

*Borrego Springs*  
**International Dark-Sky  
Community**



**IDA Application**

Submitted May 14, 2008



*Borrego Springs*  
**International Dark-Sky  
Community**



**IDA Application**

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# INTRODUCTION

## Dark Skies Over Borrego Springs, Forever?

Light pollution is a growing problem throughout the world<sup>i</sup> and especially in Southern California. It threatens not only astronomical research facilities such as the famous Palomar and the Mt. Laguna observatories of San Diego County, but also ecologically sensitive habitats, energy consumption, and our human heritage of the starry heavens.

The night sky of Borrego is particularly spectacular; it's part of the whole desert experience for everyone—residents, visitors and the scientific community. Indeed, in a 2003 *USA Today* article, the Anza-Borrego Desert was designated as one of the top ten stargazing locations in the nation.<sup>ii</sup>

There's a good reason for this: nights are very dark. With a population of between 3,000 and 8,000—depending on the season—Borrego Springs has only about 25 streetlights (all but two are shielded). In addition, the community is surrounded by the vast, lightless Anza-Borrego Desert State Park. With only a few lights scattered about its 937 square miles, one can find only about one streetlight per 40 square miles, concentrated mostly along the main street in Borrego Springs.

In our effort to protect and preserve this unique natural resource, community leaders are working with the International Dark Sky Association<sup>iii</sup> to have Borrego Springs designated as an official International Dark Sky Community.<sup>iv</sup> We would become only the world's second such community, and the first in California. This would be followed by the designation of the Anza-Borrego Desert State Park as the first International Dark Sky Park in California. These designations would set us apart by re-emphasizing the extraordinary beauty of Borrego's natural setting, and would serve to make our community a destination for all who wish to view the heavens in their full splendor.

The application to the International Dark-Sky Association requires no code changes because San Diego County's current lighting code already meets these requirements. It will be primarily voluntary choices made by residents and businesses that will make the difference in keeping our dark sky.

There is broad and growing support for the dark sky concept, but people often don't know what is considered "good lighting" or where to buy energy-efficient fixtures at reasonable costs. Even the simplest of technology—such as motion detectors and shielded bulbs—can improve security and ambience while significantly reducing energy costs. And, of course, good lighting can help keep the Borrego night skies dark for all.

Information sheets about the economic, safety, health and other issues of good and bad lighting can be found on the Internet and are listed here below<sup>v</sup>. And more specific information on lighting fixtures for homeowners are also available at the sites listed here below.<sup>vi</sup>



We hope that, through formal recognition, increased awareness, education, information, knowledge, incentives, economics, and community pride, we as a community can begin to protect and preserve this unique resource of Borrego's outstanding nighttime sky.

### **--The Borrego Springs International Dark Sky Community Task Force**

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i [http://earthobservatory.nasa.gov/Newsroom/NewImages/Images/earth\\_images\\_004.jpg](http://earthobservatory.nasa.gov/Newsroom/NewImages/Images/earth_images_004.jpg)

ii [www.earthday.com/tech/2003-07-31-star-gazing\\_A.html](http://www.earthday.com/tech/2003-07-31-star-gazing_A.html)

iii [www.darksky.org](http://www.darksky.org)

iv [www.darksky.org/membership/default.asp?refPageId=50826](http://www.darksky.org/membership/default.asp?refPageId=50826)

v [www.darksky.org/membership/default.asp?refPageId=58823](http://www.darksky.org/membership/default.asp?refPageId=58823)

vi (<http://data.nextjournal.com/site/idsa/is138.pdf> and <http://data.nextjournal.com/site/idsa/is122.pdf>).



**Borrego Springs  
International Dark-Sky Community  
Application Task Force Members**

Scott Kardel, Public Affairs Coordinator, Palomar Observatory

Betsy Knaak, Executive Director, Anza-Borrego Desert Natural History Association

Joan Malone, Education Program Director, Anza-Borrego Desert Natural History Association

Dennis Mammana, Astronomer, Photographer and Author

James Rickard, Ph.D. Astronomer, Professor Emeritus

Grace Rickard, Amateur Astronomer, Co-author bimonthly "Sky Calendar"

Sally Theriault, Manager, Anza-Borrego Institute

Sam Webb, Chairman of the Anza-Borrego Desert State Park Volunteer Steering Committee



# **Section 1.**

## **Quality Comprehensive Lighting Code**

- 1. San Diego County Division 9. Light Pollution Code**
- 2. Summary of Code**
- 3. Review of Code in Relation to Requirements for an International Dark-Sky Community**



# **SAN DIEGO COUNTY DIVISION 9. LIGHT POLLUTION CODE\***

**\*Note**--Division 9, Sections 59.101--59.115, added by Ord. No. 6900 (N.S.), effective 1-18-85; amended by Ord. No. 7155 (N.S.), effective 7-17-86; amended by Ord. No. 9716 (N.S.), effective 6-10-05.

**Cross reference(s)**--Lighting of parking area for teen-age dances, § 21.2309; street lights required, § 51.511.1.

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## **SEC. 59.101. LEGISLATIVE INTENT.**

The intent of this Division is to minimize light pollution for the enjoyment and use of property and the night environment by the citizens of San Diego County and to protect the Palomar and Mount Laguna observatories from the effects of light pollution that have a detrimental effect on astronomical research by restricting the permitted use of outdoor light fixtures on private property.

(Amended by Ord. No. 9716 (N.S.), effective 6-10-05)

## **SEC. 59.102. APPLICABILITY.**

All artificial outdoor light fixtures shall be installed in conformance with the provisions of this Division, the Building Code, the Electrical Code, and lighting requirements specified in Section 6324 (Lighting Permitted in Required Yards) and Section 6326 (Lighting not in Required Yards) of the Zoning Ordinance of the County of San Diego, along with any other related state and federal regulations such as California Title 24.

(Amended by Ord. No. 9716 (N.S.), effective 6-10-05)

## **SEC. 59.103. APPROVED MATERIALS AND METHODS OF INSTALLATION.**

This Division is not intended to prevent the use of any design, material or method of installation not specifically proscribed by this Division, provided any such alternate has been approved. The Building Official may approve any such proposed alternate provide it:

a. Provides at least approximate equivalence to the applicable specific requirements of this Division; and

b. Is otherwise satisfactory and complies with the intent of this Division.



**SEC. 59.104. DEFINITIONS.**

a. Outdoor light fixtures means outdoor artificial illuminating devices, outdoor fixtures, lamps and other similar devices, permanently installed or portable, used for flood lighting, general illumination or advertisement. Such devices shall include, but are not limited to, search, spot and floodlights for:

1. buildings and structures;
2. recreational facilities;
3. parking lots;
4. decorative landscape lighting;
5. billboards and other signs (advertising and other);
6. private street lighting;
7. private walkway lighting.

b. Class I lighting means all outdoor lighting including but not limited to outdoor sales or eating areas, assembly or repair areas, billboards and other signs, recreational facilities and other similar applications where color rendition is important.

c. Class II lighting means all outdoor lighting including but not limited to illumination for commercial, industrial and residential walkways, roadways and parking lots, equipment yards outdoor security and residential entrance lighting.

d. Class III lighting means any outdoor lighting used for decorative effects including, but not limited to, architectural illumination, flag and monument lighting and all landscape lighting such as illumination of trees and bushes.

e. Building Official for the purposes of this Division means the Director of Planning and Land Use or his designated representative(s).

f. Individual means any private individual, tenant, lessee, owner or any commercial entity including but not limited to companies, partnerships, joint ventures or corporation

g. Installed means any installation of outdoor light fixtures after January 18, 1985. Projects with construction plans approved prior to January 18, 1985 are excluded from installation in compliance with this Division in the initial installation only.

h. Residential Entrance Light means a building mounted exterior lighting fixture as required by the California Electrical Code and/or California Building Code for outdoor



entrances and exits with grade level access. These fixtures shall be limited to no more than 2000 lumens per fixture.

i. Zone A means the circular area, fifteen (15) miles in radius centered on the center of Palomar Observatory and the circular area fifteen (15) miles in radius centered on the center of Mount Laguna Observatory.

j. Zone B means all areas within the territorial limits of the unincorporated portion of the County of San Diego and not included in the area defined as Zone A.

k. Fully shielded means a light fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a defusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding must be permanently affixed. Fixture shall be mounted such that no light is emitted above the horizontal plane.

l. Luminous tube lighting means gas-filled glass tubing which, when subjected to high voltage, becomes luminescent in a color characteristic of the particular gas used, e.g., neon, argon, etc.

(Amended by Ord. No. 8553 (N.S.), effective 8-10-95, operative 8-10-95; amended by Ord. No. 8962 (N.S.), effective 9-23-98; amended by Ord. No. 9716 (N.S.), effective 6-10-05)

#### **SEC. 59.105. REQUIREMENTS FOR LAMP SOURCE AND SHIELDING.**

The requirements for lamp source and shielding of light emissions for outdoor light fixtures shall be as set forth in the following table:

##### **LAMP TYPE AND SHIELDING REQUIREMENTS PER FIXTURE**

###### **CLASS I-COLOR RENDITION IMPORTANT**

<u>LAMP TYPE</u>	<u>ZONE A (15 Mi.)</u>	<u>ZONE B</u>
Low Pressure Sodium	Fully Shielded	Fully Shielded
Others above 4050 Lumens	Prohibited	Fully Shielded
Others 4050 Lumens & Below	Fully Shielded	Fully Shielded <sup>1</sup>

###### **CLASS II-PARKING LOTS, SECURITY, ETC.**

<u>LAMP TYPE</u>	<u>ZONE A (15 Mi.)</u>	<u>ZONE B</u>
Low Pressure Sodium	Fully Shielded	Fully Shielded



Others above 4050 Lumens	Prohibited	Prohibited, except full shielded HPS is allowed on private roadways.
Others 4050 Lumens & Below	(a) Fully Shielded Fixture with motion sensor; or (b) Unshielded Fixture, 2000 lumen maximum with motion sensor; or (c) Residential Entrance Light	(a) Fully Shielded Fixture; (b) Unshielded Fixture, 2000 lumen maximum with motion sensor; or (c) Residential Entrance Light

### CLASS III-DECORATIVE

LAMP TYPE	ZONE A (15 Mi.)	ZONE B
Low Pressure Sodium	Fully Shielded	Fully Shielded
Others above 4050 Lumens	Prohibited	Prohibited
Others 4050 Lumens & Below	Prohibited	Prohibited except if less than 2000 lumens per fixture
Luminous Tube	Prohibited	Fully Shielded

Lighting for On-Premises Advertising Displays, as defined under Section 5490 of the Business and Professions Code, shall be shielded where feasible and focused to minimize spill light into the night sky or adjacent properties.

(Amended by Ord. No. 9716 (N.S.), effective 6-10-05)

#### **SEC. 59.106. SUBMISSION OF PLANS AND EVIDENCE OF COMPLIANCE.**

The applicant for any permit required by the County of San Diego for work involving outdoor light fixtures (except as exempted in Section 59.108) shall submit (as part of the application for permit) evidence that the proposed work will comply with this Division. The submission shall contain but not be limited to the following:

- a. The location of the site where the outdoor light fixtures will be installed;
- b. Plans indicating the location on the premises, and the type of outdoor light fixtures;
- c. A description of the outdoor light fixtures including but not limited to manufacturer's catalog cuts, photometric study, and drawings.

The above required plans and descriptions shall be sufficiently complete to enable the plans examiner to readily determine whether the work will comply with the requirements of this Division. If such plans and descriptions cannot enable this ready determination, the



reason of the nature or configuration of the devices, fixtures or lamps proposed, the applicant shall submit further evidence of compliance enabling such determination.

(Amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**SEC. 59.107. HOURS OF OPERATION.**

a. All Class I lighting shall be off between 11:00 p.m. and sunrise, except as follows:

1. On Premises advertising signs may be illuminated while the business facility is open to the public;

2. Billboards may remain lit until midnight;

3. Outside illumination of sales, commercial, assembly, repair, and industrial areas may be lit when such areas are actually in use.

4. Outdoor recreational facilities, public or private, may remain lit to complete a specific organized recreational event in progress and under illumination in conformance with this Division at 11:00 p.m.

5. Lighting exempted from this requirement under Section 59.108 or Section 59.109.

b. Operation of searchlights for advertising purposes is prohibited between 11:00 p.m. and sunrise.

c. All Class III lighting shall be off between 11:00 p.m. and sunrise.

(Subsection a amended by Ord. No. 7041 (N.S.), effective 11-1-85; Section amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**SEC. 59.108. PERMANENT EXEMPTIONS AND SPECIAL REQUIREMENTS.**

a. PERMANENT EXEMPTIONS

1. Previously Existing Fixtures. All outdoor light fixtures existing and legally installed prior to January 18, 1985 are exempt from the requirements of this Division, except that:

a. When existing luminaires become inoperable, replacement in compliance with this Division is required;

b. This exemption shall cease to apply when the parcel is subject to a change in use.



2. Fossil Fuel Light. All outdoor light fixtures producing light directly by the combustion of fossil fuels (such as kerosene lanterns, gas lamps, etc.) are exempt from the requirements of this Division.

3. Federal and State Facilities. Outdoor light fixtures on, in or in connection with facilities and land owned or operated by the government of the United States of America or the State of California are exempt from the requirements of this Division. Voluntary compliance with the intent and provisions of this Division is encouraged.

4. Holiday Decorations. Lights used for holiday decorations are exempt from the requirements of this Division.

5. Flag Poles. The illumination of the United States or California Flag and an associated flagpole are exempt from the requirements of this Division, provided that fixtures over 4050 lumens (per flag) shall be fully shielded.

b. SPECIAL REQUIREMENTS

1. County Airports. Outdoor lighting that is not regulated by state or federal agencies such as lighting for parking lots and outside buildings shall be low-pressure sodium.

2. Correctional Institutions. Outdoor lighting that is not regulated by state or federal regulations such as lighting for parking lots shall be fully shielded.

(Amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**SEC. 59.109. TEMPORARY EXEMPTIONS.**

a. Information Required. Any individual may submit a written request to the Building Official for a temporary exemption from the requirements of this Division. The fee for the temporary exemption shall be that fee prescribed in the Department of Planning and Land Use fee schedule (section 362 of the San Diego County Administrative Code) adopted by ordinance by the Board of Supervisors. The Request for Temporary Exemption shall contain the following information:

1. Name, address and telephone number of the applicant;
2. Location of the outdoor light fixtures for which the exemption is requested;
3. Specific exemption(s) requested;
4. Use of the outdoor light fixtures involved;
5. Duration of the requested exemption(s);



6. Type of outdoor light fixture to be used, including total lumen output, character of the shielding, if any;
7. Previous temporary exemptions, if any;
8. Such other data and information as may be required by the Building Official.

