

**BIG PARK/VILLAGE OF OAK CREEK**

**2019**

*Annual International  
Dark Sky Community Report*

**Report submitted by Joanne Kendrick, Chair**  
Big Park/Village of Oak Creek Dark Sky Committee  
Big Park Regional Coordinating Council, Inc.



The Big Park/Village of Oak Creek Dark Sky Committee is pleased to report its dark sky activities after being designated the 14th International Dark Sky Community in the world in February 2016. Offering incomparable beauty and included in the Greater Sedona Area, the Big Park/Village of Oak Creek is an attractive place to visit or settle for many reasons. One of those reasons is the magnificent dark night skies that swath its skies. The community values this natural resource and wants to preserve it for us and for future generations. When public star parties are hosted, many visitors to our community exclaimed that they cannot see the Milky Way from where they live and they are awed at the beauty of our dark night sky.

## EDUCATION EVENTS:



### **Sirius Lookers Astronomy Club, Dennis Young: Lunar Eclipse Star Party, January 20, 2019**

Dennis Young, president of Sirius Lookers Astronomy Club had a total Lunar Eclipse star party at Sombart Road, off State Route 179. The beginning of the dark shadow on the moon started at 8:33 p.m. and the start of totality was 9:41 p.m. Dennis had four different binoculars available for enhanced viewing along with a telescope. Many people attend this event.

### **Red Rock Ranger Station: Solar Viewing and Star Party, March 30, 2019**

Over 225 people attended and looked through telescopes set up by Astronomers of Verde Valley. Solar viewing was in the afternoon, followed by night star gazing. The evening was clear and perfect with great viewing. J.D. Maddy's indoor presentation was standing room only; the Rangers asked J.D. to give a second presentation to accommodate the many people who wanted to hear the presentation. As the crowd filtered out after the presentation, Karen Maddy made an informative constellation presentation, which was well received. The evening star gazing showcased galaxies, Nebulae, Orion M42 being a big hit, M81, M82, M35, Mars, Pleiades, Beehive, Sombrero Galaxy, and more. Many families, children, and adults had smiles as they viewed the diamond stars against a black sky. It was truly a marvelous event. The Big Park/Village of Oak Creek Dark Sky Committee participated in this event. Dark sky brochures were distributed as well as examples of good dark sky outdoor fixtures.

### **Yavapai County Development Services Department: April 24, 2019**

Yavapai County Development Services Department held a Lunch and Learn to discuss residential lighting. The meeting was well attended and many great questions were asked by the attendees. This was a free event, open to the public.

### **Earth Day Celebration: Red Rock State Park, April 27, 2019**

Big Park/Village of Oak Creek Dark Sky Committee participated in Earth Day Celebration at Red Rock State Park on April 27. Dark sky information was distributed. We talked with the visitors about light pollution and dark sky compliant fixtures.

Astronomers of Verde Valley also participated in this event. J.D.

Maddy and Karen Maddy provided telescope viewing of the sun.

### **National Astronomy Day: Star Party, May 12, 2019**

The Sirius Lookers Astro Club, Sedona Public Library, and Keep Sedona Beautiful Dark-Sky Committee sponsored the National Astronomy Day Star Party. Big Park/Village of Oak Creek Dark Sky Committee participated in this event. National Astronomy

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*National Astronomy Day on May 12*



*Earth Day star party at Red Rock State Park on April 27*



Day was created in 1973 by Doug Berger, then president of the Astronomical Association of Northern California.

The star party was held in the Bashas parking lot in West Sedona and began with (SAFE) solar viewing of our closest star, the Sun. Explosions coming off the Sun were seen with a special H-alpha filtered scope. Sunspots were also seen.

The nighttime stargazing began at 7 p.m. and ended after 10 p.m. Highlights were the crescent Moon, the BeeHive Star Cluster, exploding star, and more. Binoculars and giant scopes were on hand for enhanced viewing. Dark sky brochures were distributed and we discussed how to reduce light pollution.

### Red Rock State Park Star Party: June 1, 2019

Red Rock State Park hosted a star party, which was sponsored by Astronomers of Verde Valley (AVV) and Keep Sedona Beautiful Dark Sky Committee. Big Park/Village of Oak Creek Dark Sky Committee participated in this event.

Joanne Kendrick opened the presentation to a sellout audience for this special event, mentioning what Keep Sedona Beautiful does to preserve the night sky. She talked about her involvement with the International Dark Sky Association (IDA) and what the IDA does to help preserve one of our most precious natural resources, the night sky.

Dave Norton gave a PowerPoint presentation about planets, asteroids, and the Alvan Clark-refractor telescope at Lowell Observatory.

After the presentation, AVV members provided multiple telescopes for the crowd to view the night sky. They saw galaxies galore—M81, M82 (Bodes), M51 Whirlpool Galaxy, M104 (Sombrero Galaxy), M57 (Ring Nebula), M87 where they took the picture of a black hole, and many more. Some double stars were seen as well as the Ghost of Jupiter nebula and M13 Globular Cluster.

Big Park/Village of Oak Creek Dark Sky Committee distributed dark sky literature and talked with the attendees about light pollution and dark sky compliant lighting fixtures. Light refreshments were provided.



