



BORREGO SPRINGS DARK SKY COALITION 2018 ANNUAL REPORT to the International Dark-Sky Association

At this, our 9th anniversary of our IDA Dark Sky Community designation (7/31/2009 to 7/31/2018), word is out, and Borrego Springs is seeing a number of serious amateur astronomers move here, fulltime or part time, from places such as New York and Oregon, because of our IDA designation and our active Coalition. These newcomers bring skills and enthusiasm essential for our goals. Many visitors tell us they come to Borrego Springs specifically because it is a Dark Sky Community.



COMMUNITY OUTREACH –

“Welcome to Borrego Springs, An International Dark Sky Community”

Street Signs at the four major entryways into our town – Our second try with the San Diego County Department of Public Works Traffic Engineering for having new signs placed at the four main roadway entry points into our town proved successful! The county made and installed the new signs in fall 2017, in time for the start of the busy desert season. These signs are attracting much notice. We may explore the possibility of a large sign on the main entry road or town center.

Farmer’s Market Table – A display staffed by Coalition members on Fridays, November through April, is our main point of contact with both residents and visitors. It has been very successful, with public interest in the stargazing handout with dates of activities and information about good outdoor lighting. Through a questionnaire we developed, it is clear that most people are now aware of Borrego’s dark sky and believe its preservation is important.

New County Park – At the county’s request, our Coalition provided input to the lighting design and orientation of the amphitheater for the new 16-acre county park under construction in Borrego Springs.

Education, Public Programs – Members of our Coalition regularly present stargazing and astronomy programs in Borrego Springs for the public throughout the year. This year we added programs about the Moon and the Clark Lake Radio Observatory. The Dark Sky is to be the theme of Borrego Days: “Fly for the Stars.”



DARK SKY REGION – in Southern California

Anza-Borrego Desert State Park Designated an International Dark Sky Park – January 19, 2018, the 650,000-acre desert park that completely surrounds the Dark Sky Community of Borrego Springs received official IDA Dark Sky Park status, making our Dark Sky Community and the adjoining Dark

Sky Park perhaps the only combined “Dark Sky Region”—certainly the only in California. Given that the community of Borrego Springs would be the most significant source of artificial light at night in the area, our IDA community status helps protect the dark skies above Anza-Borrego Desert State Park.

In the photo above, members of the Borrego Dark Sky Coalition celebrate the recent IDA designation of Anza-Borrego Desert State Park as a Dark Sky Park. State Park Interpreter and Coalition Member Sally Theriault, seated at the far end of the table, was responsible for gaining the IDA designation for the park.

The nearby town of Julian, CA, is preparing to apply for Dark Sky status. Leaders of the Julian Dark Sky Network occasionally attend our Coalition meetings in Borrego. Together with Julian and the Anza-Borrego Desert State Park, we might one day be part of a new Dark Sky Region, working to preserve the dark night sky and providing more stargazing opportunities for visitors region- and world-wide.

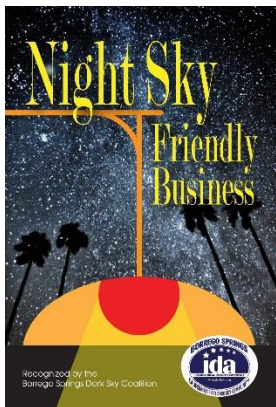
Interaction with Other Groups – We receive frequent requests for advice on dark sky communities. Whenever possible, Coalition members interact with others who request information on how to become certified as a Dark Sky Place. This can be at the Farmers Market, by email, or chance meeting. We participate in the bimonthly meetings of the San Diego IDA Chapter, and we plan to submit a poster display for the November 2018 IDA General Meeting. The Riverside Astronomical Society holds their annual Nightfall Star party in Borrego Springs, which brings many amateur astronomers to town and opportunities to coordinate with their activities.

LIGHTING SUCCESSES & CHALLENGES

LED Downtown Street Lighting – Due to our requests over the past two years, San Diego County traffic safety personnel was successful in obtaining some of the 3000K LED streetlights with dimming capability. However this lighting is typically installed on roads with less than 40 feet width. Nonetheless, the county has replaced several lights along our main entrance road through town with the 3000K luminaires to complete a trial study to ensure we maintain adequate light levels along the road. If the lighting levels meet county standards, the county will replace the remaining luminaries with the 3000K versions, using our town as a model. We have noticed a visible difference in the lighting level with the test bulbs.

The Mall and The Center – The owner is motivated to make parking lot lighting changes and has received advice from a lighting engineer, who has had sample replacement lamps sent to the property manager for evaluation.

Problem Group – Adjacent to the central roundabout in Borrego Springs are four business with too much lighting. We continue our efforts to influence the owners to cooperate, including the easy collection of over 60 signatures on a petition to reduce the light bubble.



BUSINESS INTERACTION

Night Sky Friendly Business Recognition Program – Since its inception in 2013 of our Dark Sky Friendly Business program, 25 organizations ranging from the Chamber of Commerce, to churches, resort hotels, and family-owned shops have been certified. This program gives visibility to our dark sky efforts and encourages others to follow suit.

WEBSITE -- Our website, BorregoDarkSkies.org, has been refreshed with a new layout, one which is easier to maintain, by Coalition member and professional graphic designer Dorothy Hogan. The site includes publications developed by the Coalition, the San Diego County lighting ordinance, publicity about Borrego's dark sky and the IDA certification, a calendar of programs and events, and listings of sky-related educational activities for residents and visitors.

Our Facebook page, www.facebook.com/BorregoSpringsDarkSkyCoalition, with 423 Likes, is another source of up to date information about astronomy events and stargazing programs for the public.

SKY BRIGHTNESS SURVEYS (SQM for Sky Quality Meter) -- In February, Michael McKeag, with technical support from Anthony Tekatch at Unihedron, experimented with zenith sky brightness surveys from a moving vehicle, simultaneously recording sky brightness and position measurements from a Sky Quality Meter (Unihedron SQM-LU) and GPS, attached to a laptop running Unihedron Device Manager. In the course of a few dark, clear, moonless nights Michael completed surveys along all paved roads within, and some just outside, Anza-Borrego Desert State Park, and many streets within Borrego Springs. The geographic extent and measurement density far exceed all surveys conducted with hand-held meters to date. The survey results are plotted on Google Earth for convenient review.

(See map image on page 3 of this report.)

COALITION DETAILS – The Coalition currently has 13 members. We hold six meetings yearly. When not in Borrego, members attend by Skype. Within our Coalition is a designated committee chair for community lighting standards.

Submitted by Betsy Knaak, Chairperson, P.O. Box 310, Borrego Springs, California 92004-0310, www.BorregoDarkSkies.org, on behalf of the Borrego Springs Dark Sky Coalition Members: Eli Hanks, William Hanks, Dorothy Hogan, Dennis Mammana, Mike McKeag, Dr. Jim Rickard, Grace Rickard (Committee Chair, Community Lighting Standards), Sally Theriault, and Sam Webb. Advisory: Randy Baron, Maris Brancheau, Clark Volmar.

Below is a detail of the sky brightness survey within Borrego Springs, CA, an IDA International Dark Sky Community, as completed by Michael McKeag in February, 2018.

