



2024 International Dark Sky Community (IDSC) Annual Report

Submitted to DarkSky, January 27, 2025

(NOTE: This document is based on the Annual IDSC Report submitted to DarkSky but is not an exact duplicate. Data unique to DarkSky Headquarters has been omitted and headings have been modified for clarity. Some on-going activities and initiatives are not included in this report as they were addressed in the 2023 Annual Report. The reporting period for this modified report is January 1, 2024 thru January 31, 2025)

Night Sky Quality Monitoring

Brightness of the night sky above Blanco:

Night sky measurements using the <u>Unihedron Sky Quality Meter (SQM)</u> have been conducted <u>since August 2007</u> at 15 locations in and around the City of Blanco. Beginning in 2020, measurements have been taken using the newer SQM-L. The SQM-L collects lights from a cone approximately 10 degrees wide vs the standard SQM that has a cone of approximately 42 degrees. The SQM-L, therefore, is less affected by streetlight, buildings, or trees and gives a more accurate measurement of the darkness of the night sky.

All Sky Quality Meter (SQM) data has been recorded on the original <u>Excel</u> <u>spreadsheet</u> developed in 2007. This spreadsheet parallels DarkSky's recommended spreadsheet. Additionally, it records the names of the individuals making the readings and, importantly, shows the <u>baseline measurements</u> from which progress (or lack thereof) can be seen. Finally, the spreadsheet is <u>color-coded</u> making it easy to see deviation from the baseline measurements. The higher the SQM-L reading, the darker the night sky. Blanco sits at about a <u>4.0/9 on the Bortle Scale</u>, part way between a suburban sky (5) and a rural sky (3). The near-term goal is to return it to a true rural sky, a Bortle 3 sky.

In 2020, volunteers began to record SQM-L readings at 10 locations in <u>Northern</u> <u>Blanco County</u>.

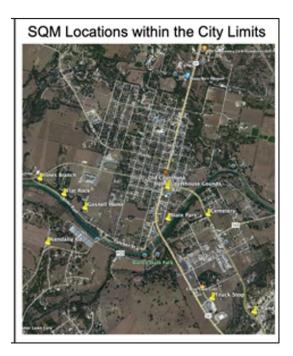
Average zenith night sky brightness reading:

At the end of December 2024, the average SQM reading from the eight measuring locations <u>inside the Blanco City Limits</u> was <u>20.10</u>

Night sky quality raw data document:

The <u>Night Sky Quality Raw Data Document</u> is available as an Excel spreadsheet from the Blanco County Friends of the Night Sky, info@blancocountynightsky.org

SQM (Sky Quality Meter) Measurement sites:



The Blanco County Friends of the Night Sky (BCFNS), in cooperation with DarkSky-Texas and supported by the Hill Country Alliance, has undertaken an ambitious project to permanently install approximately 13 continuous-read SQM-L units, in strategic locations throughout Blanco County. Completion of the <u>SQM Cluster Project</u> will allow us to continually monitor the quality of the night sky at multiple locations in the county. The Hill Country Alliance has granted us \$2,500 to help fund this project with the total cost estimated to be approximately \$6,500.

As proof of concept, the initial continuous-read SQM was installed on private property in western Blanco County, approximately 7.6 miles North-West of the City of Blanco (coordinates: 30 degrees 9.157 minutes North; 98 degrees 32.158 minutes West). The final three relevant readings of the year at that location were: October 31, 21.64; November 4, 21.92; and December 4, 22.39. The <u>average</u> of the three readings was **21.98**. This reading was considerably darker than average readings within the City Limits of Blanco (**20.10**) due to the remoteness of the measuring location.

We are supplying SQM data to DarkSky-Texas and the Globe at Night organization at the University of Hong Kong.

Changes in night sky quality from time of certification to the present:

The City of Blanco submitted its IDSC application in <u>December 2019</u>. For the eight SQM measurement locations inside the Blanco City Limits, the average SQM reading was <u>20.43</u>. The average SQM reading for those same eight locations in <u>December 2024</u> was <u>20.10</u>, a significant deterioration in the quality of the night sky.

This diminished reading can be <u>attributed to three major factors</u>: 1) the increasing sky glow emanating from the <u>nearby metropolitan areas</u> that are expanding towards Blanco, 2) <u>burgeoning developments</u> in the unincorporated areas within Blanco County but outside the Blanco City Limits where there is no legal authority to regulate outdoor lighting, and 3) several <u>businesses inside the Blanco City Limits</u> that have installed obtrusive outdoor lighting that is not in compliance with Blanco's Outdoor Lighting Ordinance

Lighting Compliance

Changes in compliance rate from time of certification to the present:

- Year of Certification 2022
- Compliance % in Original Application Approximately 10%
- Current Compliance % Approximately 20%
- Anticipated % for Next Reporting Period 40%

Actions taken to meet the Lighting Management Plan/Policy requirements:

In the last two years, the Pedernales Electric Co-op (PEC), has replaced most of Blanco's approximately <u>100 streetlights</u> with DarkSky-approved fixtures. The City has consulted with PEC to <u>shield these fixtures</u> to come into compliance with Blanco's Outdoor Lighting Ordinance (OLO). Legal and financial issues are involved. We are hopeful that the majority of these streetlights will be shielded before the end of 2025.

All Blanco Independent School District (ISD) facilities have problematic lighting. The District's Superintendent, however, supports night sky preservation efforts. The ISD installed night sky-friendly lighting on their new <u>High School tennis courts</u> in 2023. The new <u>Athletic Support Facility</u> at the Blanco High School stadium has excellent outdoor lighting. A new <u>Fine Arts Building</u>, scheduled for completion in 2025, will have similar lighting that will be in full compliance with Blanco's OLO. The Blanco County Friends of the Night Sky (BCFS) has permission to do a <u>complete audit</u> of the district's existing outdoor lighting with an eye on developing a plan to retrofit non-compliant lighting district-wide.

