

INTERNATIONAL DARK-SKY ASSOCIATION

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*TO PRESERVE AND PROTECT THE NIGHTTIME ENVIRONMENT AND OUR HERITAGE OF
DARK SKIES THROUGH QUALITY OUTDOOR LIGHTING*



**International Dark-Sky Association
Dark Sky Sanctuary Program Criteria**

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DEFINITION OF AN IDA DARK SKY SANCTUARY

An IDA Dark Sky Sanctuary (DSS) is a public or private land possessing an exceptional or distinguished quality of starry nights and a nocturnal environment that is specifically protected for its scientific, natural, or educational value, its cultural heritage, and/or public enjoyment. A DSS differs from a Dark Sky Park or Reserve in that it is typically situated in a very remote location with few (if any) nearby threats to the quality of its dark night skies and does not otherwise meet the requirements for designation as a Park or Reserve. The typical geographic isolation of Sanctuaries significantly limits opportunities for public outreach, so a DSS designation is specifically designed to increase awareness of these fragile sites and promote their long-term conservation.

GOALS FOR IDA DARK SKY SANCTUARY CREATION

- To recognize public or private lands and their surrounding communities in some of the darkest locations on Earth for exceptional commitment to and success in local implementation of the ideals of dark sky preservation;
- To promote ecotourism;
- To further the protection of nocturnal habitats, public enjoyment of the night sky and its heritage, and identification of areas ideal for professional and/or amateur astronomy;
- To encourage land owners/administrators, surrounding communities and private interests to identify dark skies as a valuable resource in need of proactive conservation;
- To provide international recognition for such sites; and
- To encourage other sites to become environmental leaders on dark sky issues by communicating the importance of dark skies and by providing an example of what is possible with proper stewardship.

BENEFITS

Achieving this designation celebrates the efforts made by any public or private organization in protecting the dark sky of the identified Sanctuary. It will encourage, consolidate, and ensure the sustainability of all actions already deployed in the area, and enhance the awareness of residents and visitors of principles of environmental stewardship and responsibility.

Designation as a DSS entitles the Sanctuary to display the IDA Dark Sky Sanctuary logo in official publications and promotions and retain the use of this logo by affiliated groups. A DSS may also choose to identify itself through various phrases stating the same effect. IDA will maintain a Web page

identifying and describing all DSSs on its website as part of the International Dark Sky Places (IDSP) Program documentation.

ELIGIBILITY (ALL MUST BE MET)

- A) A proposed DSS must be a public or a private land legally protected for scientific, natural, educational, cultural, heritage and/or public enjoyment purposes; **AND**
- B) Regular visitation by the public is essential to meet the goals of the IDSP Program. The DSS must therefore provide an opportunity for regular public nighttime access, with or without supervision. A portion of designated land may meet this requirement, or access must be available for a substantial fraction of any given night. In some cases, such as when working with areas that protect endangered wildlife, this requirement may be adjusted to meet important conservation priorities; **AND**
- C) The park must provide an exceptional dark sky resource where the night sky brightness is routinely equal to or darker than 21.5 magnitudes per square arcsecond.

MINIMUM REQUIREMENTS FOR ALL SANCTUARIES

- A) A quality comprehensive Lightscape Management Plan (LMP) should be adopted by the agency administering the proposed DSS. The LMP regulations must be binding upon all private and public landowners within the area of protection. Certain exceptions to this requirement may apply but are subject to IDA approval. Minimum standards include:
 - i) New, current, and required retrofit lighting must conform to the Sanctuary's LMP (which in turn must meet the "Lightscape Management Plan Guidelines" included in this document). The Guidelines for Outdoor Lighting in RASC/IDA Dark Sky Places (GOL; <http://bit.ly/1NYjY9D>) should be used while creating the park's LMP; **AND**
 - ii) A light warranting policy (prescribing whether an area should or should not be lighted), lighting curfews, and appropriate illumination levels; **AND**
 - iii) Fully-shielded fixtures are mandated to be standard throughout the Sanctuary. An exception may be made in instances where fixtures contain lamps of ≤ 500 initial lumens total. Any fixtures of > 500 initial lumens total are required to use fully shielded fixtures emitting no light at or above the horizontal plane passing through the light-emitting element or optic of the fixture closest to the ground. When unshielded fixtures ≤ 500 initial lumens total are used, impacts to the lightscape must be minimized with the use of timers and/or curfews; **AND**
 - iv) Methods for determining the appropriate type of lamp (color, efficiency, technology) and fixture that should be used for particular tasks and in particular areas with the goals of (1) maximizing

energy efficiency and (2) minimizing impact to human dark adaptation/recovery time, wildlife, and the nocturnal ecology. IDA requires that only lighting with $\leq 3000\text{K}$ correlated color temperature (CCT) be used in order to minimize the impact on most wildlife. Exceptions to this requirement in cases where staff/visitor safety require accurate color rendition will be considered on a case-by-case basis; **AND**