The Building Official shall have five (5) business days from the date of receipt of the Request for Temporary Exemption to approve or disapprove the request. The applicant will be notified of the decision in writing.

d. Duration of Approval. The exemption shall be valid for not more than thirty (30) consecutive days from the date of issuance of approval. Exemptions are renewable for a period of not more than thirty (30) consecutive days. Requests for renewal of a temporary exemption shall be processed in the same manner as the original request. No outdoor light fixtures shall be exempted from this Division for more than sixty (60) days during any twelve (12) month period.

e. Disapproval and Appeal. If the Request for Temporary Exemption is disapproved by the Building Official, the applicant may appeal the decision to the Board of Supervisors. Appeals shall be submitted in writing within ten (10) working days from the date of notification of disapproval. The appeal fee shall be that fee prescribed in the Department of Planning and Land Use fee schedule.

Amended by Ord. No. 8553 (N.S.), effective 8-10-95, operative 8-10-95; amended by Ord. No. 8962 (N.S.), effective 9-23-98; amended by Ord. No. 9716 (N.S.), effective 6-10-05)

#### **SEC. 59.110. VIOLATIONS AND PENALTIES.**

It shall be unlawful for any individual as defined in this Division to erect, construct, enlarge, alter, repair, move, improve or convert any lighting structure, or cause the same to be done, contrary to or in violation of any provision of this ordinance. Any individual violating any provision of this Division shall be deemed guilty of an infraction and/or misdemeanor as hereinafter specified. Each such individual shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this ordinance is committed, continued, or permitted.

Any individual convicted of a violation of this code shall be punished by (1) an infraction offense and a fine not exceeding one hundred dollars (\$100) for a first violation; (2) an infraction offense and a fine not exceeding two hundred dollars (\$200) for a second violation of the same ordinance on the same site and perpetrated by the same owner and/or agent within one year. The third and any additional violations on the same site and perpetrated by the same owner and/or agent shall each constitute misdemeanor offense and shall be punishable by a fine not exceeding five hundred dollars (\$500) or six months in jail or both. Payment of any penalty herein provided shall not relieve a person.



firm or corporation from the responsibility of correcting the condition consisting of the violation.

(Amended by Ord. No. 7201 (N.S.), effective 10-16-86; amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**SEC. 59.111. VIOLATIONS CONSTITUTE PUBLIC NUISANCE.**

Any lighting structure erected, constructed, enlarged, altered, repaired, moved, improved, or converted, contrary to the provisions of this Division shall be, and the same is hereby declared to be, unlawful and a public nuisance and subject to abatement in accordance with the Uniform Public Nuisance Abatement Procedure contained in Chapt 2, Division 6, Title 1 (commencing with Section 16.201) of this Code or the County Counsel shall, upon order of the Board of Supervisors or Building Official, respectively, commence necessary proceedings for the abatement, removal and/or enjoinder of any such public nuisance in the manner provided by law. Any failure, refusal or neglect to obtain a permit as required by this Division shall be prima facie evidence of the fact that a public nuisance has been committed in connection with the erection, construction, enlargement, alteration, repair, movement, improvement, or conversion of a lighting structure erected, constructed, enlarged, altered, repaired, moved, improved, or converted, contrary to the provisions of this Division.

(Amended by Ord. No. 7141 (N.S.), effective 6-26-86; amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**SEC. 59.112. CITATION AUTHORITY.**

Pursuant to the provisions of California Penal Code Section 836.5, the Director of Planning and Land Use or specific individuals deputized by the Director, may arrest a person without a warrant whenever the Director or the authorized deputy has reasonable cause to believe that the person arrested has committed an infraction or misdemeanor which is a violation of an ordinance, code, or statute which he or she has the duty to enforce. An officer or employee making an arrest under the authority of this section shall follow the citation-release procedures prescribed by the California Penal Code, or such proceedings hereinafter enacted by the State of California. No agent or deputy shall exercise the power to issue citations authorized above unless such agent or deputy shall first have completed a course of training that meets the minimum standards prescribed by the Commission on Peace Officers Standards and Training as established in Section 832(a) of the Penal Code.

(Amended by Ord. No. 8553 (N.S.), effective 8-10-95, operative 8-10-95; amended by Ord. No. 8962 (N.S.), effective 9-23-98; amended by Ord. No. 9716 (N.S.), effective 6-10-05)

**State law reference(s)**--Standards established, Penal Code, § 832(a); arrest without warrant, Penal Code, § 836.5.



**SEC. 59.113. SEVERABILITY.**

If any provision of this Division or the application thereof to any individual or circumstance is invalid, the invalidity shall not affect other provisions or applications of this Division which can be given effect without the invalid provision or application, and to this end the provisions of this Division are severable.

(Amended by Ord. No. 7155 (N.S.), effective 7-17-86; amended by Ord. No. 9716 (N.S. effective 6-10-05)



## **San Diego County's Light Pollution Ordinance (Division 9, Sections 59.101--59.115)**

The intent of this Division is to minimize light pollution for the enjoyment and use of property and the night environment by the citizens of San Diego County and to protect the Palomar and Mount Laguna observatories from the effects of light pollution that have a detrimental effect on astronomical research by restricting the permitted use of outdoor light fixtures on private property.

The ordinance defines a circular area, Zone A, fifteen (15) miles in radius centered on the center of Palomar Observatory and a circular area fifteen (15) miles in radius centered on the center of Mount Laguna Observatory. Zone B means all areas within the territorial limits of the unincorporated portion of the County of San Diego and not included in the area defined as Zone A.

I. Class I lighting means all outdoor lighting used for, but not limited to, outdoor sales or eating areas, assembly or repair area, outdoor advertising displays and other signs, recreational facilities and other similar applications when color rendition is important

II. Class II lighting means all outdoor lighting used for but not limited to illumination for walkways, private roadways and streets, equipment yards, parking lot and outdoor security

III. Class III lighting means that lighting not needed for Class I or Class II purposes and used for decorative effects. Examples of Class III lighting include, but are not limited to, the illumination of flag poles, trees, fountains, statuary, and building walls.

Within Zone A Class I lighting restricts most lighting types to low-pressure sodium. Other light sources above 4050 Lumens are prohibited. Other light sources rated at 4050 Lumens and lower are allowed so long as they are fully shielded and do not exceed a maximum of 8,100 total lumens per acre or per parcel if under one acre.

Within Zone A all Class II lighting must be low-pressure sodium Lamps below 4050 Lumens are allowed so long as they are (a) Fully Shielded Fixture with motion sensor; or (b) Unshielded Fixture, 2000 lumen maximum with motion sensor; or (c) Residential Entrance Light. Class III lighting (decorative) is prohibited.

Within Zone B all Class I lighting is allowed as long as lighting above 4050 Lumens is fully shielded. All Class II lighting above 4050 Lumens is prohibited. Prohibited, except fully shielded high-pressure sodium (HPS) is allowed for private roadways. Class II lighting that is below 4050 Lumens is allowed so long as it is (a) Fully Shielded Fixture; or (b) Unshielded Fixture, 2000 lumen maximum with motion sensor; or (c) a Residential Entrance Light.

Class III lighting that is above 4050 Lumens is prohibited within Zone A unless it is fully shielded low-pressure sodium. Within Zone B it is allowed as fully shielded low-pressure sodium and if less than 2000 lumens per fixture or fully shielded luminous tube lighting.

Operation of searchlights for advertising purposes is prohibited between 11:00 p.m. and sunrise.



# **International Dark-Sky Association**

## **Dark-Sky Community Designation**

Minimum Requirements for a quality comprehensive lighting code

The Borrego Springs community is not an incorporated city. The lighting ordinance governing the area is that set forth in San Diego County's Light Pollution Code (Division 9, Sections 59.101--59.115).

IDA requires an ordinance with three minimum standards. The first standard is:

"Full shielding or full cutoff standard for all lighting fixtures over 5000 lumens initial lamp output (or equivalent wattages)."

San Diego County's Light Pollution Ordinance meets and exceeds that standard. The full text of the ordinance follows, but some highlights are given below. The ordinance divides types of outdoor lighting into different classes.

I. "Class I lighting means all outdoor lighting used for, but not limited to, outdoor sales and eating areas, assembly or repair area, outdoor advertising displays and other signs, recreational facilities and other similar applications when color rendition is important

II. "Class II lighting means all outdoor lighting used for but not limited to illumination for walkways, private roadways and streets, equipment yards, parking lot and outdoor security.

III. "Class III lighting means that lighting not needed for Class I or Class II purposes and used for decorative effects. Examples of Class III lighting include, but are not limited to, the illumination of flag poles, trees, fountains, statuary, and building walls."

Within the Borrego Springs region all Class I lighting is allowed as long as lighting above 4050 Lumens is fully shielded. All Class II lighting above 4050 Lumens is prohibited, except fully shielded high-pressure sodium (HPS) is allowed for private roadways. Class II lighting that is below 4050 Lumens is allowed so long as it is (a) Fully Shielded Fixture; or (b) Unshielded Fixture, 2000 lumen maximum with motion sensor; or (c) a Residential Entrance Light.

Class III lighting that is above 4050 Lumens is allowed as fully shielded low-pressure sodium and if less than 2000 lumens per fixture or fully shielded luminous tube lighting.

Operation of searchlights for advertising purposes is prohibited between 11:00 p.m. and sunrise.

The two remaining standards call for:



## Section 2.

# Community Commitment to Dark Skies and Quality Lighting

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### As shown by:

- \* "City"-owned lighting conforming with, or committed to conforming with, the lighting code (if the latter, a published plan with a timeline for completion in no more than five years);
- \* Municipal support of dark skies and good lighting as indicated through "city" publications, flyers, PSAs, funding of lighting upgrades, etc. (just to name a few).

*Note that Borrego Springs is an unincorporated area of San Diego County, which serves as our municipal government.*

### Increasing Public Awareness and Education....

1. Support of designation by County Supervisor
2. Unanimous support of designation by County Community Sponsor Group
3. San Diego Union-Tribune Feature Article, May 1, 2008
4. KPBS Radio Interview, May 6, 2008
5. Cover article Borrego Sun Newspaper, May 15, 2008
6. Feature article, Julian News, April 23, 2008
7. Support of community indicated in "Speak Up" section of Borrego Sun, Jan 2008, Editorial support of local newspaper, April 2008
8. Support by major regional newspaper "San Diego Union-Tribune" (Quest Section, May 2008)
9. Public Meeting presented January 15, 2008
10. Informational handout developed by the Task Force and distributed to public.
11. Publicity in the ABDNHA "Sand Paper" to over 2,000 households

### ....Results in Positive Changes:

12. The Borrego Springs Dark-Sky Community Task Force is working on lighting improvements in the community:
  - a. Working with De Anza True Value Hardware to stock night-sky friendly fixtures
  - b. Working with officials from San Diego County and SDG&E to improve a street light at a major intersection
  - c. Working with the local school district to improve lighting on the high school gymnasium
13. We have already seen some positive results in the community from our efforts:



- a. Sun & Shadows residential complex desires to improve lighting in their new landscaping plan
- b. The Springs RV Resort changed lighting on their clubhouse to reduce light pollution
- c. New owners of Montessoro and La Casa del Zorro Resort contacted the task force for information about good lighting fixtures for use in redesign and development plans for these two resorts
- d. Based on hearing about Borrego Springs' efforts, other communities in the region indicate interest in becoming International Dark-Sky Communities





**BILL HORN**  
SUPERVISOR, FIFTH DISTRICT  
SAN DIEGO COUNTY BOARD OF SUPERVISORS

May 8, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310, Borrego Springs, CA 92004-0310

To Whom It May Concern:

I am writing this letter in support of Borrego Springs' application to become an International Dark-Sky Community. Borrego Springs is an unincorporated community within San Diego County and is part of my Supervisorial District.

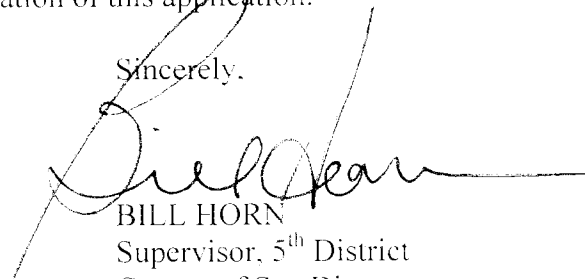
Borrego Springs is a place where the Milky Way is still visible. There are only a few places left in the country where one can see such a spectacular view of the night sky. It is important for this community that this increasingly rare resource be protected. The businesses, residents and government agencies must work together to preserve Borrego's dark sky. Once it is lost, it is gone forever.

The dark desert sky brings astronomy clubs and other interested visitors to both the state park and the community of Borrego Springs providing an economic benefit to the community that is worthy of protection.

Last year, the Borrego Springs Dark-Sky Coalition was formed to investigate the possibility of having Borrego Springs designated as an official International Dark-Sky Community. This application requires no change to the existing County lighting code. The efforts of the Borrego Springs Dark-Sky Coalition serve to involve the whole community in dark sky preservation through increased awareness, education, and availability of fixtures that better shield and direct light where it's needed, while helping to save energy and keep the desert's dark for stargazing, scientific study, and for all those who just enjoy the wonder of the night sky.

Thank you for your consideration of this application.

Sincerely,



BILL HORN  
Supervisor, 5<sup>th</sup> District  
County of San Diego

BH:dms



**BORREGO SPRINGS  
COMMUNITY SPONSOR GROUP  
P.O. Box 1371  
Borrego Springs, CA. 92004**

*The official county planning group for Borrego Springs, an unincorporated community in San Diego County*

April 10, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA. 92004-0310

Dear IDA Board of Directors,

Borrego Springs is a place where you can still go outside at night and actually see the Milky Way. There are few places left in this Country, where residents and visitors are privileged to have such a spectacular dark sky - It is important that this increasingly rare phenomenon be protected.

In 2003, USA Today listed the Anza-Borrego Desert State Park as one of the 10 best places for stargazing. This designation brings astronomy clubs and other visitors to the Park and Borrego Springs; it is an economic asset to the community, worthy of protection.