<u>Blanco's goal for 2025</u> is to attain <u>40% compliance</u> for all <u>publicly owned</u> outdoor lighting (including that owned by the Blanco Independent School District). We intend to accomplish this by 1) working with <u>PEC</u> to shield the streetlights, 2) bringing all cityowned lighting into compliance with the OLO, and 3) working with the Blanco <u>ISD</u> to retrofit non-compliant outdoor lighting.

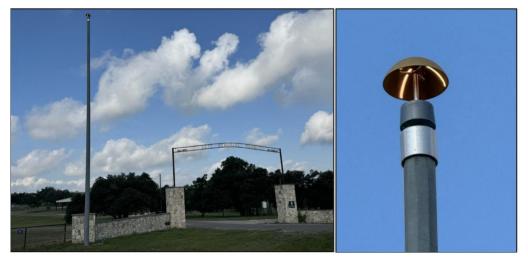
Additionally, the City will work to enforce the City's OLO through citizen-driven <u>code violation complaints</u>. Having no code enforcement officer of staff, the City has signed a <u>Memorandum of Agreement</u> whereby the BCFNS has agreed to fund a parttime, contracted code enforcement officer dedicated to enforcing Blanco's OLO. The BCFNS has obtained partial funding for this initiative and will seek more.

Examples of lighting changes made:

The Blanco County Friends of the Night Sky gives away <u>flat bottomed, 2700</u> <u>Kelvin LED bulbs</u> from Sunco Lighting Company as part of its night sky preservation efforts. As these bulbs shine down instead of outwards, glare is considerably reduced.



Using Hotel Occupancy Tax (HOT) funds, a <u>downward shining flag light</u> was installed on the flagpole at the entrance to Blanco's Yett Park.



Utilization of fixtures from DarkSky's Fixture Seal of Approval (FSA) Program:



The streetlights being installed by the Pedernales Electric Co-op all have the DarkSky Seal of Approval.



Blanco is using Hotel Occupancy Tax (HOT) funds to retrofit flagpole lighting at Yett Park in Blanco. The current flagpole is lit by a powerful spotlight mounted on the ground shining upwards onto the flag and then into the night sky. The new light will be mounted on top of the flagpole and shine downward. This fixture is manufactured by <u>Eagle Mountain Flag & Flagpole</u> in Wimberley, Texas and has the <u>DarkSky Seal of Approval</u> (https://emflag.com/mega-stargazer-flagpole-downlight/)



Factors impacting Blanco's ability to meet its lighting compliance requirements:

The <u>Pedernales Electric Co-op</u>, the City's electricity provider, requires payment to shield Blanco's streetlights (so they will be in compliance with the City's Outdoor Lighting Ordinance). Funding this requirement will be a challenge.

The limited ability of the <u>Blanco Independent School District</u> to fund the retrofitting of non-compliant outdoor lighting fixtures on all its facilities may delay full compliance with Blanco's OLO.

A significant impediment to achieving compliance with Blanco's OLO for <u>privately-owned lighting</u> continues to be the inability of the City to enforce the OLO due to <u>lack of a code enforcement officer</u>. Hopefully, the recently signed Memorandum of

Agreement with the Blanco County Friends of the Night Sky may help rectify this deficiency.

Changes to Blanco's outdoor lighting ordinances:

In January 2023, the Blanco City <u>amended the 2018</u> OLO to require a maximum color temperature of <u>2700 Kelvin</u> on all outdoor lighting (with limited exceptions) within the City Limits.

The 2018 OLO contained various <u>"grandfathering" provisions</u> for existing outdoor lighting as well as amortization provisions that allowed businesses to get a full ten years use from their investment in non-compliant outdoor lighting. The time for all those provisions has expired. The OLO, therefore, needs to be amended to expunge the nonapplicable verbiage from the ordinance.

The amended OLO is available on the City's website at <u>https://cityofblancotx.gov/ordinances-and-resolutions</u> (Amended Outdoor Lighting Ordinance 2023-O-002).

Outreach, Education, and Media

The Blanco County Friends of the Night Sky (BCFNS), a grassroots, 501(c)3 non-profit organization, serves as the <u>Executive Agent</u> for the City of Blanco's night sky preservation efforts and for the maintenance of its status as an International Dark Sky Community (IDSC). Accordingly, outreach, education, and media activities in support of the IDSC designation are conducted largely by the BCFNS.

The President of the BCFNS also serves as the <u>Night Sky Advisor</u> to the <u>Blanco</u> <u>Historic Preservation Commission</u> and the <u>Blanco Comprehensive Master Plan Working</u> <u>Group</u>.

As of January 2025, the BCFNS has <u>127 total paid-up memberships</u>, distributed as follows: 90 Annual Household Memberships; 24 Lifetime Household Memberships; nine (9) Annual Business Memberships; and four (4) Lifetime Business Memberships. Types and methods of dark-sky and light pollution-related outreach, education, and media:

-Name of event/program: In-Person Night Sky PowerPoint/Dramatic Presentations, 2024 -Number of times offered: 4 -Estimated number of attendees for each event: Range = 40-100; Average = 63; Total =190 -Name of event/program: Star Parties, 2024 -Number of times offered: 2

-Estimated number of attendees for each event: *Range: 30-40; Average = 35; Total = 70*

-Name of event/program: Night Sky Information Booths, 2024 -Number of times offered: 3 (Blanco Founders' Day; Health Fair at Blanco High School; GEM of the Hills 40Th Birthday Party) -Estimated number of attendees for each event: Range: 50-100; Average = 75; Total = 200

-Name of event/program: *Night Sky Art Contest, 2024* -Number of times offered: *1* -Estimated number of attendees for each event: *Total* =125

-Name of event/program: Presentation to State-Wide Keep Texas Beautiful Conference
-Number of times offered: 1
-Estimated number of attendees for each event: Total = 223

-Name of event/program: *Night Sky Poetry Contest, 2024* -Number of times offered: *1* -Estimated number of attendees for each event: *Total* = 47

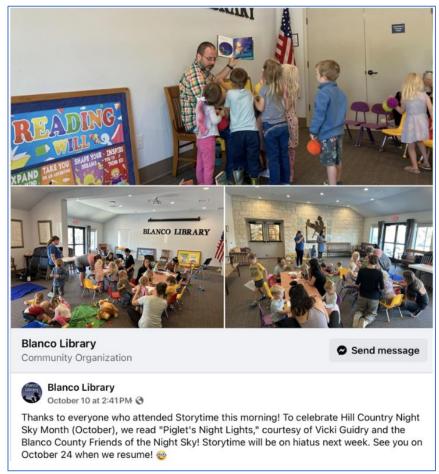
Promotion of DarkSky and its mission during Blanco's outreach programs/events:

We routinely use DarkSky (formerly IDA) <u>brochures</u> in our educational outreach efforts. These include use as handouts at presentations and information booths. We also use DarkSky <u>pop-up displays</u> for our information tables. We have included the new DarkSky IDSC Logo on the design for Blanco's IDSC <u>Entryway road sign</u>.

