



Sedona, Arizona

Keep Sedona Beautiful  
Dark Sky Committee

## 2021 Annual Report

To the International  
Dark Sky Association

Photograph Courtesy of Sedona Photographer,  
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*Photo: Dreamstime*

The International Dark Sky Association designated the City of Sedona as a Dark Sky Community in 2014: the 6th in the U.S., and the 8th world-wide. The Keep Sedona Beautiful (KSB) Dark Sky Committee is pleased to report progress from October 2020 through September 2021 toward its goal of bringing more community awareness of light pollution and preserving our magnificent natural resource—our dark night sky. This was accomplished through dark sky outreach programs by local astronomy clubs, networking with these clubs and other dark sky groups, and planning for a new project to retrofit non-compliant outdoor lighting fixtures.

## **EDUCATIONAL EVENTS**

### **Star parties around Sedona – Sirius Lookers**

The Sirius Lookers astronomy club continues to have small public star parties where it maintains social distancing, requests wearing of masks, and sanitizes telescopes and ladders after each guest. The club put on these star parties:

- Dec. 13, 2020: Geminids Meteor Shower viewing at Schnebly Hill Vista Point near Sedona, 8 pm to midnight; 8-12 participants
- May 26, 2021: Total Lunar Eclipse viewing at Sky Rock Hotel, Sedona, 4 to 6 am; 12-15 participants
- Aug. 11, 2021: Perseids Meteor Shower at Schnebly Hill Vista Point near Sedona, 8 pm to midnight; 8-10 participants
- Sept. 15, 2021: Sky Viewing at Sedona Charter School, 7 to 9:30 pm; about 50 participants

### **Sedona resort presentations – Astronomers of the Verde Valley**

The Astronomers of the Verde Valley continues to offer outreach presentations through its Resorts program in the Sedona area. During the past year, there were 3649 participants in these events. Unfortunately, the club has not been able to host any star parties since the start of the COVID-19 pandemic.

### **Online presentations – Astronomers of the Verde Valley**

Since October 2020, the club has had six public Zoom meetings to discuss current events in astronomy, with about ten participants at each meeting.

## **Cross-promotions**

KSB promoted public events led by the new Camp Verde Dark Sky Community and helped the group network with local astronomy clubs.

## **Sedona Star Party cancelled**

The City of Sedona and the Sedona Chamber of Commerce & Tourism Bureau decided to cancel the annual August Sedona Star Party public event due to the ongoing COVID-19 pandemic.

**With our beautiful preserved dark sky, multiple local Sedona companies offer private and group star parties to visitors from around the world.**

## **FLAGSTAFF-AREA DARK SKIES VISIONING PANEL SESSION SUMMARY**

On Jan. 14, 2021, Sedona Mayor Sandy Moriarty and KSB's Dark Sky Committee Chair Mark Lawler participated in a virtual brainstorming session that discussed concepts for broadening and expanding the reach of dark sky protection efforts across Northern Arizona. The event was sponsored by the Flagstaff Dark Skies Coalition.

Promising concepts were discussed that would bring more attention to, and coordination among, dark sky advocacy groups around the northern part of the state. Many participants also expressed interest in eventually designating a very large Dark Sky Reserve on the Colorado Plateau that would include much of the Verde Valley and Sedona.



*Comet NEOWISE, photographed near Sedona, AZ on July 17, 2020. The gas or ion tail (blue) and dust tail (white) are both visible. Courtesy Robert Mueller, Sedona-area resident.*

## LIGHTING RETROFIT PROJECT IN SEDONA

In 2019, the City of Sedona and the Sedona Chamber of Commerce & Tourism Bureau jointly adopted the Sedona Sustainable Tourism Plan to promote long-term environmental protection, lower-impact visitor experiences, and residents' quality of life. (See <https://visitsedona.com/sustainable-tourism-plan/>.) Among the plan's many initiatives to enhance long-term sustainability is a project to retrofit old outdoor light fixtures so that they comply with the City's outdoor lighting ordinance.