The Sponsor Group appreciates the efforts of the Borrego Springs Dark Sky Coalition, which was formed last year to investigate the possibility of having Borrego Springs designated as an Official Dark Sky Community. Their application is now in process and requires no changes to the existing County lighting codes. The basis of their application is to involve the community in the dark sky conservation process. We support this effort. Public awareness is critical. The business community, residents, and government agencies must work together to preserve Borrego's dark sky. Once it is lost, it is gone forever.

Recognizing the importance of a dark sky to our community, the Sponsor Group endorses the application of the Borrego Springs Dark Sky Coalition, to have Borrego Springs designated as an Official Dark Sky Community by the International Dark Sky Association.

Best regards,  
Borrego Springs Community Sponsor Group

Abby King, Chair  
Judy Haldeman, Vice Chair  
Sam Webb, Secretary  
Kerin Shugart, Secretary  
Bill Collins, Member  
Jane Daniels, Member  
Joe Hopkins, Member  
Kurt Levens, Member  
Jim Lindeman, Member  
Clark Shimeall, Member



The San Diego

# Union-Tribune.

Thursday  
May 1, 2008

50¢  
PLUS TAX  
Final



## DARK SKIES

bright future

Dark skies make the Anza-Borrego Desert State Park a mecca for professional and amateur astronomers. At times, it's even possible to see the light of the aurora borealis. Photo: Wikimedia Commons



#### KEEPING THE WAY

still be dark-sky friendly. Here are some tips:

- Use outdoor lights at night only when and where they are needed.
- Use fully shielded, light-efficient fixtures aimed directly at the ground.
- Incorporate timers and sensors to shut off lights when they are not needed.
- Look for light fixtures with the International Dark-Sky Association's seal of approval, which ensures minimal light pollution.

#### STAR PARTIES

Dennis Mammana's speaking and star party schedule begins in October with programs at Anza-Borrego Desert State Park, the Springs at Borrego, Joshua Tree National Park and other sites. Keep up with his celestial photography and upcoming events by visiting [dennismammana.com](http://dennismammana.com).

#### FELLOW STARGAZERS

To learn more about the wild blue (black) yonder, visit these Web sites:

- American Astronomical Society: [aas.org](http://aas.org)
- International Dark-Sky Association: [darksky.org](http://darksky.org)
- Mount Laguna Observatory: [mintaka.sdsu.edu](http://mintaka.sdsu.edu)
- Oceanside Photo & Telescope Astronomical Society: [optastroclub.com](http://optastroclub.com)
- Palomar Observatory: [astro.caltech.edu/palomarnew/](http://astro.caltech.edu/palomarnew/)
- Reuben H. Fleet Science Center: [rhfleet.org/site/astronomy/sdaa.html](http://rhfleet.org/site/astronomy/sdaa.html)
- San Diego Astronomy Association: [sdaa.org](http://sdaa.org)



In a time-exposure photograph taken in Borrego's Coachwhip Canyon, the Earth's rotation creates the illusion that the stars are wheeling around the North Star.

## BORREGO SEEKS RECOGNITION AS AN ASTRONOMY HAVEN

By Caroline Dipping  
STAFF WRITER

In Borrego Springs, the "season" is pretty well over now. The spring wildflowers have faded away. The mercury is creeping toward the triple digits of summer. The fall and winter population of about 8,000 is beginning to recede to the 3,000 stalwarts who are year-round residents.

Yet one thing in this tiny desert town remains constant. It is spectacular. And it happens only at night.

"You can see stars all the way down to the horizon," said Scott Kardel, public affairs coordinator at the Palomar Observatory. "It's very dark — not in a scary, insecure way, but in a beautiful way."

The Milky Way — which cannot be seen from downtown San Diego, nor from backyards in most of the country — is visible here in all its gleaming glory.

Borrego's inky night skies have long lured professional and amateur astronomers. In 2003, the Anza-Borrego Desert State Park was named one of the Top 10 stargazing locations in the nation by *USA Today*.

Now a group of Borregans has embarked on an ambitious project to ensure the celebration and preservation of this jet-dark canopy. They are working to get their town designated as the world's second Dark-Sky Community, a title that would make the area even more of a magnet for sky-loving tourists.

To date only Flagstaff, Ariz., holds this



Dennis Mammana

distinction, which was awarded in 2001 by the International Dark-Sky Association (IDA). Founded in 1988, the 10,000-member nonprofit organization based in Tucson, Ariz., is dedicated to building awareness of light pollution as it affects astronomy and the public, and promoting dark-sky friendly outdoor lighting.

For homeowners and businesses, that means shielding the tops and sides of outdoor lighting fixtures

over 5,000 lumens of brightness, limiting the use of outdoor lighting at night, and using light-efficient fixtures. For the community, it would also mean ensuring that street lights, for example, used low-pressure sodium lights that illuminate with less light pollution.

The association defines a dark-sky area as a town, city or other community that has shown exceptional dedication to the preservation of the night sky through implementation and enforcement of lighting codes, dark-sky education and citizen support of dark skies.

"In Borrego, one can actually see the stars," said Dennis Mammana, an astronomer, night-sky photographer and resident of Borrego Springs. (He writes the weekly Stargazer column in *Quest*.) "I don't mean just a handful or so that are visible from most suburban areas around Southern California, but thousands."

"We can regularly see such elusive sights as the Zodiacal Light, the Andromeda Galaxy and, on occasion, even the Northern Lights."

SEE **Borrego, E3**

"No one regards what is before his feet. We all gaze at the stars."

# QUEST

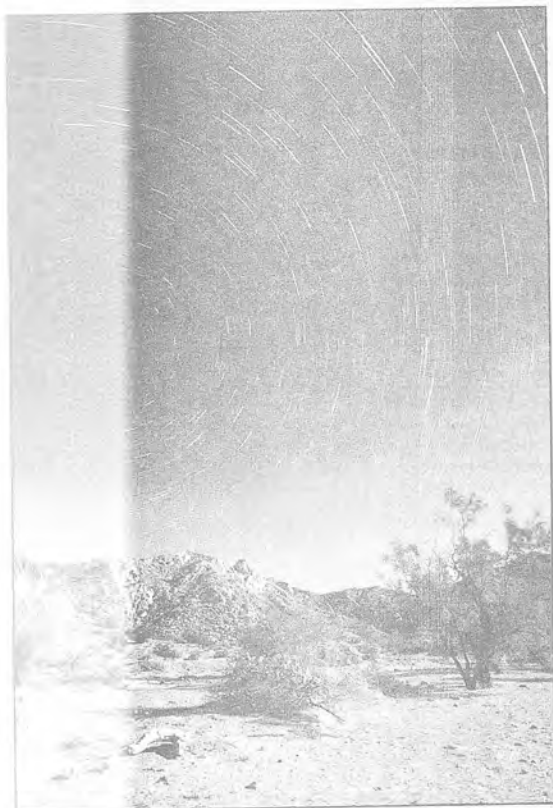
Science works to save the



# WEATHER FORECAST THROUGHOUT THE DAY

	Morning drive	Lunchtime	Evening drive	Tonight's low
COAST	Areas of low clouds, 57°	Mostly sunny, 64°	Sunny, 63°	Partly cloudy, 55°
INLAND	Partly sunny, 53°	Mostly sunny, 67°	Sunny, 67°	Partly cloudy, 49°
MOUNTAINS	Mostly sunny, 47°	Mostly sunny, 68°	Mostly sunny, 66°	Clear, 40°
DESERT	Brilliant sunshine, 62°	Brilliant sunshine, 83°	Brilliant sunshine, 87°	Clear, 52°

## IN TODAY'S UNION-TRIBUNE



### CURRENTS QUEST

## Starry night

It's known for its big-horn sheep, spectacular wildflowers and scorching, triple-digit summers. Now Borrego Springs is seeking another reputation — as an International Dark-Sky Community. The desert community has spent the past several months preparing an application for formal designation. If certified, Borrego would join Flagstaff, Ariz., as the only dark-sky communities in the United States. **E1**

### OUR REGION

## \$20 million donation for Salk

Ted Waitt, co-founder of the Gateway computer company, is giving \$20 million to the Salk Institute in La Jolla, the biomedical institute will announce today. The money will be used to create a center for biophotonics, the science of scrutinizing cell movements to help combat various diseases. **B1**

## Charges dropped in Sunroad exec case

Criminal charges have been dropped against a Sunroad Enterprises executive who once worked for the city of San Diego. Tom Story faced 14 misdemeanor counts of conflict of interest for allegedly contacting former colleagues about Sunroad development projects, including a controversial office tower in Kearny. **B3**

### PUBLIC EYE

## COACHELLA PIG IS F

When things go bad for a don't expect it to be pretty.

A helium-filled swine, released during Roger Waters' he at the Coachella music festi California desert, has been fo

Two couples found tattered pig in their yards, a few miles grounds.

Concert organizers had offered reward for the pig's return. O the plastic carcass were exar "That's definitely our pig," said.

Susan Stoltz found a plastic driveway Monday, but said it was until she read about th Desert Sun newspaper.

"My kids are going to thin said.

Another resident of the se Judy Rimmer, said she four draped over a front-yard pla

The two couples will split Fold said.

As tall as a two-story hou two school buses, the pig we on the ground Sunday as W sion of Pink Floyd's "Pigs" i capitalist album "Animals."

Then it just floated away.

## GANDALF TO RETU

Ian McKellen will again ti Gandalf the Wizard in the ci of J.R.R. Tolkien's fantasy

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## Central bank cuts rates

The Federal Reserve, mixing concern about the feeble economy with worries about rising inflation, reduced short-term interest rates yesterday for the seventh time since September, while signaling a pause in additional rate cuts for now. **C1**

## Time Warner to shed

at business



Quest

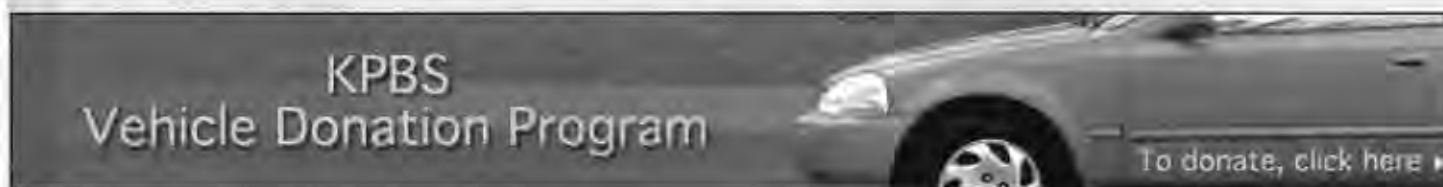


# KPBS Radio: These Days

## Borrego Springs Seeks to Become a Dark-Sky Community

May 06, 2008

Brought to you in part by:



Borrego Springs Seeks to Become a Dark-Sky Community  
May 06, 2008

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**Tom Fudge:** Southern California is a hot spot for astronomy. That's a fact that's sensible and ironic at the same time. It makes sense since your dry, cloudless climate means there's usually nothing obstructing your view of the stars. It's ironic, though, because so much of Southern California is urban and suburban, awash in light pollution that makes the stars dim to nearly invisible. When was the last time you were able to find Ursa Major while standing in your front yard?

Borrego Springs has the advantage of being out in the desert. The people there are quite proud of their night-time panorama. Now some folks who live there are trying to get Borrego Springs named an official Dark Sky Community.

### Guest

- **Dennis Mammana**, astronomer and night-sky photographer who lives in Borrego Springs. Mammana also writes the weekly *Stargazer* column in the [San Diego Union-Tribune](#).



## Borrego Springs Seeks to Become a Dark-Sky Community

May 06, 2006

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Guest

- Dennis Mammiana, astronomer and night-sky photographer who lives in Borrego Springs. Mammiana also writes the weekly *Stargazer* column in the *San Diego Union-Tribune*.



000000KPBS

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5/14/2008



# Borrego Sun

(USPS 061-260)



a Copley Newspaper 75¢

Vol. 57, No. 10 Borrego Springs, California May 15, 2008

## 4 arrested as goods in truck

Earlier arrest in Borrego Springs. The man was arraigned in Vista Superior Court on May 2 and is being held at the Vista Detention Facility on a \$61,000 bail.

Deputies Brian Sheets and Carlos Medina responded to two separate burglary calls on the morning of

**atch** April 29. The first report came from the 3000-block of

Giorgio Road where an all-terrain vehicle and numerous other items were reported stolen. The second burglary report that day was on the 1000-block of Yaqui Pass Road and included a diesel generator, paint sprayer and other construction materials and tools.

Information gathered during the course of the investigation led the deputies to Schatz, who because of his probation status had given up Fourth Amendment rights regarding search and seizure, Evans said.

When Medina, Sheets, Evans, and deputies Billy Painter and David Mickey pulled up at Schatz's home to question him, they observed three people in a truck in the driveway. Some of the stolen property was found in the bed of the truck. The black Nissan Frontier had been reported stolen from Thermal, Calif., in Riverside County.

The truck's driver, Raul Moras, 27, of Mecca, was arrested and charged with two counts of *see BURGLARY, Page 24*



## Starry splendor

PHOTO by DENNIS MAMMANA

NIGHT sky shot through the trees at the photographer's home shows why a local group is working to have the Borrego Valley declared an International Dark-Sky Community. (See article on Page 17.)

## Care local hearing of utilities commission

In what is considered an extremely rare opportunity, Borregans and other residents of the backcountry were able to provide input Monday on the proposed Sunrise Powerlink

than 70 people gathered with representatives from the Sierra Club at Borrego Springs High School. They came to learn more about the CPUC, the five-member panel that is tasked

employee Martha Sullivan when she addressed the May 7 group. "And, See POWERLINK, Page 9

What's Inside



Scott Baker's

# Julian Skies

## Saving Julian's Night Skies

One of Julian's natural resources, that is often taken for granted, is its dark night skies. Being a B&B owner, I frequently hear from guests that visit my observatory, "the skies are so dark here" or "I never knew there were so many stars". Another, even more frequent comment is, "What's that milky looking cloud across the sky?" pointing at the Milky Way. We are raising whole generations of people that have never seen the Milky Way, or wondered at the vastness of space, only because they cannot see it from their homes in the cities.

Of all of San Diego County, Julian, the Laguna's and the Anza-Borrego Desert are the last bastions of dark sky left. If you look at this computer-generated map of light pollution in Southern California, you will see the encroaching light pollution. Even the famous Palomar Observatory, surrounded and fighting a losing battle with casinos, will someday succumb to this creeping menace. Light pollution, from new housing, businesses, and unaware public lighting, can destroy the small portion of dark sky that Julian holds.