- v) LMP should conform to or surpass applicable agency or departmental policy on lighting and dark sky protection as well as other guidance (e.g. environmental leadership programs, agency orders, wilderness act, energy management guidelines) and all local/state/provincial/territorial/national laws.
- B) Evidence of commitment to dark skies and lightscape management as demonstrated by: at least two-thirds (67%) of existing outdoor lighting fixtures in the DSS conform to the requirements of the Lightscape Management Plan; or an alternative fraction approved by the Dark Sky Places Committee (DSPC) **AND**;
 - C) A schedule on which 90% of all outdoor lighting in the DSS will conform to the Sanctuary's LMP within five (5) years of receipt of an IDA designation and a written commitment that 100% of the lighting will conform within ten (10) years of the designation; **AND**
 - D) A sky brightness measurement program must be established and maintained either by the Sanctuary administering authority or by another public or private organization (university, research center, IDA chapter, astronomy club, etc.) to follow the evolution of light pollution in the DSS and ensure that the night sky quality does not degrade over time; **AND**
 - E) The importance of dark skies/natural darkness and the benefits of good lighting are paramount in Sanctuary external communications. If the Sanctuary typically provides interpretive programs, then dark skies must be one of the central themes ("dark skies" refers not only to astronomy education but also education about wildlife, efficiency, safety, and human health) communicated through on-site interpretation. If interpretive programs are not typically offered, then publications, flyers, press releases, media, or other outreach are appropriate substitutes; **AND**
 - F) Acknowledgement of the protected area, by the appropriate jurisdiction higher than community level (e.g. county, province, state, etc.), in that dark skies are an important scientific, natural, cultural, and/or scenic resource value as evidenced by the inclusion in official documents (politics, protocols, management plans, etc.) for long term planning; **AND**
 - G) Once established, the Sanctuary must erect and maintain a sign indicating the IDA Dark Sky Sanctuary designation along a roadway entrance, along a footpath entrance if no roadway exists, or a visitor contact center. The sign must include IDA DSS text and logo. With IDA approval, an alternative wording may be used, such as Dark Sky Wilderness, Night Sky Refuge, or similar. Once the sign is erected a picture documenting this sign must be taken and sent to IDA for records along with a description of its location
 - H) Establishing night sky quality
 - i) The core of the Sanctuary must have identified the sources of light pollution through calculations, maps, photographs or any other proper method **AND** clearly identify actual present

and anticipated future threats to the night sky quality. A plan must be put in place to address these current and future threats.

- ii) A determination of whether the minimum sky quality standard has been met through sky brightness measurements made via an IDA-approved data collection method.

LIGHTING INVENTORY

- A) When there are numerous outdoor lights it is acceptable to group lights by facility or area. Whether the fixtures are fully-shielded, are special purpose fixtures under 500 initial lumens total, and what the lighting application is should be noted for each fixture or group of fixtures.
- B) The Lighting Inventory should also include a plan or stated commitment to bring all outdoor lights into compliance with the Lighting Guidelines within the time periods specified above.
- C) Daytime photographs, or manufacturer diagrams/cut sheets if available, of each fixture type should also accompany the inventory.

A sample table from portion of a Lighting Inventory is shown on the following page.

Location	Fixture	Fully-Shielded	Special Purpose (≤500 initial lumens)	Application	Conformity with LMP
Visitor Center	12 fixtures on 14' pole, 70 W HPS	YES	NO	Parking lot, timer off at 10pm	YES
	2 door lights, 100 W MH	YES	NO	Building egress	YES
	6 bollard (post) lights, 32 W CFL	NO	NO	Walkway	NO – see plan
Historic Cabin	2 carriage style lights at doorways, 40 W incandescent	NO	YES	Historic Preservation, egress	YES
Maintenance Yard	6 wall packs, 250 W MH	NO	NO	Occasional night operations	NO – see plan
	8 Glarebusters, 11 W compact fluorescent	YES	NO	Egress, security	YES

Lamps of 500 initial lumens and less include: 33 watt incandescent and less; 25 watt tungsten (quartz) halogen and less; 8 watt linear fluorescent and less; 10 watt compact fluorescent and less.