Keep Sedona Beautiful agreed to take the lead role in making this project happen to reduce impacts to our dark sky. In late 2020, KSB started planning a lighting retrofit project to financially support local small businesses to convert to compliant light fixtures.

In early 2021 KSB applied for funds for the project and successfully obtained generous grants from the Sedona Community Foundation and the Whole Foods Market Community Giving Program. Combined with KSB's own allocated funds for the project, a total of \$9142 is available to support light retrofits through the middle of 2022.

A preliminary survey in spring 2021 identified non-compliant light fixtures outside several local businesses in Sedona. KSB will initially reach out to these businesses to implement lighting retrofits and will also conduct further surveys. The project might eventually be expanded to support lighting retrofits by local homeowners.

## NEW CITY STREETLIGHTS INSTALLED ON JORDAN ROAD

The City of Sedona recently installed a set of new LED streetlights along Jordan Road in the Uptown part of Sedona. These lights are poorly shielded and appear excessively bright for the needs of this part of the city. KSB is promoting discussions between local citizens and City staff to see what actions can be taken to make these fixtures more dark-sky-friendly.

## KEEP SEDONA BEAUTIFUL WEBSITE

At KSB'S website, <https://keepsedonabeautiful.org>, the **Dark Skies** selection under the **Initiatives** tab is kept updated about dark sky issues and events. It links to the International Dark Sky Association (IDA) video, "Losing the Dark," as well as to the following:

- IDA Website
- IDA Quick Link to Lights at Night Turn Pollinators Off
- IDA Quick Link to My Neighbor's Lighting
- IDA Quick Links to Light Pollution, Wildlife, Energy Waste, Human Health, and More
- IDA Quick Link to Small Changes, Big Impact-Dark Sky Lighting at Home Depot
- IDA Quick Link to International Dark Sky Places
- City of Sedona Outdoor Lighting Ordinance
- Yavapai County Light Pollution Control Ordinance



*Milky Way over Cathedral Rock, with Sedona at lower right, May 27, 2020. Courtesy Robert Mueller.*

**SKY QUALITY MEASUREMENTS**

The KSB Dark Sky Committee takes Sky Quality Measurements to ensure that Sedona continues to protect its dark night sky. Measurements, in magnitudes per square arc second, were taken in three locations in April and June, at the same locations as in previous years. Higher numbers mean a darker sky. No significant changes are evident from previous years.

SKY QUALITY READING IN SEDONA, AZ CITY LIMITS PERFORMED ON APRIL 10, 2021, NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
21:35	Saddle Rock Cir and June Bug Cir; about 1.2 miles west from Y (right before Sedona Bar & Grill)	0%	20.83	20.94	20.84	20.91	20.91	20.87	20.88
21:24	Whitetail Ln and Rodeo Rd; 2.1 miles W of Y off Rodeo Road/89A (by Safeway)	0%	20.91	20.92	20.99	21.12	20.96	21.04	20.99
21:54	Keep Sedona Beautiful parking lot, 340 Brewer Road, facing away from KSB office	0%	20.94	21.04	21.00	21.04	20.99	21.04	21.01

SKY QUALITY READING IN SEDONA, AZ CITY LIMITS PERFORMED ON JUNE 8, 2021, NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
21:41	Saddle Rock Cir and June Bug Cir; about 1.2 miles west from Y (right before Sedona Bar & Grill)	0%	21.13	21.06	21.26	21.17	21.13	21.11	21.14
21:25	Whitetail Ln and Rodeo Rd; 2.1 miles W of Y off Rodeo Road/89A (by Safeway)	0%	21.10	21.01	20.99	21.01	21.06	21.31	21.08
21:50	Keep Sedona Beautiful parking lot, 340 Brewer Road, facing away from KSB office	0%	21.12	21.11	21.09	21.14	21.09	21.09	21.11

Report submitted by Mark Lawler, Dark Sky Committee Chair  
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