Although the County of San Diego passed legislation trying to protect this resource, the laws are often ignored and seldom enforced. The strictest laws are within 15 miles of either the Palomar or Laguna observatories, Zone A, but Julian is outside these two areas and falls into the Zone B restrictions. A synopsis of the Zone B restrictions follows:

A. All exterior lights should be fully shielded or full cutoff types.

A full cutoff or fully shielded light is one that the bulb is not visible when you look straight at the lamp and it is pointed at the ground, at eye level. Yardblasters, those large mercury vapor lamps that people use to light large areas, are not legal in this county, unless fitted with a full shield.

B. All lighting should point down at the earth.

This is simple; all lighting should point down, and not at the sky. Lights for business signs should be mounted on top of the

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\*\*\*  
*The most effective kind of education is that a child should be brought up amongst lovely things.*  
\*\*\*



The lightest areas of the map are where there is Severe light pollution, the darkest where skies are relatively dark.



to turn up from below.

C. Lighting from one property cannot encroach or spill over to another property.

No light from a lamp on your property should fall on a neighbor's property; this is called "Light Trespass" and is against the law.

So what can you do to protect our dark night skies, easy, just follow these simple steps.

- Walk around your property at night and look at your lights. Replace any lights where the bulb is visible, or shield the light so that its not.

- Put motion sensors on outdoor floodlights, leaving them on all night not only pollutes the sky, but wastes energy.

- Look over your neighbor's fence. Can you see light from your lights in his yard or on his house? Then adjust or move the lights so that it does not cross over the property line.

- Look at your landscape lighting – is any of it pointed up to light a tree or rock? Reposition the lights so that no light goes up into the sky and only points down at the earth.

- Do you own a business? Check to make sure that your business sign is lit from above, not from below.

- Does your neighbor have one of those bright, obnoxious Yardblasters in his backyard? Ask him nicely to turn it off or put a full shield on it. If he does not comply, then call the County and file a complaint. There are only a handful of code compliance officers, but they will eventually get around to making him comply with the law.

The one thing about light pollution is, unlike other manmade pollutants, it is easily and quickly reversible. All it takes is a concern for the environment and the willingness to spend a little time and money to make your lighting compliant with the law. If we all work together, we can even darker skies here in Julian for a very long time.

If you have any questions, or want further information, feel free to send an email to: [scott@mountainhighbnb.com](mailto:scott@mountainhighbnb.com) or give me a call at 765-1083.

Clear, and Dark Skies!  
Scott Baker



**SPEAK UP!****Borregans support keeping local skies dark for stargazing**

A local task force hopes to preserve the valley's clear night skies by having Borrego Springs named an International Dark-Sky Community and Anza-Borrego Desert State Park an International Dark-Sky Park. The designations would place controls on artificial light usage at night. Our "Speak Up" reporter asked residents for their input on the idea.



**Jim Hossack** - *"It sounds like a good idea to me. I like to see the sky at night. It seems like with just a little care and a little attention, a small town like this, with its unique location, could put this together pretty easily. There are a lot of small towns, but not all of them have this opportunity."*



**Hugh Mincher** - *"My wife is a big fan of tracking the nighttime iridium flares. I think it's a terrific idea and it would be good to preserve the night sky."*



**Sue Loeb** - *"I believe thoroughly that it should be done, because the stars are as important down here to me as anything. When people shine lights upward, it destroys your night vision. I'm really proud of Borrego."*



**Carolyn Kyle** - *"I think it's definitely a plus for Borrego Springs. We're losing too much of our dark sky in the city."*



**Bill Herzog** - *"I'm definitely behind it because there are so few communities like this left in California. We're surrounded on three sides by mountains, which is ideal for shielding us from city lights."*

**Roseanne Hale** - *"We're here because (the night sky is) so beautiful and I wouldn't want anything to change. It's clear, it's fresh - you can see the stars here like nowhere else."*



**Justin Liversidge** - *"I applaud any efforts on the part of the city management and the community to designate Borrego Springs as an International Dark-Sky Community. It's clearly, literally polluting the pristine environment you live within (not to do so)."*



# Borrego Sun

FOUNDED MARCH 1949



a Copley Newspaper

## EDITORIAL

### Borrego offers more than flowers

As the streets of Borrego Springs filled last month with curious visitors seeking the beautiful blooms that were promoted so heavily in regional, and even national, media, it is hoped that the tourists were able to see beyond the flower fields to the everyday offerings of the valley.

With our offices situated in a central spot and with a prominent flag in front, our staff fielded its share of queries about the wildflowers. "We've been driving around the circle and we don't see any flowers," remarked one visitor. "Where do we see the flowers?" Visitor after visitor seemed to have the same quest in mind: wildflowers and lots of them.

While Borrego Springs is blessed to be located in such a prime viewing spot for the once-every-few-years display of color, the valley has much more to offer than just a few weeks of verbena, evening dune primrose and desert sunflowers.

Occurring parallel to this year's bloom, and a phenomenon that occurs every spring, is the migration of hawks. The Swainson's hawk, in particular, favors Borrego Springs as a stopover on its lengthy migratory trip each spring.

"Did you see the craziness in town?" asked Hal Cohen, a retired biologist who helps coordinate a volunteer hawk count. He wasn't referring to our two-footed visitors. More than 800 low-flying hawks swept through western Borrego Springs on March 25. They looked like a thick, dark fog over Church Lane, according to Anza-Borrego Desert State Park Ranger Bob Thériault. The annual migration of these large raptors is sure to draw eco-tourists.

Further, the dark sky in Borrego is a major draw. Very few places in the United States offer such dramatic views of the Milky Way. The current effort to tone down outdoor lighting and preserve the view of the stars should help put Borrego on the map for those seeking a spectacular skyscape.

And, it's clear that artists are increasingly finding Borrego an inspirational place to create. More than 25 artists recently took part in the week-long Plein Air Invitational. The Festival of Art, the Borrego Art Guild's spring show and community tile-making project also made March burst with beauty that will continue blooming, regardless of rainfall.

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# Borrego Sun

a Copley Newspaper

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Published every other Thursday

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# *Dark Sky Community*

## *An Educational Talk*



*Tuesday, January 15, 2008*

*6:30-8:00 p.m.*

*at the*

*Borrego Springs High  
School Library*

*Speaker: Scott Kardel,  
Public Affairs Coordinator,  
Palomar Observatory*

*Learn to keep our night skies  
dark, protect wildlife, save  
energy and money.*

*Co-sponsored by  
Anza-Borrego Desert Natural  
History Association &  
Anza-Borrego Foundation &  
Institute*

*View the night sky with  
Astronomer Dennis Mammana  
following the talk.*



# Borrego Sun

(USPS 061-260)



a Copley Newspaper

75¢

## *Public meeting on dark-sky efforts*

An educational talk on the effort to designate Borrego Springs as an International Dark-Sky Community will be held from 6:30 p.m. to 8 p.m. on Tuesday, Jan. 15 in the Borrego Springs High School library. Scott Kardel of Palomar Observatory will provide information on how to minimize light pollution in the valley. The presentation is co-sponsored by the Anza-Borrego Desert Natural History Association and the Anza-Borrego Foundation and Institute.

1-10-08





Scott Kardel, Public Affairs Coordinator for the Palomar Observatory, providing information to the citizens of Borrego Springs on ways to protect their community's brilliant dark night sky from light pollution.- Jan 15, 2008.  
Co-sponsored by: Anza-Borrego Desert Natural History Association & Anza-Borrego Foundation & Institute.



# Dark Skies Over Borrego--Forever?



## You can help preserve the beauty of the night sky:

Our choice of lighting fixtures affects our ability to enjoy the night sky. In most cases, all we need to do is aim our lights, which in turn provides better safety and security. This brochure describes how our lighting choices can improve personal safety and security while preserving the night sky for scientific research as well as for our own enjoyment.

## A message from Palomar Observatory:

"The Palomar Observatory's astronomical research is threatened by light pollution from Riverside and San Diego Counties. Good lighting at your home can help preserve the nighttime skies for everyone."  
Scott Kardel, Palomar Observatory

## What is light pollution?

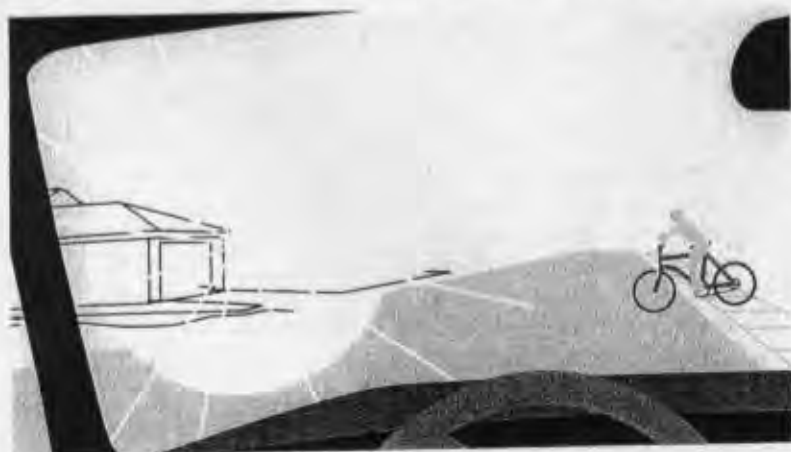
The scientific community and lighting regulations often use the term "light pollution." Light pollution is the unused portion of light from poorly aimed lighting fixtures that shines up and sideways. This light is scattered by the atmosphere and reflected back to the ground as sky glow. This sky glow is light pollution blocking our window to the universe.



## How you can help keep Borrego's skies dark

- Aim your lights downward onto your property
- Use low-pressure sodium lights where you do not need white light.
- Use lights with reflective covers that aim light downward, especially if you need bright light.
- Use motion or proximity activated security lights.
- Turn off unneeded lights.
- Use dim or low pressure sodium lights in decorative features.

## Bright, unaimed lights create glare, which is a safety hazard

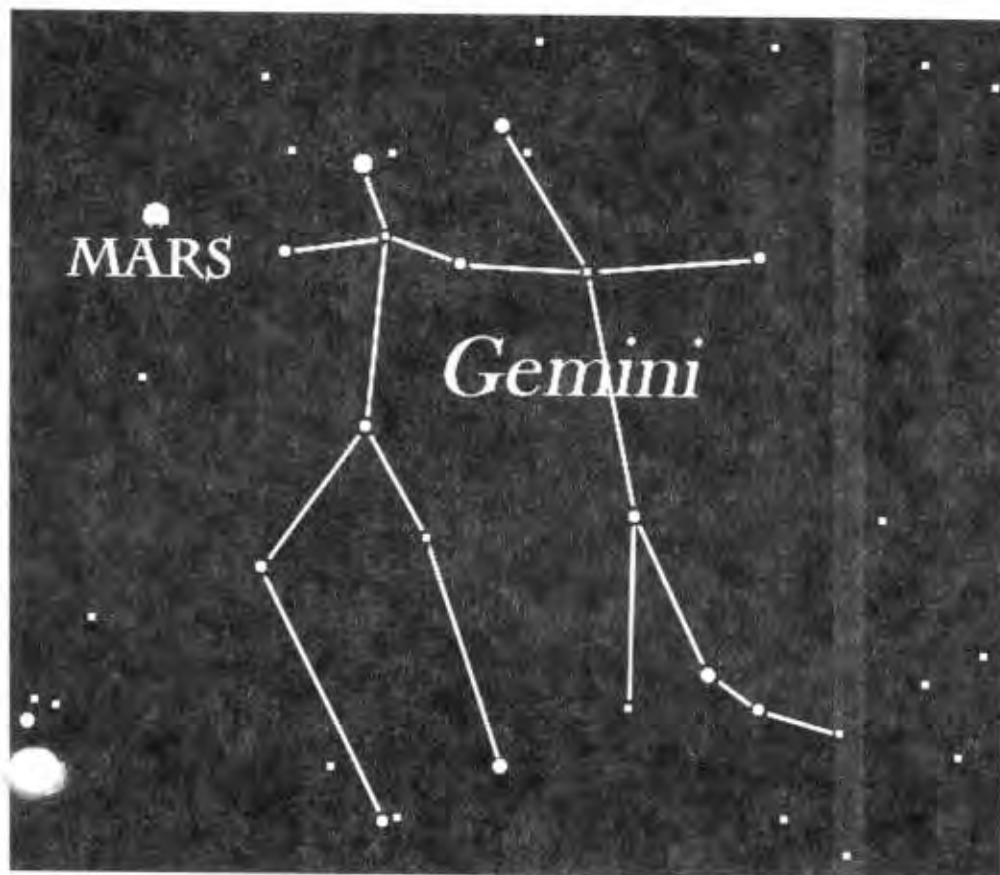


This unaimed 175-watt mercury vapor light gives a false sense of security. The intensity of the white light overwhelms a driver's ability to see well at night. In my case, I couldn't see a child about to enter the street on a bicycle. Fortunately, the child's parent was under the light waving to the child. I slowed and missed the child because I saw the parent's gesture, but I could not see the child until he or she was in front of my car.

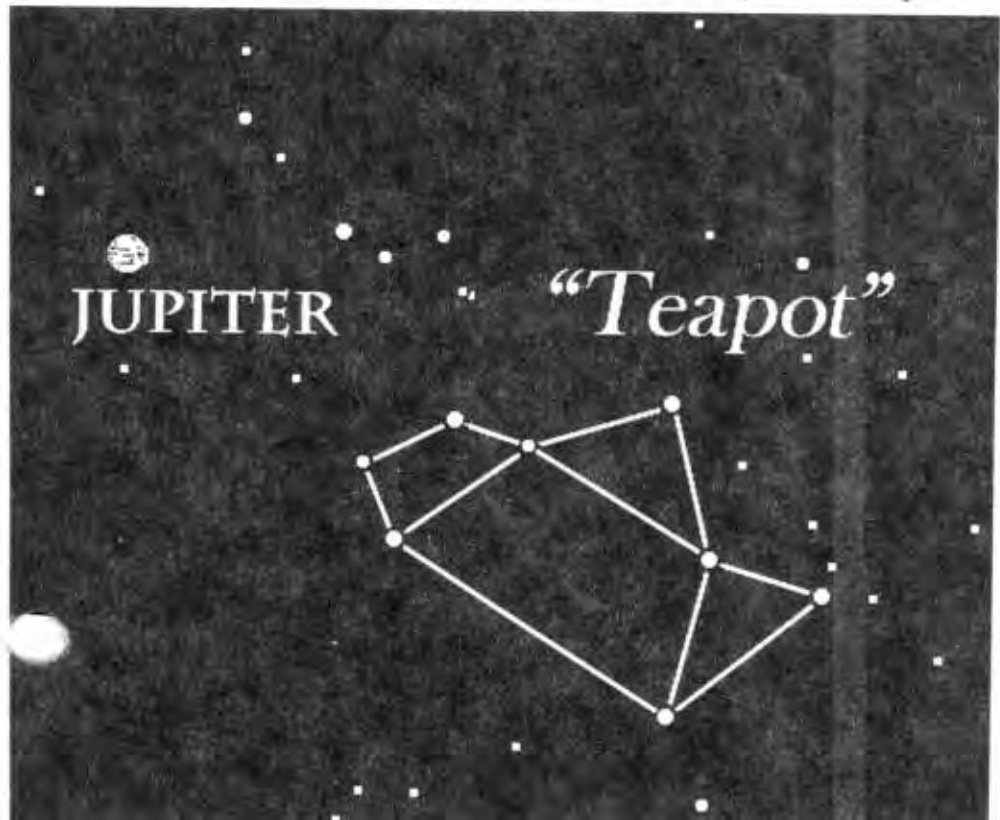
Using a cover that aims the light downward would preserve the safety and security function while eliminating the glare hazard as well as the light pollution.