Programming blending the arts and/or culture with dark skies:

We conduct a yearly <u>Night Sky Art Contest</u> for Blanco County Middle School age and High School age students. With the enthusiastic support of the art teachers, these contests generated approximately 125 entries in 2024. Cash prizes of more than \$800 were awarded to the winning entries. Not only have these contests engaged the students and their families, but they have also been covered extensively in the two local newspapers and on social media, thereby giving publicity to the night sky preservation movement in Blanco County.

In support of the Hill Country Alliance's Night Sky Month (October) BCFNS volunteers participated in <u>Storytime" at the Blanco Library</u>. The children were fascinated by "Piglet's Night Lights" that both entertained and informed the very receptive young audience about why the night sky is worth preserving.



In June 2024, the BCFNS was invited to give a night sky preservation presentation to the annual conference of the state-wide <u>Keep Texas Beautiful</u> organization. The presentation provided the opportunity to make the point that keeping Texas beautiful also includes keeping the night sky above the state beautiful.

In 2024, we again sponsored a hole at the annual <u>Rotary Club of Blanco County</u> <u>Golf Tournament</u>. Seeing the night sky logo prominently displayed on the golf course has generated increased recognition of the night sky movement. Seeking to create a "bandwagon" effect for night sky preservation, the BCFNS actively encourages its members to purchase and display <u>BCFNS Membership signs</u>. Anyone seeing the sign displayed on a neighbor's property is visually notified that the night sky is important to them and worthy of protection. We feel this is the best advertisement the night sky can have. To date, we have we have distributed <u>187</u> <u>BCFNS membership signs</u> for display on private property throughout Blanco County.

Visitors' experiences with Blanco's night sky programs and outreach efforts:

While there has been no formal survey of visitors' perception of Blanco as an IDSC, there is ample anecdotal evidence that interest in night sky preservation is growing. The City's Visitor Center in the <u>Old Blanco County Courthouse</u> reports that they routinely run out of night sky preservation brochures provided by the Blanco County Friends of the Night Sky (BCFNS).

Many of the visitors at the Annual "Raise the Roof" fundraising event at the <u>historic Twin Sisters' Dance Hall</u> come from throughout Blanco County as well as areas outside Blanco County and continue to be interested in the night sky preservation information booth manned each year by BCFNS. Although we were unable to have a night sky information booth at the 2024 event due to manpower constrains, we donated an auction item to the event that prominently included the BCFNS name and logo. The BCFNS was also recognized as an event sponsor with its name and logo displayed at the event and promoted on the Twin Sisters' social media feeds, all of which kept the idea of night sky preservation visible to the attendees.



In 2024, the <u>BCFNS website</u> averaged 2,939 unique visitors a month, a number that has steadily increased over the course of several years. An undetermined number of these visitors are from outside Blanco County as evidenced by the fact that we routinely receive requests for assistance in night sky preservation matters from other areas in Texas and from other states. In response to several requests to include "student-provided" links to night sky resources, we have created a special tab on the website to accommodate such requests as are deemed useful for others. The tab can be seen here: <u>https://www.blancocountynightsky.org/student.php</u>



Representative photos of night sky events and outreach efforts:

The Wizard gives a PowerPoint presentation on the night sky to Blanco ISD students in a recent class visit. (Photo by Linda Whitlow)



The second sky quality meter was recently installed in Blanco County by the Blanco County Friends of the Night Sky. This monitor was placed at the Bamberger Ranch near Johnson City. It's one of 13 monitors that BCFNS will install to monitor dark sky quality in the county. Pictured above, April Sansom, Bamberger Ranch executive director, BCFNS volunteer Samuel Lartigue and Drew Neyland, Bamberger Ranch research coordinator, after the meter is installed. See more on page 3. (Contributed photo)



Cymbre Wicker, left, and her sister, Sherri, are owners of the Cor-Jul Ranch north of Blanco. They proudly display their Blanco County Friends of the Night Sky (BCFNS) lifetime membership sign prior to Easter festivities at the ranch. The Wickers' \$500 lifetime business membership brings to 21 the total number of BCFNS lifetime memberships in effect. The proceeds will be used to support the non-profit organization's efforts to educate the community about the effects of light pollution and the necessity of protecting the night sky by using common sense outdoor lighting practices. (Photo by Wayne Gosnell)

Night Sky art contest winners announced







Isabella Carbo (first place) and Corinne Unterbrink (second place). Also pictured are BCFNS members Mary Bob Smith, Kris Baker (art teacher), Elizabeth Seibert and Bob Heinonen.