*Red Rock State Park event on June 1*



**With our beautiful preserved dark skies, multiple companies offer private and group star parties to visitors worldwide.**





**Red Rock State Park Moonlight Hike:**  
June 16, 2019

Astronomers of Verde Valley led a moonlight hike at Red Rock State Park. After the hike, there was telescope viewing of the moon, Jupiter and all four of the Galilean moons.

**Red Rock Ranger Station Solar Viewing & Star Party:** September 21, 2019

The Astronomers of Verde Valley (AVV) hosted a solar viewing and star party at the Red Rock Ranger Station. Solar viewing was well attended as visitors and locals looked through special dedicated solar telescopes to see sunspots and sun flares. The evening event started with a PowerPoint presentation by J.D. Maddy which included the latest technological advances, fun facts, and discussion of our Universe. After the presentation, Karen Maddy delighted the viewers with a laser tour of the constellations and Milky Way. Multiple telescopes provided by members of the AVV were available for the crowd to view the night sky. Viewers saw Galaxies M31, Double star Albireo, Eta Cassiopeia, Nebula Swan, Lagoon, Gas Giants Jupiter and Saturn, Globular Cluster M13, M22, a beautiful open cluster Butterfly, Ptolemy Cluster, Sagittarius star cloud and more. About 155 visitors and locals attended this event.

Big Park/Village of Oak Creek Dark Sky Committee participated in this event. Dark sky brochures and other handouts were distributed.



*Red Rock Ranger Station event on Sept 21*

**Red Rock State Park Star Party:** September 28, 2019

Red Rock State Park hosted a star party which was sponsored by Astronomers of Verde Valley (AVV) and Keep Sedona Beautiful Dark Sky Committee. The Big Park/Village of Oak Creek Dark Sky Committee participated in this event.

The star party began with a presentation by J.D. Maddy, followed by a laser tour of the night sky by Karen Maddy. Then, the astronomers had multiple telescopes available for dark sky viewing. The gas giant planets of Jupiter and Saturn played hide and seek throughout the night; the viewers were impressed with open clusters Owl Cluster and Double Cluster, as well as the pretty Globular Clusters M22 and M13. The Andromeda Galaxy M31 and M110 both could be seen in the eyepiece simultaneously. The observers were in awe that they could see M31 which is located 2.5 million light-years away. About 87 people participated in the evening event.

The Keep Sedona Beautiful Dark Sky Committee and Big Park/Village of Oak Creek Dark Sky Committee distributed dark sky brochures and discussed the importance of reducing light pollution and having dark sky compliant lighting. Light refreshments were served.



**In Big Park/Village of Oak Creek**

- There were no new buildings in Big Park/Village of Oak Creek completed with Final Certificates of Occupancy (CofO) in 2019.
- Part of the County’s inspection process includes a lighting night-time inspection. Issuance of a final CofO is evidence that all inspections, including a lighting inspection, were passed.
- The following remodels in Big Park/Village of Oak Creek were completed in 2019. Please note this is not a comprehensive list, but only includes projects that involved new lights.
  - Tenant improvements for 80 Bell Rock Plaza (APN #405-27-294)
  - Tenant improvements for Verde Valley Medical Center phase 2, 61 Bell Rock Plaza
  - Change of Use w/Tenant Improvements for SNAP Fitness, 7000 State Route 179
  - Tenant Improvements for Tortas De Fuego Bar & Grill, 6623 State Route 179
  - Tenant Improvements to Butterfly Burger, 6623 State Route 179

**SKY QUALITY MEASUREMENTS:**



The Big Park/Village of Oak Creek Dark Sky Committee takes Sky Quality Measurements to ensure that the Big Park/Village of Oak Creek continues to protect its dark night skies and to reduce light pollution. The measurements were taken in three locations on June 3, 2019 and August 1, 2019. The readings were taken at the same locations as in previous years. Below are the measurements:

**SKY QUALITY READING IN VILLAGE OF OAK CREEK**  
 Performed on June 3, 2019, New Moon

Time	Location	Percent of Cloud Cover	1st Sky Quality Reading	2nd Sky Quality Reading	3rd Sky Quality Reading	4th Sky Quality Reading	5th Sky Quality Reading	6th Sky Quality Reading	Average Sky Quality Reading
22:05	Jacks Canyon Road/ SunCliff Dr.	0%	21.7	21.5	21.5	21.4	21.4	21.4	21.5
22:15	888 Saddlehorn Rd	0%	21.6	21.6	21.5	21.5	21.5	21.5	21.5
21:56	Bell Rock/Red Butte - North of Golf Club	0%	21.3	21.2	21.3	21.2	21.3	21.3	21.3

**SKY QUALITY READING IN VILLAGE OF OAK CREEK**  
 Performed on August 1, 2019, New Moon

Time	Location	Percent of Cloud Cover	1st Sky Quality Reading	2nd Sky Quality Reading	3rd Sky Quality Reading	4th Sky Quality Reading	5th Sky Quality Reading	6th Sky Quality Reading	Average Sky Quality Reading
0:30	Jacks Canyon Road/ SunCliff Dr.	10%	21.3	21.3	21.3	21.3	21.3	21.3	21.3
0:42	888 Saddlehorn Rd	10%	21.4	21.3	21.3	21.3	21.3	21.3	21.3
0:22	Bell Rock/Red Butte - North of Golf Club	0%	21.2	21.2	21.1	21.1	21.1	21.1	21.1

**Report submitted by Joanne Kendrick, Chair**  
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