John Garrett, Temecula Valley Astronomers





On April 30, Mars is in line with Castor and Pollux in Gemini, and about the same brightness, but note that its orange color becomes dim in April and May as we move apart.



## Dark Skies for Anza-Borrogo Forever?

A Borrogo Springs task force of astronomers, a representative of Palomar Observatory, ABDNHA, and other local groups and individuals, is preparing an application for formal designation of Borrogo Springs as an International Dark Sky Community.

The designation is granted by the International Dark-Sky Association. The IDA mission is to preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting. The program identifies communities with exceptional commitment to and success in implementing the ideals of dark sky preservation and quality outdoor lighting. It provides local, national, and international recognition for such communities. Borrogo Springs would be the second community in the United States to be awarded the designation, the only other being Flagstaff, Arizona.

The task force suggests the end of 2008 as a good target for achieving status as an International Dark Sky Community, since 2009 has been designated the International Year of Astronomy (<http://www.astronomy2009.org/>). Its aim is to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme "The Universe, Yours to Discover."

In preparation of the application, the task force requests that letters of support be sent in April to [abdnha2@att.net](mailto:abdnha2@att.net). Please include your name, full address, and short statement, and type "Dark Sky" in the subject line.



Be a FAN of ABDNHA!

I am particularly partial to deserts and to those organizations whose mission is to enhance the public's awareness, concern and protection of a resource that is all too often neglected, or worse, forgotten.

The Anza-Borrego Desert Natural History Association, through its wide variety of lectures, field trips, classes, publications, nature center, among many other activities, is at the forefront of enriching the public's appreciation of desert landscapes, particularly the Anza-Borrego region, one of the richest desert environments anywhere in the American Southwest.

The Association was one of the first and continues to be one of the most active organizations of its kind, and I am proud to be a member for life.

Jim Cornett  
Ecological Consultant and Author

## THE BUZZ FROM YOUR BOARD To ABDNHA Members

In the words of the old hymn, Mother Nature continues to bring Borrego an abundance of "all things bright and beautiful" this spring.

March issued in an abundance of flora from desert aster to blooming yucca, putting Borrego Springs on the map once again—even the *Wall Street Journal* took notice. Not to be outdone, in April we're playing host to a plethora of colorful feathered friends. Hooded Orioles, Black-headed Grosbeaks, and Yellow Warblers are brightening the yards and the hearts of hospitable Borregans who provide food and shelter in the form of native plants, and water sources to those migrating through the valley.



Our year-round starry night skies also belong in the "bright and beautiful" category. Led by astronomer Dennis Mammana and Scott Kardell, public affairs coordinator of the Palomar Observatory, ABDNHA and other Borrego community groups have formed a task force to help assure they stay that way.

The task force goal: to make Borrego Springs an international dark sky community and Anza-Borrego Desert State Park an international dark sky park. Should it happen, we would be the second such town in the United States, Flagstaff, Arizona being the first. Our group has strong support from the San Diego chapter of the International Dark Sky Association, whose leaders are most interested in our town seeking designation as an International Dark Sky Community.

The preservation of this irreplaceable resource that already attracts astronomers from around the world, coupled with an assured boost in the local economy, make this a win-win for Borrego Springs and all who appreciate this treasure, and we urge our members to support the effort. The task force is preparing an application and we'd be delighted to have your thoughts included. To support this effort, email your name, address and a short statement or an entire letter to [abdnha2@att.net](mailto:abdnha2@att.net). Type "Dark Sky" in the subject line.

Join us; your input can make a difference.

Valerie Lemke  
ABDNHA Board Chair

### *The Sand Paper*

© 2007-2008, Anza-Borrego Desert Natural History Association (ABDNHA)  
P.O. Box 310, 652 Palm Canyon Drive,  
Borrego Springs, CA 92004-0310  
Tel (760) 767-3052 \* Fax (760) 767-3099  
E-mail [abdnha@uia.net](mailto:abdnha@uia.net) \* Web: [www.abdnha.org](http://www.abdnha.org)

Borrego Desert Nature Center,  
652 Palm Canyon Drive \* Tel (760) 767-3098

The official newsletter of the Anza-Borrego Desert Natural History Association,

*The Sand Paper* is published in five issues,  
October through June.

Editor: Betsy Knaak, Assistant: Nancy Bye,  
Production and Photography: Bill Sullivan,  
Circulation: Helen Dougherty and the ABDNHA  
Volunteers

Printing: RanRoy Printing Company, San Diego

Vol XXXVI, Issue 4



Stylized steel artwork of Font's Point donated to ABDNHA by sculptor Rolf Lotz. The work is designed so the brushed steel will rust to a brown desert patina, while the stainless steel ABDNHA logo remains light against the darker background. Engineer Dan DeVoe and craftsman Steve Pretot volunteered time and expertise to hang the artwork. See it on the street-side patio at the ABDNHA Borrego Desert Nature Center next time you visit.



**The Task Force is working on lighting improvements in the community.**



SUPPORT OF BORREGO SPRINGS DARK SKY INITIATIVE  
BY  
DE ANZA TRUE VALUE HARDWARE STORE

Borrego Springs International Dark Sky Community Task Force Members, Betsy Knaak and Joan Malone, met with the manager of De Anza True Value Hardware Store, Borrego Springs, on the 17<sup>th</sup> of April to discuss the store's support toward Borrego Springs Dark Sky Initiative.

Key points from the meeting:

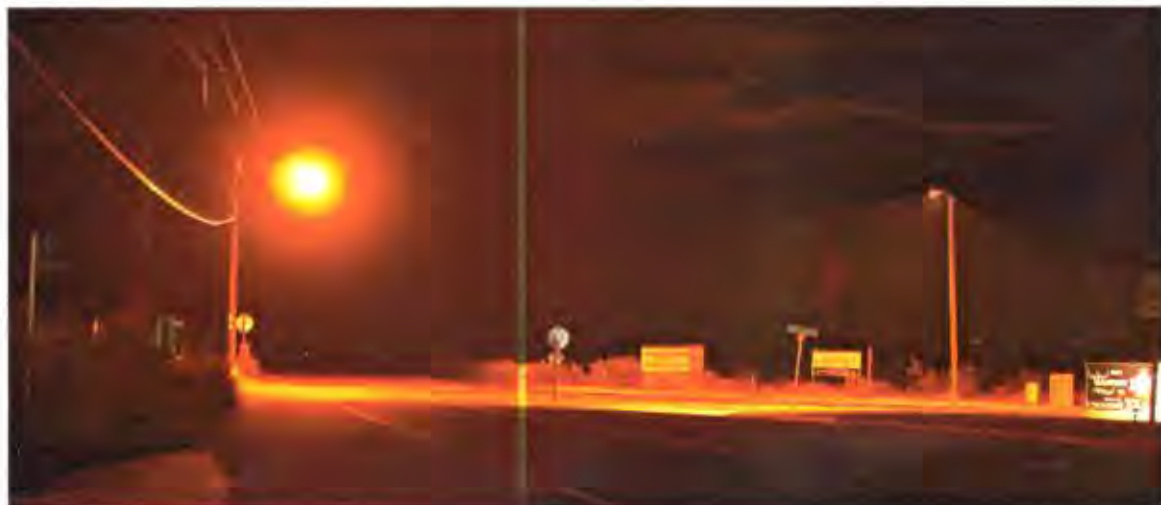
- The manager visited the IDA website and several other websites gathering information on dark sky friendly lighting and retrofitting of existing lighting.
- They currently have in stock and sell night sky friendly as well as energy-efficient fixtures such as timers and motion detectors.
- They would like to provide more choices of "good" lighting fixtures and are contacting their distributors for availability of such fixtures. They will also contact other sources for lighting and retrofitting recommended by the websites.
- They plan to designate a small area in the store as a "Dark Sky" information station, posting educational material for customers so they may make "good lighting" choices.
- They will act as a distribution center for lighting fixtures or lighting shields if they become available from SDG&E.



# Borrego Springs Street Lights

## Streetlight Inventory:

There are 25 streetlights in Borrego Springs, which covers an area of 76 square miles. Twenty of these lights are located in the downtown section, and the other five are at busy roadway intersections in Borrego Valley. These lights are under the control of San Diego County. All of the streetlights, except two, are low-pressure sodium with full cutoff fixtures, and are in compliance with the County Lighting Code.



**Streetlights, the bad and the good, side by side:** This photograph represents 8 percent of our total streetlights and 50 percent of our "bad" streetlights! Our International Dark-Sky Community Task Force is working with officials from San Diego County and San Diego Gas & Electric (SDG&E) to improve street lighting at this key entrance intersection to Borrego Springs, as well as the one other unshielded streetlight in the community. The two street lights have drop down lens and will be processed with the County to be retrofitted with full cutoff fixtures in order to reduce glare and light pollution.

**Residential Lighting:** There are no residential streetlights in Borrego Springs. A majority of residents choose not to routinely utilize their outdoor porch lights. A probable contributing factor to this lack of outdoor lighting is that Borrego Springs has the lowest crime rate in San Diego County, and people feel safe in their homes and neighborhoods. A brochure about dark-sky friendly outdoor lighting is being planned and will be available at the Chamber of Commerce and real estate offices.







# Organizational Supporters of International Dark Sky Community Designation

## Letters received:

Anza-Borrego Desert Natural History Association	Borrego Springs, CA
Anza-Borrego Desert State Park/ Department of Parks and Recreation	Borrego Springs, CA
Anza-Borrego Foundation & Institute	Borrego Springs, CA
Borrego Lutheran Church	Borrego Springs, CA
Borrego Solar Systems, Inc.	San Diego, CA
Borrego Springs Chamber of Commerce	Borrego Springs, CA
Borrego Springs Civic Foundation	Borrego Springs, CA
Borrego Springs Community Sponsor Group	Borrego Springs, CA
Borrego Springs High School	Borrego Springs, CA
Borrego Springs Village Association	Borrego Springs, CA
California Department of Parks & Recreation San Diego Coast District, W. Curt Lawrence	San Diego, CA
County of San Diego, Supervisor Bill Horn	San Diego, CA
Episcopal Women of St. Barnabas Church	Borrego Springs, CA
Joshua Tree National Park Association, & Hi-Desert Nature Museum, Bill Souder	Yucca Valley, CA
Oceanside Photo & Telescope Astronomical Society	Yucca Valley, CA
Palomar Observatory	Oceanside, CA
Riverside Astronomical Society, Inc.	Palomar Mountain, CA
RoadRunner Golf and Country Club	Moreno Valley, CA
San Diego Astronomy Association	Borrego Springs, CA
The Springs at Borrego RV Resort	San Diego, CA
	Borrego Springs, CA





*Within the desert, like a great open book, may be seen and read...the history of Mother Earth. —H. PARKER*

CONNECTING PEOPLE,  
NATURE & HISTORY  
THROUGH EDUCATION  
AND INTERPRETATION  
OF THE SOUTHWEST  
DESERTS

April 14, 2008

International Dark-Sky Association  
C/O ABDNHA  
P.O. Box 310  
Borrego Springs, CA 92004

Dear Borrego Springs Dark Sky Community Task Force:

Anza-Borrego Desert Natural History Association whole-heartedly endorses the Borrego Springs Dark-Sky Task Force initiative seeking designation as an International Dark-Sky Community from the International Dark-Sky Association.

As a 37-year-old local organization with deep roots in the community, we know both our membership and the town's citizenry support credentialing our year-round starry sky that already attracts astronomers and nature lovers from around the world. The preservation of this unique resource, as well as an assured boost to the local economy, make this a win-win situation.

You can count on ABDNHA for support in obtaining this important international designation.

Sincerely,

A handwritten signature in cursive script that reads "Valerie Lemke".

Valerie Lemke  
ABDNHA Board Chair

ANZA-BORREGO  
DESERT NATURAL HISTORY  
ASSOCIATION  
POST OFFICE BOX 310  
BORREGO SPRINGS  
CALIFORNIA 92004-0310  
PHONE: (760) 767-3052  
FAX: (760) 767-3099  
E-MAIL: ABDNHA@UIA.NET  
WWW.ABDNHA.ORG





587 Palm Canyon Dr.,  
Suites 219 & 220  
P.O. Box 2001  
Borrego Springs, CA 92004

Foundation (760) 767-0446  
Institute (760) 767-4063  
Fax (760) 767-4065

[www.theabf.org](http://www.theabf.org)

International Dark-Sky Association  
c/o Borrego Springs Dark Sky Coalition  
Borrego Springs, CA 92004

April 25, 2008

Dear IDA:

One of the most unique features of Borrego Springs is its very dark night sky. Amateur astronomers and other visitors come here to enjoy quiet starry nights and a spectacular view of the Milky Way. As a conservation organization that supports education and scientific research in and around Anza-Borrego Desert State Park, we recognize the importance of this dark night environment to the park and to the community.

When we bring urban children to the desert for our environmental tent camp, one of their favorite experiences is being out at night, under the stars. Visitors from the city consistently express surprise at discovering what "dark" really is!