LIGHTSCAPE MANAGEMENT PLAN GUIDELINES

The LMP should embody good lighting practices such as:

- A) The written policy meets or exceeds applicable agency or departmental policies regarding outdoor lighting and conforms to all local, regional, and national laws;
- B) Only use light when it is needed, where it is needed, and in the appropriate amount for the identified task;
- C) Outdoor lighting fixtures should be fully-shielded and make appropriate use of timers and motion sensors;
- D) Lighting of ≤ 500 initial lumens total may be unshielded for special purposes, such as historical preservation. Approved special uses should be stated in the LMP. IDA will scrutinize these uses to ensure that Sanctuary lighting is a suitable example of good lighting for the public and protects the nighttime environment to the maximum practical extent. IDA may request additional descriptions, photographs, or drawings of designated special use fixtures. These lights are not exempt from the lighting guidelines, and must still be designed to minimize impact to the lightscape;
- E) The correlated color temperature of installed lighting should not exceed 3000 K;
- F) IDA has collaborated with the Royal Astronomical Society of Canada to develop the RASC/IDA Guidelines for Outdoor Lighting (GOL), available from the IDA website. These guidelines should be adopted as part of the LMP for the Sanctuary. If there are provisions of the GOL that are not appropriate for the Sanctuary, the GOL may be amended or substituted with more suitable guidelines. IDA will review the modifications or substitution and determine on a case-by-case basis if the changes are acceptable for the individual Sanctuary.

PROVISIONAL STATUS

- In limited cases, a Sanctuary interested in being designated may lack the resources to satisfy all the requirements set forth in this document. If minimum sky quality criteria and appropriate outreach requirements have been met, a Sanctuary may apply for and be granted Provisional status at the discretion of the IDA Board of Directors. Provisional status recognizes the Sanctuary's ongoing work toward full designation and is intended to be used as a leverage point to enable the necessary lighting upgrades or retrofits and policy changes.
- Provisional status expires after three years. At any time before the end of the provisional period, a Sanctuary may reapply for full status. Material submitted for the consideration of full status may be an addendum to the initial application provided the material includes a current assessment of night sky quality, goals, outreach, and programs listed in the original application.
- To be considered for a provisional status, send a nomination package to support the following needed information:

- Initial sky quality measurements indicating that the night sky quality criteria described under “Eligibility” are fulfilled;
- Documented intent to create and support a DSS;
- An action plan describing how the aspiring Sanctuary will meet minimum requirements within a three-year period.

GUIDELINES ON IDA DSS PROCESS

NOMINATION

The nomination may be initiated by an IDA qualified nominator who has personally reviewed a Sanctuary's outdoor lighting and commitment to natural lightscapes, or by a member of the area's administrative staff who maintains an IDA membership. To become an IDA qualified nominator, you must be an IDA member in good standing and be approved by the IDA Dark Sky Places Manager. The nomination may be a joint effort between area administration and the qualified nominator. Nominators are encouraged to correspond with IDA staff and the area's administration throughout this process—from first consideration of a Sanctuary through the formal submission of the application. A letter must accompany the member nomination from the Sanctuary administrative authority (e.g., superintendent, property owner) expressing commitment to the principles of Dark Sky Sanctuaries outlined in this document.

IDA DSS APPLICATION PROCESS

STEPS FOR APPLICANT

- A) Establish initial contact with IDA by phone or email to discuss the process and receive recommendations followed by regular contact to consult with IDA staff and to review progress.
- B) Identify a formal point of contact (POC) person and report that person's title, phone, address, and email information to IDA staff. Before and after designation any changes to this POC, or his/her contact information, must be communicated to IDA in order to ensure unimpeded communication at all times.
- C) Send the completed application in PDF or Microsoft Word format to IDA staff for preliminary review. IDA staff will check that the application is complete and ready for submission or else return it with comments and suggestions for improvement.
- D) Make the final application submission in plenty of time for IDA staff to review and prepare your application to make the bi-monthly deadline that you prefer. Requests to rush applications will **NOT** be accepted. Planning well ahead is therefore essential if the proposed Sanctuary is planning to meet a particular deadline.