Chess Club Steakhouse, Dairy Queen honored by night sky program



On behalf of the Blanco Chamber of Commerce and Blanco County Friends of the Night Sky (BCFNS), acting business recognition program coordinator Michael Green presented the Night Sky Friendly Business Certificate of Merit to Emily and Steve Becker, owners of the Chess Club Steakhouse in Blanco, pictured above at right. Also shown receiving a Certificate of Merit is Robert Gaitan, manager of the Blanco Dairy Queen, pictured above at left. This recognition program, which is sponsored by the Blanco Chamber of Commerce, endorsed by the Hill Country Alliance and supported by the Blanco County Friends of the Night Sky, is open to any business or organization in the Blanco area. Chamber membership is not a requirement. The goal is to protect and preserve the treasured natural resource that is the Hill Country's starry nighttime sky. The program encourages the practice of responsible outdoor lighting that prevents light from escaping above the horizon into the nighttime sky, causing "sky glow" and off-premises glare. (Photos by Linda Whitlow)

Please see 18-item "Media Coverage, January 2024-January 2025", attached

Social media handles or website links used to promote dark skies are:

The <u>City of Blanco official website</u> is at: <u>https://cityofblancotx.gov/</u>

The <u>Blanco Chamber of Commerce website</u> is at: <u>https://www.blancochamber.com/</u>

The <u>Blanco County Friends of the Night Sky website</u> is at: <u>https://blancocountynightsky.org/index.php</u>

The <u>Blanco County Friends of the Night Sky Facebook Group</u> is at: <u>https://www.facebook.com/groups/BCFNS</u>

The <u>Blanco County Friends of the Night Sky Facebook Page</u> is at: <u>https://www.facebook.com/BlancoCountyNightSkyFriends/</u>

The <u>Blanco County Friends of the Night Sky Instagram</u> page is at: <u>https://www.instagram.com/blancofriendsofthenightsky/?hl=en-gb</u>

<u>Social media stats</u> as of January 2025 are: BCFNS Facebook Group Members – 1,107 BCFNS Facebook Page Members -- 665 BCFNS Instagram Followers -- 544 Average Monthly Visitors to the BCFNS Website in 2024 -- 2939

<u>Newsletter</u>. A monthly newsletter with updates on night sky happenings was distributed via email to 575 recipients as of December 2024. On the average, 55% of the emails were opened by the recipients with 61% opened in December.

Additionally, the <u>websites City of Blanco and the Blanco Chamber of Commerce</u> prominently note that Blanco is an International Dark Sky Community. However, as the websites themselves are not dedicated exclusively to night sky preservation, the number of visitors to the websites is included in this report.

Blanco and its night sky advocates participated in DarkSky-led initiatives as follows:

Blanco participated in the DarkSky-led International Dark Sky Week by publicizing the week on Blanco County Friends of the Night Sky <u>social media</u> and timing the <u>Night Sky Art Contest</u> for middle schoolers and high school students to coincide with Dark Sky Week (judging was April 19, 2024).

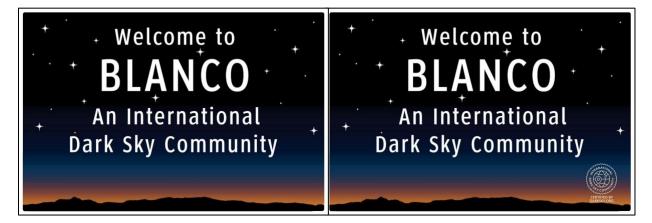
Additionally, each year we participate in a related and complementary celebration, the <u>Hill Country Night Sky Month in October</u>, sponsored by the Hill Country Alliance. For this, we have coordinated events and have secured resolutions supporting the night sky from the Blanco City Council, the Johnson City City Council, and the Blanco County Commissioners Court.

Media coverage:

Blanco's night sky preservation efforts were the subject of 18 stories/photos with cutlines from January 2024 thru January 2025. Please see "<u>Media Coverage, January 2024-January 2025</u>", attached.

Signage with the DarkSky label:

Shortly after receiving its International Dark Sky Community (IDSC) designation, the Blanco City Council approved the design of <u>IDSC signage</u> for the City's gateways. The sign is prominently displayed in the public area of the Blanco City Office, on the official website of the City of Blanco, on the website of the Blanco Chamber of Commerce, and the website of the Blanco County Friends of the Night Sky. The sign has since been modified to show the <u>new DarkSky IDSC logo</u> and the attribution that the designation is "Certified by DarkSky.org." (Please see "Additional Information" at the conclusion of this report)



The City of Blanco tried for several years to secure permission from the Texas Department of Transportation (TxDOT) to erect International Dark Sky Community signs on the four <u>TxDOT-controlled entryways</u> into the city. Unfortunately, TxDOT has determined that this is not possible as only "directional" signage can be placed in the right-of-way. As one could not point to a physical location of Blanco's IDSC status, a sign acknowledging that will not be allowed.

Avoiding the TxDOT right-of-way, in 2024, a large banner was erected in a prominent place on <u>private property</u> along the main highway leading into Blanco from the south. The sign reads "Welcome to Blanco...An International Dark Sky Community." Th new DarkSky-International IDSC logo was printed in the upper right-hand corner of the sign.



One road into the City is <u>a county road</u> and TxDOT permission is not required. The Blanco County Commissioner in whose precinct the road lies enthusiastically approved placement of the sign and agreed to mount the sign in a prominent location on the road at no cost to the City of Blanco. On January 31, 2024, the sign with the new DarkSky IDSC logo and attribution was installed.



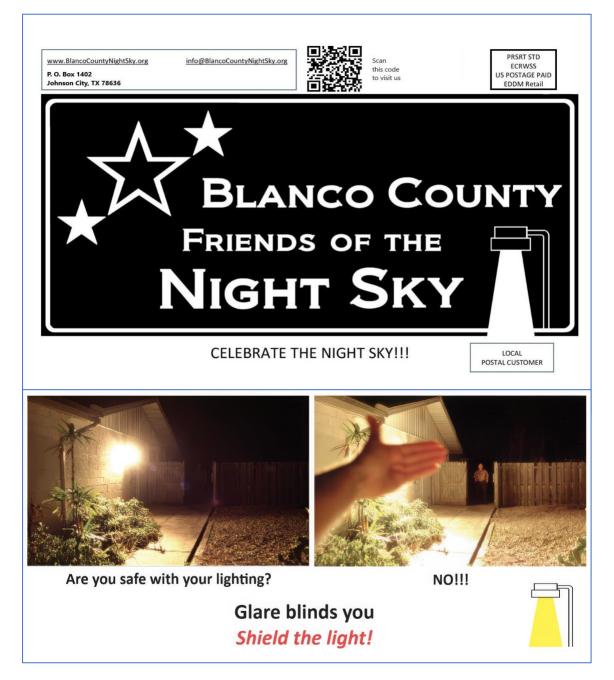
We intend to work with TxDOT to install Blanco's IDSC sign on a future, consolidated "<u>Community Pride Welcome Sign</u>" that TxDOT allows many cities to erect on TxDOT rights-of-way.