We support efforts to limit and reduce light pollution in order to maintain or improve the quality of the nighttime sky over Borrego Springs, which has been rated one of the top ten Dark Sky locations in the United States. We encourage you to designate the community of Borrego Springs an official International Dark-Sky Community

Sincerely,

Sally Theriault  
Manager, Anza-Borrego Institute

Linda Carson  
Executive Director, Anza-Borrego Foundation and Institute



CONSERVATION · EDUCATION · RESEARCH

*The Anza-Borrego Institute is a partnership of the Anza-Borrego Foundation, the Colorado Desert District of California Department of Parks and Recreation, and the Wildlife Health Center at University of California, Davis.*





DEPARTMENT OF PARKS AND RECREATION  
Anza-Borrego Desert State Park  
200 Palm Canyon Drive  
Borrego Springs, CA 92004  
760 767-4962 Fax 760 767-7492

Ruth G. Coleman, Director

International Dark Sky Association  
c/o Borrego Springs Dark Sky Coalition  
Box 310  
Borrego Springs, CA 92004

April 22, 2008

International Dark Sky Association:

I am writing to support the Dark Sky Initiative for the town of Borrego Springs.

As the Honorary Mayor of Borrego Springs, and the Superintendent of Anza-Borrego Desert State Park, I feel that the night sky is of the most important resources we should address in our stewardship of the town and the surrounding State Park. Preservation of dark skies is something we can control and maintain if only we work together and persevere.

Visitors are attracted to the Anza-Borrego Desert from all over the globe. A recurring theme in comments from visitors is their wonder of the night sky, the fact that the Milky Way still exists in our desert sky. City folks have forgotten what they have lost, and our desert skies remind them of the Universe and their place within it. The solution is so simple, yet implementation can be so complex.

I fully support the efforts of the Borrego Springs Dark Sky Coalition and the International Dark Sky Association and look forward to much progress in light reduction in the coming months and years.

Thank you all for your good work, and good luck to all of us in our quest for darkness, bright stars, and generations of children who look skyward.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark C. Jorgensen".

Mark C. Jorgensen  
Superintendent  
Anza-Borrego Desert State Park

Honorary Mayor  
Borrego Springs, California



## **BORREGO SOLAR SYSTEMS, INC.**

1365 North Johnson Ave., Suite 102  
San Diego. CA 94710  
www.borregosolar.com  
CA License C-46 #814435



**BORREGO SOLAR**

Anza-Borrego Desert Natural History Assn.  
Attn: Dark Sky Task Force  
P. O. Box 310  
Borrego Springs, CA 92004

March 25, 2008

Dear Committee Members,

We support the designation of Borrego Springs as an International Dark Sky Community because it can help reduce the needless consumption of electricity and light pollution in the Borrego valley.

Borrego Solar Systems, Inc. specializes in residential, commercial and public sector grid-connected solar electric systems. We have over 25 years of experience in solar energy utilization, and a portfolio of over 650 solar photovoltaic projects. Our business was founded in Borrego Springs, and now has offices in San Diego, Berkeley, Sonoma, Silicon Valley, Orange County and Boston - we provide installation and support throughout California and New England.

We strongly believe in accelerating the adoption of renewable energy, encouraging personal conservation and sustainable business practices.

We offer energy consultation as part of our services. During our site visits evaluations of the electric usage is made. We perform energy audits in order to identify the most cost-effective ways to reduce electric consumption. The most common energy efficiency upgrades are lighting.

Our examiners commonly find outdoor lighting to be excessive, improperly installed, or of poor illumination design. Both homeowners and businesses can often significantly reduce your electrical consumption by reducing or improving outdoor illumination.

While the goal may be to darken the night sky for local residents and Palomar Observatory, another significant benefit is the lessening of electric usage.

Supporting the Dark Sky Initiative is a huge step forward for the community of Borrego Springs in order to stimulate what many residents have wanted for years - a formally recognized dark night sky policy. We have personally noted the overwhelming support in Borrego Springs for dark sky policies. Many residents choose this place to live because they appreciate the dark sky and the view of the cosmos it allows.

Sincerely yours,

A handwritten signature in dark ink, appearing to read 'James Rickard', written over a horizontal line.

James Rickard, PhD  
Founder



# **Borrego Lutheran Church**

*In the center of beautiful Anza-Borrego Desert State Park*

PO Box 1122  
Borrego Springs, California 92004-1122  
(760) 767-3039

May 4, 2008

International Dark Sky Association  
C/o Borrego Springs Dark Coalition  
PO Box 310  
Borrego Springs, CA 92004

Dear IDA:

We at Borrego Lutheran Church recognize the importance of Dark Skies and a Dark Night Environment to the community of Borrego Springs, which has been rated one of the top ten Dark Sky locations in the United States. Our many visitors to this area as well as our residents are privileged to have such a spectacular night sky and it is important that this increasingly rare phenomenon be recognized and protected.

We support the efforts of the Borrego Springs Dark Sky Coalition in seeking the designation of Borrego Springs as an International Dark Sky Community and we encourage the IDA to bestow this unique title upon our special town. At this time the only other community that has been granted this title is Flagstaff, Arizona.

Sincerely,

  
Robert Juers  
President





PO Box 420, Borrego Springs, CA 92004

760-767-5555 [www.borregospringschamber.com](http://www.borregospringschamber.com)

*We provide leadership and act as a catalyst in creating a vibrant economic environment that supports business growth and attracts people to visit and live in Borrego Springs.*

March 31, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

Dear IDA Board of Directors,

Thank you for the enormous service your organization is lending to building awareness of a fast-vanishing and enormous natural resource – our dark skies. Because of our proximity to the stunning and vast Anza-Borrego Desert State Park, Borrego Springs is blessed every night with an abundance of beautifully sparkling stars. This is a treasure we wish to protect!

The Chamber of Commerce Board of Directors enthusiastically endorses the efforts of the Borrego Springs Dark-Sky Task Force initiative to achieve designation as an International Dark-Sky Community from the International Dark-Sky Association (IDA).

The designation would bring significant benefits to our community, for residents, businesses, and visitors. The Chamber of Commerce would actively promote such a designation on our website (with nearly 100,000 annual visitors) and in all other marketing projects. Above all, we believe the initiative presents an invaluable opportunity to raise awareness, inform, and educate our citizens and visitors about what's at risk and how we can work together to keep our town special.

Borrego Springs' beautiful starry skies are an invaluable resource to be treasured and protected. Thank you for your leadership and dedication to this cause and your efforts on our behalf. Please keep us informed about how we can further and best support this effort.

Best regards,  
Board of Directors

Gwenn Marie, President  
Lynn Pierce, Vice President  
Cathy Oswald, Secretary  
Leo Buckley, Treasurer  
Mike Gotch, Director  
Joe Raffetto, Director  
Don Holladay, Director  
Cooper Barron, Director





P.O. Box 1164, Borrego Springs, CA 92004 -1164

YOUR COMMUNITY RESOURCE FOR CHARITABLE GIVING

May 8, 2008

TO: Borrego Springs Dark Sky Coalition

SUBJECT: Dark Sky Application for Borrego Springs

Recognizing the importance of a dark night sky to Borrego Springs and the many tourists that visit the Anza-Borrego Desert State Park, which surrounds our community, the Civic Foundation supports the Dark Sky Coalition's application to become an Official Dark Sky Community.

The residents of Borrego Springs are privileged to live in such a spectacular night sky viewing location and anything that can be done to protect this increasingly rare phenomenon is important to all of us.

Sincerely,

Rosa Bitner, Chairperson



**BORREGO SPRINGS  
COMMUNITY SPONSOR GROUP  
P.O. Box 1731  
Borrego Springs, CA. 92004**

April 10, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA. 92004-0310

Dear IDA Board of Directors,

Borrego Springs is a place where you can still go outside at night and actually see the Milky Way. There are few places left in this Country, where residents and visitors are privileged to have such a spectacular dark sky - It is important that this increasingly rare phenomenon be protected.

In 2003, USA Today listed the Anza-Borrego Desert State Park as one of the 10 best places for stargazing. This designation brings astronomy clubs and other visitors to the Park and Borrego Springs; it is an economic asset to the community, worthy of protection.

The Sponsor Group appreciates the efforts of the Borrego Springs Dark Sky Coalition, which was formed last year to investigate the possibility of having Borrego Springs designated as an Official Dark Sky Community. Their application is now in process and requires no changes to the existing County lighting codes. The basis of their application is to involve the community in the *dark sky* conservation process. We support this effort. Public awareness is critical. The business community, residents, and government agencies must work together to preserve Borrego's dark sky. Once it is lost, it is gone forever.

Recognizing the importance of a dark sky to our community, the Sponsor Group endorses the application of the Borrego Springs Dark Sky Coalition, to have Borrego Springs designated as an Official Dark Sky Community by the International Dark Sky Association.

Best regards,  
Borrego Springs Community Sponsor Group

Abby King, Chair  
Judy Haldeman, Vice Chair  
Sam Webb, Secretary  
Kerin Shugart, Secretary  
Bill Collins, Member  
Jane Daniels, Member  
Joe Hopkins, Member  
Kurt Levens, Member  
Jim Lindeman, Member  
Clark Shimeall, Member



**Borrego Springs Village Association**  
PO Box 420  
Borrego Springs, CA 92004

April 18, 2004

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

Dear IDA Board of Directors,

The Borrego Springs Village Association enthusiastically supports efforts to designate Borrego Springs as an International Dark-Sky Community.

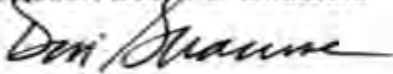
A goal of the Village Association is to promote a sustainable community in harmony with the surrounding Anza-Borrego Desert State Park. Borrego Springs' residents and visitors alike enjoy our pristine environment, including clear views of starry nights free of light pollution.

The Borrego Springs Village Association feels that achieving designation as an International Dark-Sky Community will raise awareness and contribute greatly to our efforts to remain an eco-friendly community.

We appreciate your leadership and hard work in promoting preservation of this valuable and vulnerable asset, our dark skies, while the opportunity to do so still exists.

Sincerely,  
Borrego Springs Village Association Board of Directors

Dennis Nourse, President  
Linda Carson, Treasurer  
Jim Wermers, Secretary  
Abby King, Director  
Betsy Knaak, Director  
Ben Nourse, Director  
Mark Jorgensen, Director  
Mike Gotch, Director  
Beth Divine, Director



Cc: County Supervisor Bill Horn, 5<sup>th</sup> District, San Diego  
The *Borrego Sun*





San Diego Coast District  
4477 Pacific Hwy  
San Diego, Ca. 92110

May 14, 2008

To Whom It May Concern:

Part of the mission statement of the Parks system is not only protection of our natural resources but to provide optimal recreational experiences for our visitors.

One recreational need that has been growing is the need for dark skies to enhance astronomical viewing by amateur astronomers looking to the Parks system to provide not only the space but also interpretive programs to support this expanding hobby. I personally have been deeply involved in developing such programs in the eastern San Diego County which includes Anza Borrego State Park. We have played host to over 3,000 visitors this last year that have taken advantage of such programs and the use of Park properties that provide a dark sky environment.

We are in support of the community of Borrego Springs in their endeavors to become an International Dark Sky Community.

Thank you for your interest.

W. Curt Lawrence





**BILL HORN**  
SUPERVISOR, FIFTH DISTRICT  
SAN DIEGO COUNTY BOARD OF SUPERVISORS

May 8, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310, Borrego Springs, CA 92004-0310

To Whom It May Concern:

I am writing this letter in support of Borrego Springs' application to become an International Dark-Sky Community. Borrego Springs is an unincorporated community within San Diego County and is part of my Supervisorial District.

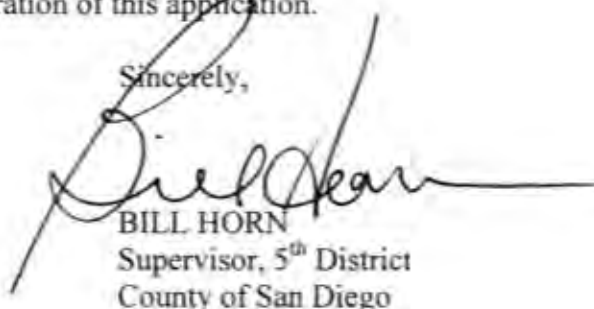
Borrego Springs is a place where the Milky Way is still visible. There are only a few places left in the country where one can see such a spectacular view of the night sky. It is important for this community that this increasingly rare resource be protected. The businesses, residents and government agencies must work together to preserve Borrego's dark sky. Once it is lost, it is gone forever.

The dark desert sky brings astronomy clubs and other interested visitors to both the state park and the community of Borrego Springs providing an economic benefit to the community that is worthy of protection.

Last year, the Borrego Springs Dark-Sky Coalition was formed to investigate the possibility of having Borrego Springs designated as an official International Dark-Sky Community. This application requires no change to the existing County lighting code. The efforts of the Borrego Springs Dark-Sky Coalition serve to involve the whole community in dark sky preservation through increased awareness, education, and availability of fixtures that better shield and direct light where it's needed, while helping to save energy and keep the desert sky dark for stargazing, scientific study, and for all those who just enjoy the wonder of the night sky.

Thank you for your consideration of this application.

Sincerely,



BILL HORN  
Supervisor, 5<sup>th</sup> District  
County of San Diego

BH:dms



**abdnha2@att.net**

---

**From:** <JRick40@aol.com>  
**To:** <abdnha2@att.net>  
**Sent:** Friday, March 21, 2008 10:23 PM  
**Subject:** Re: Notes from March 18 meeting

Thanks for the minutes, Betsy.

I spoke to my friend Shirley Vialpando today. She said the Episcopal Women had sent a letter of support for the dark sky to the , something Coalition, for the something initiative.

If you need another to the Dark Sky Committee, she can arrange it. Let me know. She lives at Santiago Estates. She said they are going to be putting in new lighting, eventually, and would speak to the manager, Sherii, about the type. If it is "appropriate lighting", is it something that could go in your list of projects?

Grace

---

Create a Home Theater Like the Pros. [Watch the video on AOL Home.](#)

3/22/2008



May 7, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

Dear Sir/Madam,

I am writing to support Borrego Springs' application to become a Dark Sky Community.

I have visited the area many times over the past 25 years and have always enjoyed the dark skies. The community is dark enough and in a remote enough area to be able to sustain the existing dark skies and to prevent unnecessary light pollution.

Borrego Springs can become a model dark sky community for other areas in Southern California, including my community of the Morongo Valley.