TO BE INCLUDED IN A DARK SKY SANCTUARY APPLICATION

- A) Map(s) of the area to be designated clearly indicating the Sanctuary and its geographic context.
- B) Letters of nomination from an IDA member nominator and the Sanctuary administrative authority.
- C) Any management documents supporting dark skies and/or natural lightscapes as a valued natural resource.
- D) Documentation of sky quality, light pollution measures, satellite pictures, maps, photographs, or other evidence demonstrating the noteworthiness of the night sky resource. This should include measurements of night sky brightness in at least ten (10) distinct locations within the proposed DSS using an approved night sky brightness meter, such as the Unihedron Sky Quality Meter or Dark Sky Meter iPhone app. Measurements should document the approximate darkest and brightest areas of the Sanctuary. Data included in the application must contain an updated survey of the Sanctuary completed no more than two years before the application's submission along with any other relevant surveys. IDA staff may be consulted for advice concerning how to establish a night sky brightness measurement and monitoring program.
- E) Lightscape Management Plan
- F) Lighting Inventory and a plan to bring 90% of outdoor lighting into compliance with the Sanctuary's LMP within five (5) years of receiving an IDA designation, as well as a written commitment to bring the Sanctuary into 100% compliance within ten (10) years of designation.
- G) Any documentation of the cultural/historical/scientific significance of the Sanctuary and ongoing efforts to preserve and promote these resources.
- H) Description and documentation of any interpretive programs or products related to dark skies/natural darkness
- I) Future Plans
- J) Proposed wording of an alternative designation title (e.g. Dark Sky Wilderness, Dark Sky Refuge, etc.), if desired.

IDA REVIEW PROCESS

- A) Applications are sent to the DSPC on a bi-monthly basis.
- B) Before the Sanctuary's final application is submitted it is highly recommended that the Sanctuary be in regular conversation with IDA staff to perfect the application. Applications not ready for submission by the current deadline for DSPC consideration will be considered at the following regularly scheduled DSPC meeting.
- C) IDA staff forwards the application to Committee for review at the deadline preferred by the applicant.
- D) Approval of application by the DSPC is by a 2/3 majority vote. An application that fails to reach this threshold will be returned to the applicant with the Committee's reasons and recommendations.

Applications can be resubmitted, after a minimum of three bi-monthly periods have passed, for future consideration after remediation is complete.

- E) The DSPC need not act on an application during the regularly scheduled meeting at which it is presented and may, at its option, consider applications for up to two (2) months before rendering a decision.
- F) The sky-quality eligibility of the site is determined as part of the consideration process and is based on data provided by the applicants and any other relevant information.
- G) Following an affirmative DSPC vote, a 10-day waiting period shall commence during which the IDA Board of Directors has the formal right to veto the approval should it perceive any problem with the application.
- H) If approved the location will be notified and during the waiting period, the Program Manager will devise an external communications plan with the applicant and administrative authority. The Sanctuary has the right to choose the day and time on which the decision is publicly announced but must organize a release date in conjunction with IDA unless alternate arrangements are agreed upon by both parties.
- I) Approved locations are awarded the Dark Sky Sanctuary designation and listed along with their application on the IDA website. By submitting the application to IDA the DSS expressly agrees that the application documents will be posted to the website unless otherwise requested in writing.
- J) The Sanctuary will submit an annual report to IDA by 1 October of each year detailing activities and progress towards fulfilling IDA DSS goals during the previous year. The report serves to document that Sanctuaries continue to meet minimum program requirements, are sustaining partnership, outreach, and interpretive efforts, and are making adequate progress toward at least 90% compliance with LMPs. The report should include dates and brief descriptions of any interpretive events, lighting retrofit projects, community outreach, etc. It should also provide information on any new lands acquired since designation and/or the most recent prior report, as well as any potential future sale of land that may result in reassessment of DSS status (see "Sale or Transfer of Land Ownership," below). Samples of printed materials and press articles should also be included. The annual report should not require a lot of time to produce, as it should be a compilation of information generated during the previous year. A form will be provided to aid in the compilation of these details. Electronic submission of these documents is required in MS Word or PDF format. If the annual report is not sent in a timely fashion, IDA may suspend the IDA DSS' status until the annual reporting requirements have been met.

REASSESSMENT OF IDA DSS DESIGNATIONS

To ensure that Sanctuaries continue to be exemplary in their protection and restoration of natural lightscapes, IDA will periodically reevaluate each site in the Dark Sky Places Program. This is done to confirm that the Sanctuary continues to meet the minimum requirements and is making adequate progress toward LMP compliance goals outlined in this document.