Provision and use of night sky educational materials:

Night Sky-related educational materials routinely used in our night sky preservation educational efforts include <u>brochures</u> provided by Dark Sky, the Blanco County Friends of the Night Sky information brochure, informational <u>flyers</u>, informational <u>postcards</u>, <u>advertisements</u> for night sky events, <u>bumper stickers</u>, <u>souvenir stickers</u>, <u>business cards</u>, etc. There are distributed via Night Sky Information booths at community events, direct mail, handouts at night sky presentations, and direct, one-onone contact. In addition, materials are distributed via paid newspaper <u>ads</u>, free newspaper and magazine <u>articles</u> and cutlined photos, and <u>social media</u> to include Facebook and Instagram.

Examples of original educational materials that have been used in Blanco's night sky education initiatives:

In 2024, based on the success of the 2023 effort, we mailed <u>8,010 6" x 9"</u> <u>postcards</u> to every U.S. Mail customer in Blanco County. The card was designed to be read at a glance to quickly convey the anti-light pollution message in the 3 seconds it takes the average person to look at the card on the way to the trash can. We have had several reports, however, of recipients actually posting the card in the homes. Additionally, the cards have motivated individuals to become members of the Blanco County Friends of the Night Sky.



To emphasize the message from the postcards, paid advertisements were taken out in both Banco County newspapers.



Blanco County News, June 19, 2024



more information.



A lot of us moved out here to get away from the city and enjoy country living. For many of us, part of that enjoyment is being able to sit back and enjoy our still wonderfully dark nighttime sky and the peaceful, rural countryside around us.

But, boy oh boy, it can sure be annoying when that view is destroyed by that one neighbor down the way who has a bright light that shines off his place and onto yours! His light **trespasses** onto your property to your great annoyance and spoils both your view of the countryside and your enjoyment of the night sky.

The thing about it is... that neighbor probably doesn't have a clue that his light is bothering you. But it is. His light is trespassing onto your property and you just plain don't like it..

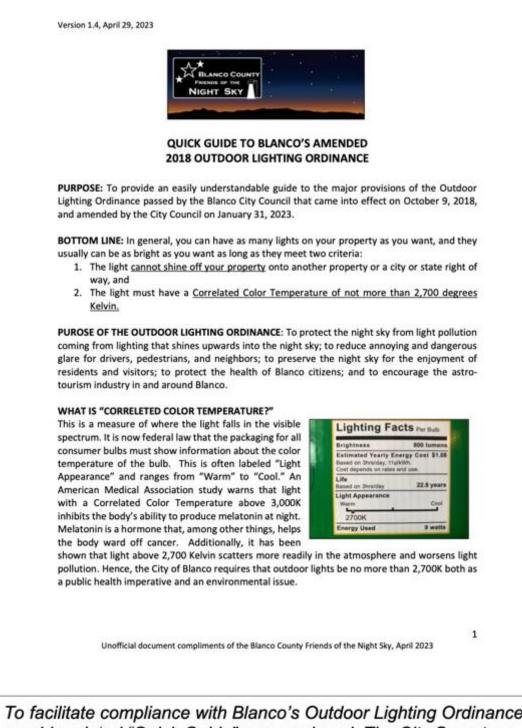
But have you said anything? How does he know? If you'll just mention it to him, you'll probably discover that he had no idea that his light bothers you and he will be most eager to correct it, especially if you offer to pay for it. That's what good neighbors do.



If you have a light of your own that you're not sure about, just go out at night and stand on your property line. If you can see the direct light coming from the fixture — oops! — that light is shining off your property and is probably trespassing onto someone else's place. Whether your neighbor mentions it to you or not, go ahead and do the right thing — shield the light or reposition it so it shines down and stays on your own property. If we all do that, we'll all be able to continue to enjoy those beautiful nights we have out here.

Here in the Texas Hill Country, let's all work together to keep the Stars at Night, Big, and Bright!.

A one-page handout entitled "Hold on, Pardner. That's <u>Tresspassin'!</u>" and aimed at city people who move to the country with no appreciation of the concept of light trespass. The handout was available on the BCFNS website and routinely passed out at Night Sky Advocacy Information Booths.



To facilitate compliance with Blanco's Outdoor Lighting Ordinance, an abbreviated "<u>Quick Guide</u>" was produced. The City Secretary provides this Guide to anyone seeking a Building Permit from the City, thereby ensuring that the outdoor lighting requirements are fully known by anyone likely to erect new lighting.



FACT SHEET on PEC Area and Street Lighting

BACKGROUND: The Pedernales Electric Cooperative (PEC) has contracted to replace approximately 30,000 area and street lighting fixtures within portions of their service area, to be completed by early 2023. The upgraded fixtures have LED light emitters with specifications to be found here: Streetlight Specifications (https://www.pec.coop/ wp-content/uploads/2022/03/2022-03-16-PEC-Area-and-Street-Lighting.pdf). The new fixtures will be much more efficient than the old ones, using significantly less electricity and providing substantially longer service. The lighting emitted from the fixtures will have a color temperature no greater than 3,000 degrees Kelvin (a warm, yellowish light) as required by several of the municipalities in the PEC service area. Shields are available to reduce glare and light trespass from the fixtures.

COMMON QUESTIONS:

 Question: The light from the new fixture in front of my house is too bright. We don't need that much light at this location. How can I get it dimmed?
 Answer: Dimming is not currently available, while the project is in deployment phase. If light is shining too brightly toward the home, consider requesting a shield.

 Question: The light from the new fixture in front of my house shines in my bedroom window and is disturbing my sleep. Can it be shielded?

Answer: Yes, the fixture can be shielded to prevent the light from shining onto an area where it is not wanted or needed and/or to mitigate glare from the fixture. Several types of shields are available ranging from 360-degree shields to shields of lesser coverage. A request to shield the fixture be initiated by the member who is being billed for the fixture. The member who is being billed for the fixture. The member who is being billed for the fixture can contact PEC at 888-554-4732 or login to SmartHub to request any modification to the installed fixture to include a shield. The request must include the approximate location of the fixture and the pole number on which it is installed.

