all directions.

“This is something that helps people save money. It helps people see better. It helps people be safer. It helps people take better care of the environment. It makes your town, your businesses, your homes, whatever, look better when you don’t have all of that light clutter and glare,” says Cindy. “People can improve their lives and be better neighbors. It’s very practical.”

And it's soul-filling. As we experience the night from Cindy and John's observatory, the natural dark and soothing moonlight seem almost tangible, and a blanketing peace settles over us in the quiet. An owl hoots, leaves rustle in the spring breeze, and our bodies seem to sigh, "Finally."



"What will happen to the next generation and the next for all these people who don't have that connection, who have not been inspired to go into scientific fields or to write literature or to paint art about the night sky? How do you quantify losing that?" Cindy asks.

"It's just something that we could so easily get back."

To learn more about the International Dark-Sky Association (IDA) and its work to preserve the night sky, visit www.darksky.org.