To this end, the Sanctuary will submit by October 1st an annual report, covering a one-year reporting period ending previously in that same year, to IDA detailing activities and progress towards meeting DSS

requirements during the previous twelve months. Subsequent reports must cover a reporting period starting the day after the end of the previous reporting period. The report should include dates and brief descriptions of any interpretive events, lighting retrofit projects, outreach efforts, etc. Samples of printed materials and press articles should also be included. The annual report should not require a lot of time to produce, as it should be a compilation of information generated during the year. Electronic submission of the report and supporting documentation is required in PDF or Microsoft Word format. If the annual report is not sent in a timely fashion, IDA may suspend the site's DSS status until the annual reporting requirement has been met (see the following section).

A DSS designation is intended to represent the beginning of an ongoing relationship between the Sanctuary and IDA to our mutual benefit. IDA will periodically review the nature of that relationship in the required annual reports as described in the previous section. From time to time, IDA also receives comments from visitors to Sanctuaries that raise concerns about the veracity and timeliness of information provided to IDA by site administrators. IDA may, at its discretion, investigate claims in which it is alleged that DSSs are not living up to commitments made to IDA and the public in their applications to the Program. This section details the IDA procedure for carrying out such investigations, and the rights of DSSs in such matters.

Investigation and Due Process

An allegation of impropriety concerning any of the elements of participation in the Program outlined in this document is subject to IDA investigation and potential disciplinary action including temporary suspension and/or permanent revocation of the DSS designation. IDA staff shall perform due diligence in gathering facts concerning such allegations it deems credible, and will prepare a report of its findings for consideration by the DSPC. The DSPC commits to weighing the evidence fairly and impartially, and to seek to resolve disputes whenever possible through dialog. A Sanctuary subject to an investigation shall be notified in a timely manner and solicited for evidence contrary to the specifics of the allegation at hand. The resolution manner of dialog shall be emphasized from the beginning, and the Sanctuary will be given an opportunity to correct any deficiencies with regard to the Program guidelines established by the IDA investigation within a reasonable time period to be prescribed by the DSPC.

Failure to achieve consensus through these means risks a DSPC recommendation for suspension or revocation of the DSS designation. If made, such a recommendation will be forwarded to the IDA Board of Directors for formal ratification before coming into force. The Board's decision on any disciplinary matters involving a DSS shall be considered definitive and binding.

Any DSS so investigated has the right to review the allegations against it and all factual information collected by IDA pertinent to the allegations.

Reinstatement Following Suspension

If the DSPC recommends a suspension of a Sanctuary's IDA designation and the Board ratifies the suspension, the Sanctuary administration shall be immediately notified. The status of a suspended DSS shall be changed to "Provisional" in all IDA communications until the designation is reinstated or revoked; however, the process of obtaining reinstatement of a designation is not the same as that outlined in the "Provisional Status" section of these guidelines.

To obtain reinstatement of a suspended designation, the DSS must provide evidence to the DSPC's satisfaction that the specific issues identified by the DSPC as grounds for the suspension have been corrected and that all Program guidelines are once again met. The DSPC will consider the evidence presented by the DSS and render a judgment to either

- Accept the reinstatement petition, OR
- Reject the petition and recommend revocation, OR
- Return the petition with further instructions and a defined deadline for a DSS response.

A suspension left unresolved after one (1) year from the date of the Board's assent to the suspension automatically becomes a permanent revocation. Revocation entails removal of the DSS from IDA's roll of approved Dark Sky Places, and from mention on the IDA website and in member and external communications. IDA reserves the right to take legal action against any former DSS whose designation is duly revoked but continues to use the IDA name/logo in advertising, communications, and/or signage.

Sale or Transfer of Land Ownership

IDA considers the rights and privileges outlined here in association with DSS status to be simultaneously permanent and revocable. Furthermore, IDA requires that the responsibilities and obligations of the landowner(s) at the time DSS status is achieved are incumbent upon all future landowner(s) if the Sanctuary lands are sold or their title is otherwise transferred to any other public or private owner. A new owner or owners may unilaterally withdraw from participation in the program at any time by indicating these wishes in writing; otherwise, IDA will hold a new owner or owners accountable to the provisions of these guidelines in perpetuity. Any failure of new ownership to abide by the conditions for continued participation in the program laid out in this document, whether indicated by withdrawal or abandonment of responsibilities, will cause IDA to take action as described above ('Investigation and Due Process') which may result in the permanent revocation of DSS status.