I am very active in trying to protect the skies to the North of Joshua Tree national Park and the cities of Twentynine Palms, Joshua Tree, Yucca Valley and the Morongo Valley. Civic leaders are skeptical about the ability to protect dark skies.

By designating Borrego Springs as a Dark Sky Community, you will not only make that a desirable astronomical destination, but will help to support the concept of dark skies and energy conservation everywhere.

Sincerely,



Bill Souder, Vice President, Joshua Tree National Park Association  
President, Hi-Desert Nature Museum  
Board member, Sky's the Limit  
Member, Andromeda Astronomical Society  
Member, IDA

5022 Canton St  
Yucca Valley, CA 92284  
760 369-3814





# Oceanside Photo & Telescope Astronomical Society

918 Mission Avenue  
Oceanside, CA 92054  
USA  
Phone: 1-800-483-6287  
Fax: 760-722-5819  
Email: penny@optcorp.com  
Website: <http://www.optastroclub.com>

May 5, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

To Whom It May Concern:

I have heard that the community of Borrego Springs is applying to become the next International Dark Sky Community, and I am writing on behalf of the Oceanside Photo & Telescope Astronomical Society (OPTAS) to voice our support regarding this application.

Our astronomy club, which numbers approximately 150 members, has traveled to the Anza-Borrego Desert State Park for over twenty years to observe and enjoy their beautiful, dark skies each new moon weekend. I have also attended star parties and other astronomical events throughout the years in Borrego Springs, and it is always a pleasure to look up at their skies and see the Milky Way! It is obvious that the people of Borrego Springs appreciate the value of dark skies, and I applaud their work to make sure their skies are as dark twenty years from now as they are today.

Please help Borrego Springs protect their skies by favorably considering their application to become the next International Dark-Sky Community.

Sincerely,

Penny Distasio  
OPTAS



**PALOMAR OBSERVATORY**  
CALIFORNIA INSTITUTE OF TECHNOLOGY  
P.O. BOX 200  
PALOMAR MOUNTAIN, CA 92060

Telephone (760)742-2111, Fax (760)742-1728, Email: [ws@astro.caltech.edu](mailto:ws@astro.caltech.edu)

February 28, 2008

International Dark-Sky Association  
c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

To Whom It May Concern,

I am writing in support of the dark-skies movement currently underway in Borrego Springs.

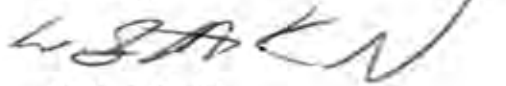
As you know the community of Borrego Springs would like to apply to become the IDA's next International Dark-Sky Community. The Palomar Observatory supports their application, not only for because of its own interests in preserving the night, but because the people of Borrego Springs know its value. They know that they want to hang on to their night sky, a vanishing resource that much of the nation cannot enjoy.

I have been working directly with community members and organizations in Borrego Springs toward this goal. Community response has been very positive and the movement has the support of a wide-range of groups including the Anza Borrego Desert Natural History Association; the Anza-Borrego Foundation and Institute; the Chamber of Commerce; and others.

Since October, several stories and positive responses from the citizens have been featured in the Borrego Sun, the community's newspaper. By all indications, there appears to be broad support for the IDSC designation.

Please give their application due consideration and help them to join the IDA in defending the night.

Sincerely,



W. Scott Kadel  
Palomar Observatory





Riverside Astronomical Society, Inc.  
11100 Saddle Ridge Road

[www.rivastro.org](http://www.rivastro.org)

March 6, 2008

International Dark-Sky Association

c/o Anza-Borrego Desert Natural History Association  
P.O. Box 310  
Borrego Springs, CA 92004-0310

I am writing on behalf of the nearly 300 members and the Board of Trustees of the Riverside Astronomical Society.

Many of our members have the annual pleasure of visiting Borrego Springs during Nightfall, a weekend where we, along with hundreds of other amateur astronomers from around Southern California, enjoy the beautiful dark skies. My family and I, and I know many others in our club, have visited Borrego Springs and the nearby state park at other times of the year also.

We would like to express our support for the efforts being made by Borrego Springs to be named a Dark Sky Community.

It is difficult to preserve dark skies for astronomers, desert lovers, and the many visitors to our pristine places. But efforts such as this will help. To be recognized as a place that is preserving all of its natural beauty, even that overhead on a moonless night, will surely help when the leaders of Borrego Springs are considering new development and lighting.

We would sorely miss coming to this community if it were to lose those beautiful skies, and we will support the efforts to preserve them.

Alex S. McConahay  
President, Riverside Astronomical Society, Inc.  
[alexmcconahay@roadrunner.com](mailto:alexmcconahay@roadrunner.com)  
909 261 6593





Great Idea!

This program was meant for Borrego Springs. We should have known about this years ago!

The RoadRunner Club is a private community of approximately 350 homes expanding to as many as 550 homes with all the amenities – golf course, clubhouse, pools etc., an active adult community.

Strongly support this idea.

RoadRunner Club  
P.O. Box 308 1010 Palm Canyon Dr.  
Borrego Springs, CA 92004

e-mail: [roadrunnerclub@cableusa.com](mailto:roadrunnerclub@cableusa.com)

## Borrego Springs Dark Sky Coalition

The undersigned recognizes the importance of Dark Skies and a Dark Night Environment to the community of Borrego Springs, which has been rated one of the top ten Dark Sky locations in the United States. Residents and visitors to this area are privileged to have such a spectacular night sky and realize it is important that this increasingly rare phenomenon be protected.

We support the efforts of the Borrego Springs Dark Sky Coalition in seeking the designation of Borrego Springs as an International Dark Sky Community.

Individual Name(s): RoadRunner Club

Address: P.O. Box 308 1010 Palm Canyon Dr. Borrego Springs, CA 92004

Signatures: \_\_\_\_\_

Email: roadrunnerclub@cableusa.com Date: \_\_\_\_\_

Comments:



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The undersigned recognizes the important of Dark Skies and a Dark Night Environment to the community of Borrego Springs, which has been rated one of the top-ten Dark Sky locations in the United States. Residents and visitors to this area are privileged to have such a spectacular night sky and realize it is important that this increasingly rare phenomenon be protected.

We support the efforts of the Borrego Springs Dark Sky Coalition in seeking the designation of Borrego Springs as an International Dark Sky Community.

Organization Name: The Springs at Borrego RV Resort

Address: PO Box 70 - 2255 DiGiorgio Road

Signature: Daniel A Wright

Email: springsoo004@sbcglobal.net Date: 3/31/08

Comments:

Save our SKY!

Return  
to:

International Dark Sky Association  
c/o ABDNHA,  
P.O. Box 310  
Borrego Springs, CA 92004-0310



May 10, 2008

On behalf of the San Diego Astronomy Association (530 members), I strongly support Borrego Springs as a dark sky community.

The residents are united in their care of the environment and consider dark skies to be an important part of that.

They have followed good lighting practices and they are striving to improve the few improperly lit locations in the area.

They are also very conscientious of and cooperate with nearby observatories.

Jim Traver

Observatory Director

San Diego Astronomy Association

Board member San Diego Section - I.D.A.



## Section 4.

# Success in Light Pollution Control



### **Requirement:**

Demonstrate examples of a minimum of ten projects built under the lighting code, demonstrating effective application of the local lighting code

1. Borrego Valley Inn
2. Boys & Girls Club & Badlands Skate Park
3. Borrego Sun Newspaper
4. Chamber of Commerce
5. De Anza True Value Hardware
6. St. Barnabas Episcopal Church
7. Little League Field
8. Post Office
9. XL Gas Station
10. The Center



# Borrego Valley Inn

Palm Canyon Drive  
Borrego Springs, CA

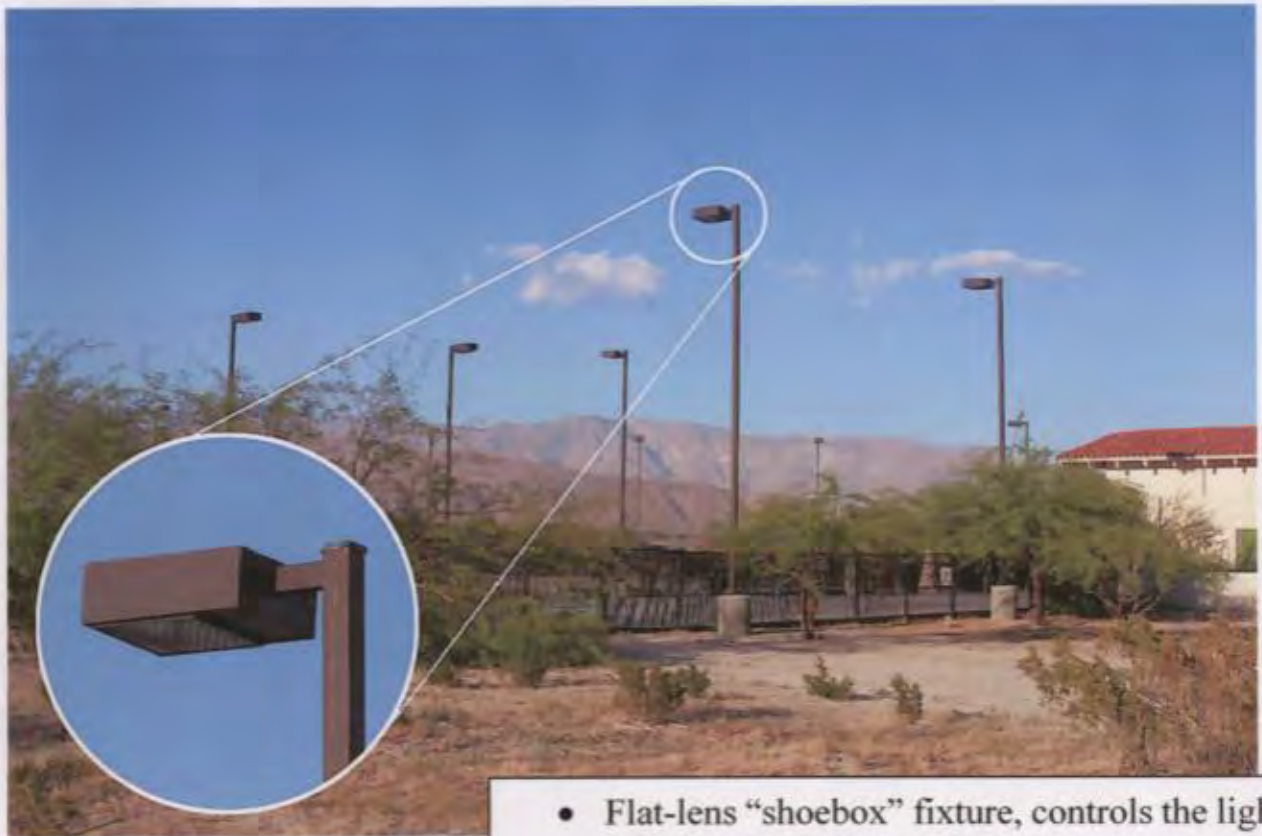


- Fixtures provide area illumination without up-reflected light pollution.
- Lighting adequate for near-building parking and pedestrian access
- Preserves view of dark night sky



# Boys & Girls Club & Badlands Skate Park

Cahuilla Drive  
Borrego Springs, CA



- Flat-lens “shoebox” fixture, controls the light with internal reflectors.
- Glare and light trespass are minimized
- No uplight is produced
- Top and side shielding direct light to intended target



# Borrego Sun Newspaper

Palm Canyon Drive  
Borrego Springs, CA



- Glare and light trespass are minimized
- Minimal uplight produced
- Preserves nighttime visibility
- Only as bright as needed
- Interior lights on, because staff sometimes work at night
- Adequate lighting for near-building workers, parking, and security
- Minimal lighting of landscaping



# Chamber of Commerce

Palm Canyon Drive  
Borrego Springs, CA



- Energy efficient
- Only as bright as needed
- Preserves nighttime visibility
- Glare and light trespass are minimized
- No uplight is produced



# De Anza True Value Hardware Store

Palm Canyon Drive  
Borrego Springs, CA



- Glare and light trespass are minimized
- Minimal uplight produced
- Lighting under overhang reduces light trespass
- Adequate lighting for near-building parking, safety, and security
- Minimal lighting of landscaping



# St. Barnabas Episcopal Church

Country Club Drive  
Borrego Springs, CA



- Fixtures provide area illumination without up-reflected light pollution.
- Lighting adequate for near-building safety, security, and pedestrian access
- Preserves nighttime visibility
- Recesses lighting under building overhang reduces light trespass
- Good example of artistic outdoor lighting without light-pollution



# Little League Field

Circle J Drive  
Borrego Springs, CA



- Sports lighting with top and side shielding
- Pointed at least 45 degrees below the horizontal
- Uplighting is minimized
- Turned on only during games, then shut off on timer



## Post Office: 92004

Country Club Road  
Borrego Springs, CA



- Glare and light trespass are minimized
- Minimal uplight produced
- Shielded streetlight
- Preserves nighttime visibility
- Only as bright as needed
- Adequate lighting for near-building parking, safety, and security
- Energy efficient
- Minimal or no lighting of landscaping



# The Center Shopping Center

Palm Canyon Drive  
Borrego Springs, CA



- Glare and light trespass are minimized
- Minimal uplight produced
- Recessed lighting under building overhang reduces light trespass
- Adequate lighting for near-building parking, safety, and security



# XL Gas Station

Corner of Palm Canyon Drive & Country Club Drive  
Borrego Springs, CA



- Canopy of garage prevents light from shining upward
- Shines only on intended target
- Only as bright as needed
- Adequate lighting for near-building parking and pedestrian safety and security
- No lighting of landscape
- Minimal glare and light trespass
- Preserves nighttime visibility



“Restrictions on total amount of unshielded lighting, such as a limit on lumens per acre total site lumens in unshielded fixtures (or equivalent wattages)”; and “A method to address overlighting, such as energy density caps, lumens/acre caps, or illuminance specifications.”

While the San Diego Light Pollution Ordinance does not provide for these features it does say:

“All artificial outdoor light fixtures shall be installed in conformance with the provision of this Division, the Building Code, the Electrical Code, and lighting requirements specified in Section 6324 (Lighting Permitted in Required Yards) and Section 6326 (Lighting not in Required Yards) of the Zoning Ordinance of the County of San Diego, along with any other related state and federal regulations such as California Title 24. California Energy Code [California Code of Regulations, Title 24, Part 6. <http://www.energy.ca.gov/title24/index.html>]”

The California Title 24 Energy Code creates standards in an effort to reduce energy consumption. The type of luminaires and the allowable wattage of certain outdoor lighting applications are regulated by placing different areas and communities into “Lighting Zones”. Each of these zones has limits the total illumination in Watts per square foot, based on the function that requires lighting.