If the request for a shield is made before the fixture is installed, there will be a \$55 additional charge to be paid by the member who is being billed for the fixture. If the request for a shield is made after the fixture has been installed but within thirty (30) days of installation, the charge remains \$55 and is to be paid by the member who is billed for the fixture. If the request is made after the fixture has been in place for longer than 30 days, there is a \$160 charge. This is a pass-through charge from the contractor PEC will charge to the billing statement. https://pec.smarthub.coop/.

3. Question: How does one determine the owner of a particular area or street light fixture?

Answer: To request a modification of an area light or streetlight, individuals will have to reach out to the member who is being billed for the lighting fixture. The member who pays for the fixture will have to make the request. PEC does not provide any private member data to other members. However, PEC can disclose if the fixture is billed to a government entity, an HOA, a business, or other non-personal entity.

4. Question: The fixture specification shoet indicates that fixtures are also available with 2700 Kelvin light emitters (a warmer color than 3,000 Kelvin). Is there any way to lower the Kelvin temperature to 2700 Kelvin or less?

Answer: The PEC's standard light fixtures are 3,000 Kelvin. There is currently not an available 2,700 Kelvin option.

5. Question: How do I request that an area or street lighting fixture be removed entirely? Answer: The member who is being billed for the fixture must make such a request. There may be a charge to remove and dispose of the fixture that could vary fixture to fixture. Requests to remove area or street light fixtures may be made to PEC at 888-554-4732 or login to SmartHub to create a light repair inquiry. https://pec.smarthub.coop/

6. Question: How do I request that an area light or streetlight be installed in a location where there is none now?

Asswer: The owner of the property on which the fixture is to be installed must contact PEC with the request. Requests may be made to PEC at 888-554-4732 or login to SmartHub to make a request. Residents in municipalities or those in areas covered by a Homeowners Association (HOA), Property Owners Association (POA), etc., are cautioned to ensure the installation would not violate any ordinances or restrictions therein. https://pec.smarthub.coop/

NOTE: The information in this Fact Sheet was compiled by the Blanco County Friends of the Night Sky and the Count County Friends of the Night Sky and verified by PEC. It was current as of January 6, 2023.

When the Pedernales Electric Co-op (PEC) began replacing all of Blanco's streetlights with DarkSky (then IDA)-approved fixtures, there was considerable confusion amongst the public at large as to what was happening. Accordingly, an informational Fact Sheet was prepared as a cooperative endeavor between the City of Blanco, PEC, the Blanco County Friends of the Night Sky, and the Comal County Friends of the Night Sky.



Friends of the Night Sky to be distributed free of charge to all Blanco County schoolchildren, faculty, and staff for the 2023 and 2024 solar eclipses in Blanco County.

Items developed for sale or free distribution:

A cooperative commercial venture was undertaken with a local graphic artist to produce <u>T-shirts and sweatshirts</u> with the theme of Blanco's dark skies. These items featured the trademarked catch phase of the Blanco County Friends of the Night Sky, "Deep in the Dark of Texas" \mathbb{M} .

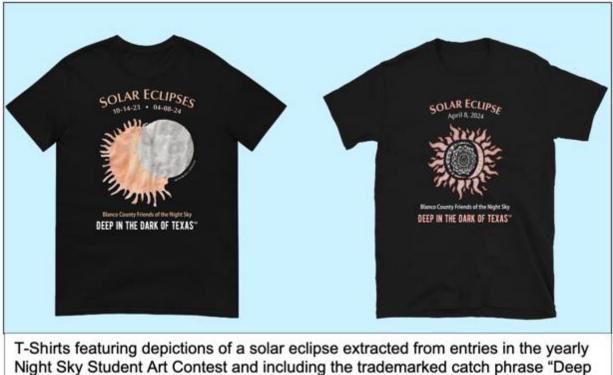
The success of this venture spawned another that highlighted the October 14, 2023 and April 8, 2024 <u>Solar Eclipses</u> passing through Blanco County. These designs featured original artwork extracted from submissions to the <u>Blanco County Night Sky Art</u> <u>Contest</u> for middle schoolers and high school students. To date, we have sold 107 of the <u>t-shirts and sweatshirts</u> of all designs.

The Blanco County Friends of the Night Sky sells or gives away night themed <u>polo shirts, caps, and shopping bags</u>. The Night Sky Songwriting Contest produced a <u>CD of 13 original night sky songs</u> that is given free of charge as take-aways at presentations, information booths, and art contests.

The <u>membership signs</u> for the Blanco County Friends of the Night Sky are sold at cost, \$35/sign, which includes a free one-year household membership.

Photos of items developed for sale or free distribution:







These are some of the locally developed items use to promote night sky preservation.

Efforts to reach new audiences:

Although growth within the city limits of Blanco is limited, the city is surrounded by several <u>large developments</u> that are growing by leaps and bounds. As transportation corridor improvements are made radiating out from Austin and San Antonio, the Blanco area becomes more and more attractive to those wanting to escape the city environment. These new residents too often bring their city lights with them. A key demographic for our outreach efforts remains <u>recently arrived city people</u> who have yet to develop an appreciation for or even an awareness of the night sky. This will be an on-going task into the foreseeable future.

Partnerships

Partners with whom Blanco and its night sky advocates work to promote the dark-sky movement:

Blanco's dark sky initiative is collaborative partnership between the <u>City of</u> <u>Blanco, the Blanco Chamber of Commerce</u>, and the <u>Blanco County Friends of the Night</u> <u>Sky (BCFNS</u>), the local night sky advocacy group.

The BCFNS and the <u>Blanco Chamber of Commerce</u> run the <u>Night Sky Friendly</u> <u>Business Recognition Program.</u> As of January 2025, 35 businesses within the Blanco City Limits have been so recognized

We work closely with the <u>Night Sky Team of the Hill Country Alliance (HCA)</u>, a 501(c)3 environmental advocacy organization. This has been a rich collaboration with many solid results ranging from night sky measuring and mapping to state-level legislative initiatives to protect the night sky.

We have also worked with <u>HCA</u> to <u>proliferate the number of Friends of the Night</u> <u>Sky advocacy groups</u> throughout the Texas Hill Country. Using the model of the Blanco County Friends of the Night Sky (BCFNS) as the first county-wide friends' group, there are now 17 such groups in the Texas Hill Country.

We also worked with HCA to develop a <u>Night Sky Friendly Neighborhood</u> <u>program</u> aimed at new developments in the Texas Hill Country. To date, nine developers in Blanco County have been approached and restrictions have been secured from seven.

We conduct events and star parties from time to time in conjunction with Blanco's <u>Gem of the Hills Community Center</u>, <u>Blanco State Park</u>, and the <u>Hill Country</u> <u>Astronomers.</u>

We have assisted <u>Blanco's Public Library</u> with children's programs and have conducted night sky preservation programs in its facility.

We worked with the <u>Selah/Bamberger Ranch Preserve</u> to install a continuousread SQM-L unit near the Reserve's observatory.

We work with the <u>Keep Blanco Beautiful</u> organization and the <u>Blanco Historic</u> <u>Preservation Commission</u> on lighting options in Blanco's Historical District.

We routinely coordinate efforts with <u>DarkSky-Texas</u>, the state affiliate of DarkSky.

Grants or funding for night sky preservation projects:

The BCFNS received a \$2,000 grant from the <u>Varricchio Family Foundation</u> in Plano, Texas to purchase solar eclipse glasses for all students, faculty, and staff in the two Blanco County Independent School Districts. 5,600 eclipse glasses were purchased and distributed in time for the October 14, 2023 partial solar eclipse and the April 8, 2024 Total Solar Eclipse in Blanco County.

The BCFNS also received a \$1,000 grant from the <u>Brown Foundation</u> in Houston, Texas specifically to purchase night sky friendly light bulbs to be distributed as part of its on-going educational outreach efforts. Several dozens of these bulbs have been distributed and this program continued throughout 2024 and into 2025.

In 2024, we received a \$2,500 grant from the <u>Hill Country Alliance</u> (HCA) to support the county-wide Unihedron SQM Cluster Imitative. Additional HCA grants of \$2,192 was received to purchase Night Sky Business Award material and two Opple Light Meters; and \$750 to support the application of Johnson City for designation as an International Dark Sky Community (IDSC).

Working with the Hill Country Alliance, several years ago we were able to secure State-level legislation that enabled the City of Blanco to use <u>Hotel Occupancy Tax</u> (HOT) funds for night sky preservation. Only five municipalities in the State currently have this authority, with Blanco being the only one actively using it. In 2024, we worked with the Hill Country Alliance to help draft legislation to extend that authority state-wide.

The majority of funding for the Blanco County Friends of the Night Sky, however, has come from <u>membership dues</u>, which are \$20 per year per Household yearly membership; \$50 per year for a Business yearly membership; and \$500 per Household or Business for a Lifetime Membership. As of January 2025, the BCFNS has 127 total paid-up memberships, distributed as follows: 90 Annual Household Memberships; 24 Lifetime Household Memberships; nine (9) Annual Business Memberships; and four (4) Lifetime Business Memberships.

Collaboration with DarkSky-related entities:

As noted above, we routinely coordinate with <u>DarkSky-Texas</u> on all matters relating to fighting light pollution. On occasion, we also contact <u>DarkSky HQ in Tucson</u> on technical matters.

We often collaborate with the <u>Hill Country Alliance's Night Sky Team</u> and the <u>Comal County Friends of the Night Sky</u>, the Hays County Friends of the Night Sky, the <u>Kendall County Friends of the Night Sky</u>, and <u>the Gillespie County Friends of the Night Sky</u>. Additionally, we routinely help other night sky advocacy groups in the Texas Hill Country and beyond get up and running.

Ongoing conservation and/or research programs with which Blanco and its night sky advocates collaborate:

The <u>Blanco County Conservation Initiative</u> (BCCI), begun in the fall, 2023, is dedicated to environmental education and conservation activities in Blanco County. Though the focus of the BCCI is broader than just night sky preservation, many members of the Blanco County Friends of the Night Sky hold dual memberships and support the combined effort.

The <u>Hill Country Alliance</u> (HCA), with whom we routinely collaborate, has numerous conservation and research programs throughout the Texas Hill Country. The one we have been most closely associated with is the "<u>Hill Country Land, Water, Sky,</u> <u>and Natural Infrastructure Plan</u>," a collaborative effort involving dozens of organizations and governmental entities. Additionally, the Blanco County Friends of the Night Sky is an organizational member of HCA's Night Sky Team and collaborates with HCA on all matters involving the night sky.

Future plans to engage with existing and new partners and expand the dark-sky movement:

In addition to continuing the projects enumerated in the section below, in 2025 we intend to:

- Work collaboratively with the <u>Hill Country Alliance</u>, <u>DarkSky-Texas</u>, and <u>DarkSky-International</u> to enhance and expand our educational efforts in support of night sky preservation and light pollution abatement
- Work with <u>DarkSky-Texas</u> and the <u>Hill Country Alliance</u> to seek State-wide Outdoor Lighting Regulations.
- Work with the informal "<u>Circle on the Square</u>" community group to repeat the very successful Night Sky Song Writing Contest, soliciting from the area's very talented group of musicians' original songs extolling the night sky above Blanco County.
- Work with the <u>Blanco County Conservation Initiative</u> on mutually supportive projects.
- Work with the <u>Science Mill</u> in Johnson City and the <u>Selah Bamberger Ranch</u> <u>Preserve</u> to incorporate night sky reservation initiatives into their ongoing programs.
- Work with <u>Keep Blanco Beautiful</u> and <u>Keep Texas Beautiful</u> to emphasize that keeping the night sky beautiful is part and parcel of their ongoing beautification and preservation efforts.
- Work with other <u>county level night sky preservation groups</u> on mutually supportive initiatives.