See full 72 page document at: [http://www.energy.ca.gov/2005publications/CFC-400-2005-006/chapters\\_4q/6\\_Outdoor\\_Lighting\\_Signs.pdf](http://www.energy.ca.gov/2005publications/CFC-400-2005-006/chapters_4q/6_Outdoor_Lighting_Signs.pdf) for the complete information on Title 24 Outdoor Lighting Standards.

Borrego Springs is completely surrounded by the Anza-Borrego Desert State Park, which is classified as Lighting Zone 1. The community of Borrego Springs is defined as a “rural area” and as such is Lighting Zone 2. As an example, a new building entrance (without canopy) built under the Title 24 regulations may be illuminated at just  $0.35 \text{ W/Ft}^2$  in Zone 1 (the State Park),  $0.50 \text{ W/Ft}^2$  and within the Borrego Springs community. Compare this to the  $0.70 \text{ W/Ft}^2$  and  $1.00 \text{ W/Ft}^2$  allowed in Zones 3 and 4 respectively putting the allowed lighting levels in this example much lower in Borrego Springs than would be allowed in many other areas. Further, under Title 24 non-cutoff fixtures are not allowed.



# 165 Individual Supporters of International Dark Sky Community Designation listed below and attached

Mike Bigelow	Borrego Springs, CA
Jan Bigelow	Borrego Springs, CA
Sita A. Antel	Borrego Springs, CA
Bill Haneline	Borrego Springs, CA
Linda Haneline	Borrego Springs, CA
Becky Sanders	Borrego Springs, CA
Donald Crowe	Borrego Springs, CA
Mary Crowe	Borrego Springs, CA
Marilyn Dickson	Borrego Springs, CA
Anne Bogardt	Borrego Springs, CA
Dan Devoe	San Diego, CA
Violet Devoe	San Diego, CA
Ralph Webb	Borrego Springs, CA
Rosalie Webb	Borrego Springs, CA
Dr. K. B. Reid	Borrego Springs, CA
Rudy Kastelic	Borrego Springs, CA
Toni Kastelic	Borrego Springs, CA
Mark Jorgensen	Borrego Springs, CA
Kelley Jorgensen	Borrego Springs, CA
Betsy Knaak	Borrego Springs, CA
Gerald Rubin	Borrego Springs, CA
Esther Rubin	Borrego Springs, CA
Carol Black	Borrego Springs, CA
Bob Blum	Borrego Springs, CA
Madeleine Theriault	Borrego Springs, CA
Richard Mouser	Borrego Springs, CA
Ron Poitras	Borrego Springs, CA
Peg Poitras	Borrego Springs, CA
Dennis Mammana	Borrego Springs, CA
Astrid Webb	Borrego Springs, CA
Sam Webb	Borrego Springs, CA
Joan Malone	Borrego Springs, CA
Virginia Perrine	Borrego Springs, CA
Elsa Nunez	Downey, CA
Michael P. Stroud	Escondido, CA
Georgia Stroud	Escondido, CA
Ron Campnell	San Diego, CA
Roland Roberge	Sioux Falls, SD
Debra Roberge	Sioux Falls, SD
David E. Sabol	Walnut, CA
Judith L. Sabol	Walnut, CA



Ray Carle  
Robert A. Chester  
Julie Kehler  
Bob Anke  
Kathy Anke  
Beth Ann Farris  
Don Farris

Borrego Springs, CA  
Borrego Springs, CA  
Borrego Springs, CA  
Claremont, CA  
Claremont, CA  
Sonoma, CA  
Sonoma, CA





## **Borrego Springs Dark-Sky Coalition**

P.O. Box 310 Borrego Springs, CA 92004

January 9, 2009

International Dark-Sky Association  
Christian B. Luginbuhl  
US Naval Observatory Flagstaff Station  
10391 West Naval Observatory Road  
Flagstaff, AZ 86001-8521

Dear Mr. Luginbuhl:

After much legwork and with some delay, the Borrego Springs Dark-Sky Coalition is pleased to re-submit our application for designation as an International Dark-Sky Community by way of this letter and accompanying materials. As you know, our group has undertaken a survey of the 10 local lighting projects submitted previously as examples of proper night lighting. Our group has also held conversations with San Diego County's airport management regarding the beacon at the Borrego Valley Airport. Additionally, during this application process, we have been contacted by numerous groups who are showing a proactive interest in retrofitting lights and in adhering to IDA standards.

Enclosed are a CD and hardcover reports of our comprehensive lighting survey. We visited each site, documented the year the buildings were constructed, mapped the location of the sites and the lights at each site, and detailed the number and type of each light and its corresponding output. We have learned the language of lumens and hope you will find, as our group has, that the projects fall within your organization's standards and are appropriate sites to qualify for the designation.

Following our first submittal, we were contacted by a local resident who felt Borrego Springs' designation as an International Dark-Sky Community was premature given a new beacon light that was recently installed at the Borrego Valley Airport. The Committee had noted the beacon and the distressing way in which it illuminated local homes in some areas and had previously made inquiries of the local airport staff. Due in part to our involvement, the beacon light was adjusted.

On Oct. 9, members of this coalition held a phone conference with representatives of the County of San Diego, including the director of County Airports and the head of airport maintenance. We learned in this phone conversation that when the updated beacon first went in, the lumens registered at 100,000 and the wattage was 400. However, with



adjustments the beacon has been reduced to 24,000 lumens and the wattage to 250. The beacon has been baffled and the baffles are painted a flat black. A number of residents have remarked that the light is much improved and while it is still bothersome to some properties, the amount of light impacting the dark sky is minimal.

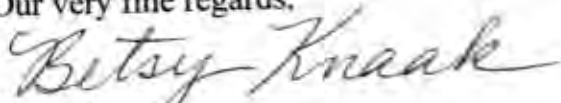
Furthermore, we were assured by representatives of the county that the airport staff is in full support of our designation as a Dark-Sky Community and that the county will work with us if any future concerns arise. Indeed, our group has the written support of Fifth District Supervisor Bill Horn, the lone elected official representing Borrego Springs at the county level.

We are pleased to report to you that based in part on news articles and in response to the growing interest in the IDA and the designation for our town, the coalition has been contacted by a number of groups who are proactively adjusting their nighttime lighting. Among these groups are the homeowner's associations for the Montecito casita properties and the Sun & Shadows development. A member of our coalition responded to these groups by providing volunteer lighting surveys, making suggestions, and referring the groups to the IDA Web site.

Our coalition continues to work with the community to promote the dark sky in Borrego. Earlier this month, the beautiful viewing of the crescent moon, Jupiter, and Venus brought many astronomy buffs to the desert and reminded all of those who live here of the awe-inspiring darkness that surrounds us. And, the weekend after Thanksgiving brought back the popular Nightfall astronomy club. The club was appreciative of the retrofitted streetlight that our coalition had spearheaded and, as usual, the astronomers were not disappointed in the view of the heavens from Borrego Springs.

Mr. Luginbuhl, we know you must be as busy as all of us are this time of year. We are so pleased to have finished our resubmission and to forward to a full consideration by the IDA nominating committee. If there is anything else you need from our coalition, please do not hesitate to ask. We are hopeful that the designation decision will be forthcoming as we enter 2009—the International Year of Astronomy.

Our very fine regards,



Betsy Knaak

for the Borrego Springs Dark-Sky Coalition

Scott Kardell

Joan Malone




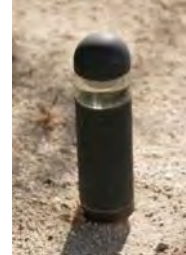



Dennis Mammana

Sally Theriault

Sam Webb







### Lighting at Borrego Valley Inn (constructed 1997)



Photograph	Type	#	Conforming?	Comments
	25 watt Incandescent (210 lumens)	28	yes	Fully-shielded, with decorative pinholes Downward-directed
	9 watt compact fluorescent (600 lumens)	23	yes	Walkway lights, downward shielded; some without bulbs
	25 watt incandescent (210 lumens)	14	yes	Fully-shielded spot lights on exterior patios; safety for step- down at doorways
	10 watt Incandescent (<120 lumens)	12	yes	Walkway lights
	10 watt quartz halogen (200 lumens)	3	yes	Spotlights illuminating fountain in courtyard
	45 watt spotlight (500 lumens?)	2	yes	Spotlights illuminating landscaping; only one currently contains a bulb
	25 watt incandescent bulbs (210 lumens)	18	yes	Downward-directed decorative fixtures illuminating exterior corridors; sheltered completely by overhanging eaves.



### Lighting at Boys & Girls Club and Badlands Skate Park (2003)




Photograph	Type	#	Conforming?	Comments
	Low-pressure sodium	2	yes	Full-cutoff fixtures illuminating parking lot. Note: the local Community Sponsor Group insisted that these fixtures, along with those illuminating the skate park (below), be fully shielded.
	Low-pressure sodium	13	yes	Full-cutoff fixtures illuminating skate park; on only during events at night
	spotlights	2	yes	2 spotlights on one pole; used to illumine play structure only when in use at night
	Globe lights	3	yes	Turned on only for special events

### Lighting at Borrego Sun Newspaper Office (1959)





Photograph	Type	#	Conforming?	Comments
	16 watt Incandescent (120 lumens)	11	yes	Fully shielded Directed downward
	Security Flood fixture with two bulbs: 75-watt (1180 l) 16-watt (120 l)	1	yes	Fully shielded under patio cover, directed inward onto building



### Lighting at Borrego Springs Chamber of Commerce (2001)







Photograph	Type	#	Conforming?	Comments
	13-watt (900 l) compact fluorescent (5); 60-watt (855 l) incandescent (1)	6	yes	Shielded, downward-directed lights illuminating walkways and doorways. Note: All exterior lights are turned on only for special events
	Unknown, low-light	6	yes	Shielded walkway lights turned on only when building is used at night (infrequently).
	35 watt quartz spotlights (<800 lumens)	5	yes	Spotlights used to illuminate landscaping are turned on only for special events at night, which are infrequent.

### Lighting at Borrego Springs Little League Field (2003)



Photograph	Type	#	Conforming?	Comments
	Flood lamps 2 poles with 4 lamps each 2 poles with 7 lamps each	22	yes	Bulbs are shielded and directed downward. Lights are turned on only when night games are being played.
	75-watt incandescent (1180 lumens)	4	yes	Bulbs are fully shielded and directed downward over doors. Lights are turned on only when night games are being played.
	60-watt incandescent (855 lumens)	22	yes	Lights are all shielded under eaves of restroom building. Lights are turned on only when night games are being played.
	Halogen-bulb floodlight on concession bldg	4	yes	One fixture lacking a bulb. Lights are turned on only when night games are being played.



### Lighting at St. Barnabas Episcopal Church (1986)




Photograph	Type	#	Conforming?	Comments
	60 watt Candelabra bulb (855 lumens)	9	yes	Positioned under wide eaves Turned on for events
	75-watt Flood lamp in can fixture (1180 lumens)	1	yes	Downward-directed; located completely under eave over front door.
	Flood lamps (unknown wattage)	10	yes	Motion detectors turn on lights when parking lot is used at night
	Flood lamps (unknown wattage)	10	yes	Flood lamps are shielded and directed downward
	Unknown wattage	2	yes	Decorative Turned on only during events
	1-watt LED bulb (minimal lumens)	4	yes	Solar-powered lights at edge of walkway near parking lot

### Lighting at Borrego Springs Post Office (constructed 1986)

Photograph	Type	#	Conforming?	Comments
	Low-pressure sodium	3	yes	Full-cutoff fixtures (2 on one pole and 1 on another pole) that illuminate parking lot
	60-watt yellow incandescent bulbs (855 lumens)	8	yes	Fixtures are completely sheltered under eaves. These lights are currently not turned on at night. No landscape lighting.






### Lighting at XL Gas Station (1989)

Photograph	Type	#	Conforming?	Comments
	Halogen? LPS?	1	yes	Full cutoff fixture Illuminates parking lot
	110-watt Fluorescent tube lights	44	yes	All lamps are located under cover: 30 under roof over gas pumps and 14 under eaves around main building.
	Lighted sign	2	yes	Illuminated from within (one sign currently not illuminated)






### Lighting at Borrego Springs Middle School (constructed 1999)

Photograph	Type	#	Conforming?	Comments
	High-pressure sodium	2	yes	Full cutoff fixture Illuminates parking lot Two fixtures on one pole
	Unknown wattage	29	yes	All fixtures are recessed and are located under cover
	Unknown wattage	7	Yes	Fixtures located over doorways and completely under overhang





**Lighting at Borrego Lutheran Church (constructed 1996)**

Photograph	Type	#	Conforming?	Comments
	18 amp fluorescent	6	yes	Recessed light fixtures located underneath walkway roof (two 18-amb bulbs in each fixture)
	Unknown wattage	1	yes	Bulb is recessed in light fixture, located under roof over doorway
	18 amp fluorescent	27	Yes?	Parking lot lights; turned on only during evening events



## Night Sky from “Downtown” Borrego Springs



Despite the uplighting on the palm trees the Milky Way, is easily visible from Christmas Circle, the center of town. Bright streaks in the image are from automobiles in this timed exposure.



## **Zodiacal Light from Borrego Springs**



Zodiacal Light photographed four miles from the center of Borrego Springs in March 2008. The brightest light in the image is a beacon at the airport, which has since been shielded to avoid light trespass in the community.



## Star Trails from Borrego Springs



Star trails over Borrego Springs. Moonlight provides the illumination for the palm tree and other vegetation.



## Milky Way Over Tree



Silhouettes of trees with the Milky Way behind them from Borrego Springs, CA.



## Desert Aurora



Aurora Borealis from Borrego Springs, CA



Enclosures:

CD and hard-copy report:

Borrego Springs Comprehensive Lighting Survey and map

Additional correspondence received since original application May 22, 2008:

Borrego Springs Chamber of Commerce Real Estate Committee

The Casitas at Montezoro Dark Sky Policy, Adopted 12/01/08



## Borrego Springs Street Lights – Update

The Borrego Springs Dark-Sky Coalition has worked with officials from San Diego Gas & Electric and San Diego County to fix the two non-compliant streetlights in the community. Because of their actions both of the street lights have now been replaced with full-cutoff fixtures.