Success in Light Pollution Control, Leadership, and Future Threats

New or ongoing projects and/or renovation activities that have taken place in Blanco:

On-going projects of note are:

- Developing a county-wide, continuous read <u>SQM Cluster</u> of at least 13 units
- Conducting our third Annual "<u>Media Blitz</u>," sending 6" x 9" postcards supporting night sky preservation to every U.S. postal customer in Blanco County, supplemented by paid advertising in the two Blanco County newspapers
- Expanding the Night Sky-Friendly Business Recognition Program
- Making <u>Educational Presentations</u> to a variety of audiences, often featuring the "Wizard of the Night Sky," an original, costumed character actor dedicated to protecting the night sky.
- Manning Night Sky Information Booths at community events
- Conducting <u>Night Sky Art Contests</u> for middle school and high school students
- Publishing our <u>monthly newsletter</u>, currently distributed to 590 email recipients with an astonishing "open" rate of 59%-65%,
- Posting news of our activities and news about the night sky in <u>Social Media</u> to include our <u>Facebook group page</u> (1,107 members), <u>Facebook page</u> (665 followers), and <u>Instagram account</u> (544 followers).
- Improving the BCFNS <u>website</u>, that gets almost 3,000 unique visitors per month (<u>https://www.blancocountynightsky.org/index.php</u>)
- Submitting news items to the two Blanco County <u>newspapers</u>
- Encouraging new members to purchase a BCFNS <u>Membership Signs</u> to display on their property (187 total signs have been placed throughout Blanco County, the best advertising the night sky can have).
- Participating in DarkSky's <u>International Night Sky Month</u> in April and the Hill Country Alliance's <u>Hill Country Night Sky Month</u> in October.
- Seeking <u>Night Sky Proclamations</u> of support from the three municipalities in Blanco County as well as the Blanco County government.
- Installing a downward-shining, Night Sky-friendly <u>flagpole light</u> on the flagpole at Blanco's Historic Cemetery
- Installing <u>glare shields</u> on the approximately 100 city-owned streetlights in the City Limits of Blanco
- Refining the BCFNS <u>Policy and Procedures Manual</u> to ensure organizational continuity.
- Helping <u>Johnson City</u> and <u>Round Mountain</u> begin the process of attaining IDSC designation.

The status of previously identified "threats" to Blanco's night sky:

Since receiving its IDSC designation in 2022, the "threats" to Blanco's night sky remain essentially unchanged but the severity has increased, i.e., 1) encroaching sky glow from <u>Austin and San Antonio</u>, 2) burgeoning <u>residential developments</u> in the immediate area, 3) continuing pollution from <u>unshielded outdoor lighting within the Blanco City Limits</u>.

The effect of those threats, regrettably, have increased as evidenced by the diminished quality of the night sky as compared to baseline SQM measurements.

Changes to the previously identified "threats" to Blanco's night sky:

The metropolitan area of <u>Austin/San Marcos/New Braunfels/San Antonio</u> is one of the fastest growing areas in the country. With that growth has come increased light pollution and sky glow. As the <u>sky dome</u> above that area grows ever larger, it is impinging on the relatively dark sky above the City of Blanco and Blanco County. We refuse, however, to accept that loss of our night sky is inevitable and have rededicated ourselves to <u>fighting light pollution wherever we can at the local level</u> while working with partners to effect <u>outdoor lighting controls at the state level</u>.

Anticipated management of "threats" to Blanco's night sky in the coming year:

We will continue our <u>night sky preservation education efforts</u> countywide and will encourage citizens living within the Blanco City Limits to file Outdoor Lighting Ordinance <u>code violation complaints</u> with the City.

We will continue to work with the Hill Country Alliance to refine and expand the <u>Night Sky Friendly Development Program</u>.

We will continue working with <u>other night sky advocacy groups</u> in the Texas Hill Country to affect an area-wide reduction in light pollution.

We will continue working with DarkSky-Texas and the Hill Country Alliance to seek <u>state-wide outdoor lighting restrictions</u>, specifically legislation to give all 254 counties in Texas the authority to regulate outdoor lighting and to enact and use Hotel Occupancy Tax (HOT) funds to support light pollution abatement and enforcement efforts.

Change in Ownership, Place Size, or Access

The total size of the City of Blanco: 3.2 Sq Miles/8.4 Sq Km

The current population:

The official 2020 U.S. Census credited the City of Blanco with a population of 1,682 in 978 households, and 530 families residing inside the City Limits.

Changes to the physical size of Blanco:

There has been no increase in the physical size of the Blanco City Limits in several years. Nor is it anticipated to grow in the future as the Texas Legislature removed the ability for any municipality in the state to do involuntary annexation of property, even property in its Extraterritorial Jurisdiction (ETJ). It is doubtful that property owners adjacent to the City of Blanco will apply for voluntary annexation as the City is unable to provide requisite services.

Additional Information

The greatest single benefit of the Dark Sky Community certification to Blanco:

Obtaining the International Dark Sky Community (IDSC) designation has given a significant <u>boost to our efforts</u> supporting night sky preservation and light pollution abatement. It has increased our <u>credibility</u> with key audiences such as governmental bodies and legislators and has given the community-at-large something in which they can take justifiable <u>pride</u>.

Due to increased traffic on Highway 281, the Texas Department of Transportation is actively considering building a bypass around Blanco. In order to avoid dying due to diverted traffic, Blanco will need to market itself as a <u>destination city</u> in order to attract tourist business to keep the city's businesses alive. <u>Night Sky tourism</u> will play an important role in this and Blanco's IDSC designation will support that effort.

Additional information submitted to DarkSky for the 2024 IDSC Annual Report:

<u>REPORT AUTHORSHIP</u>: Blanco's IDSC application was the result of the <u>collaborative work</u> of three mutually supporting entities: the City of Blanco, the Blanco Chamber of Commerce, and the Blanco County Friends of the Night Sky (BCFNS). The <u>BCFNS</u> continues as the City's <u>Executive Agent</u> for all actions relating to night sky preservation to include filing the IDSC Annual Report with DarkSky-International.