

The Nevada Starry Skies Certification

Nevada's efforts to preserve a disappearing
resource

Advisory Board on Outdoor Recreation

June 15, 2026

Presented by

**Chelsea Kincheloe, Program
Officer III**



Photo of a person kneeling

Nevada Starry Skies Certification

The Nevada Starry Skies Certification was established in 2021 through SB 52 with a mission to promote, preserve, protect, and enhance Nevada's dark sky resources.



Photo of a night sky.

Who can apply?



Photo of person using a telescope.

- **Unincorporated Communities**
- **HOA's**
- **Tribal governments**
- **Parks/Open Spaces**
- **Businesses**
- **Schools (public and private K-12 schools and higher education schools or programs)**



Photo of a mountain landscape with stars.

DarkSky International

Nevada Starry Skies Certification

Scope

Global program with worldwide recognition. Established in 1987 exclusively for educational and scientific purposes.

State-level program specific to Nevada

Difficulty/ Requirements

Strict lighting standards and long-term management. Costly and has more rigorous standards.

Encourage night sky stewardship and recognize Nevada communities for responsible lighting.

Lighting Standards

Must meet strict, codified lighting guidelines and reduce existing light pollution.

Must meet strict, codified lighting guidelines and reduce existing light pollution.

Oversight & Monitoring

Ongoing compliance checks, annual reports

Ongoing compliance checks, annual reports

Recognition Level

Internationally recognized "gold standard" designation.

Statewide recognition to promote awareness and education

Primary Benefits

Reduce overall light pollution of a sight. International visibility.

Local visibility. Can be a steppingstone towards DarkSky International Designation.

Nevada DarkSky Chapter

Goals & Objectives

Facilitate Dark Sky Certifications in the State of Nevada

- Assist with both DarkSky International and Nevada Starry Skies certifications.
- State certification as a stepping stone to DarkSky International certification.
- Conduct public outreach, including hosting and/or supporting events, on the importance of dark skies and the economic benefits of astrotourism (Outreach and Education).
 - Educate about artificial lighting; light pollution impacts.
- Recruit new dark sky advocates from across the state.



Nevada Starry Skies Certification

Work at the community level with local organizations and entities to control the lighting of a site.

Nevada Starry Skies Certification

- Like DarkSky International, the certification process requires a **lighting management plan, creating an internal lighting policy or lighting ordinance.** A lighting plan entails noting the location, purpose, manufacturer, lamp type/spectrum, lamp lumens of each light in the park which includes lighting zones.
 - Create a lighting zones plan (LZ0- no ambient lighting to LZ4- High ambient lighting)
- **Provide an education plan and outreach efforts.**



A Disappearing Resource

- 80% of the world experiences artificial light at night (ALAN).
- Light pollution impacts human health and wildlife.
 - Recent UNR study found that sparrow chicks in Reno/Sparks, NV in high density lighting are lighter in color and have reduced survival rates.
- The night sky is disappearing at a rate of 10% every year. Future generations have a high risk of not being able to see the Milky Way, a once common sight 75 years ago.

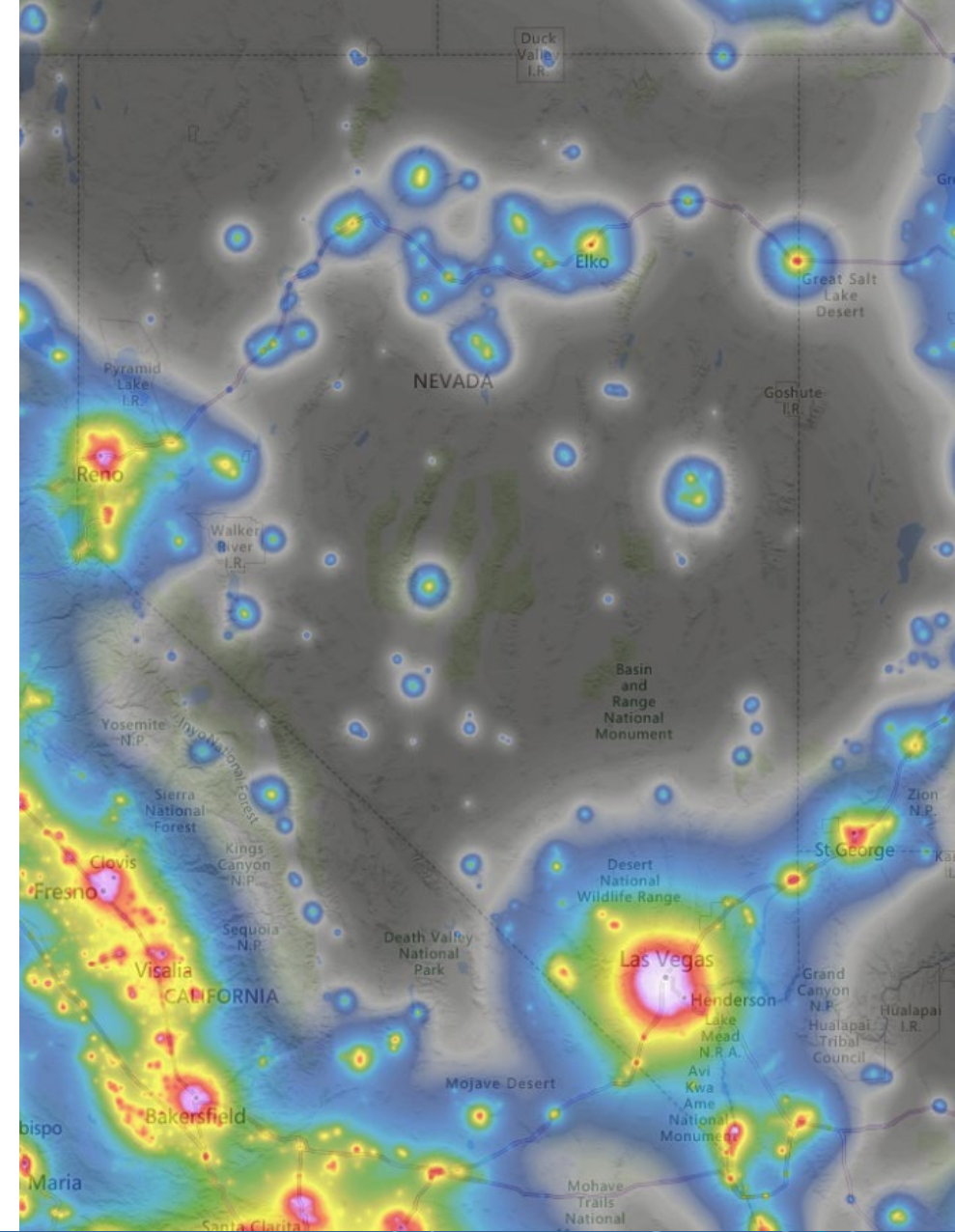
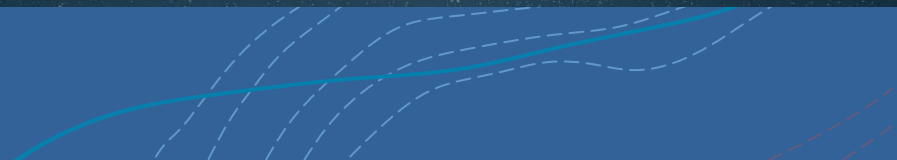
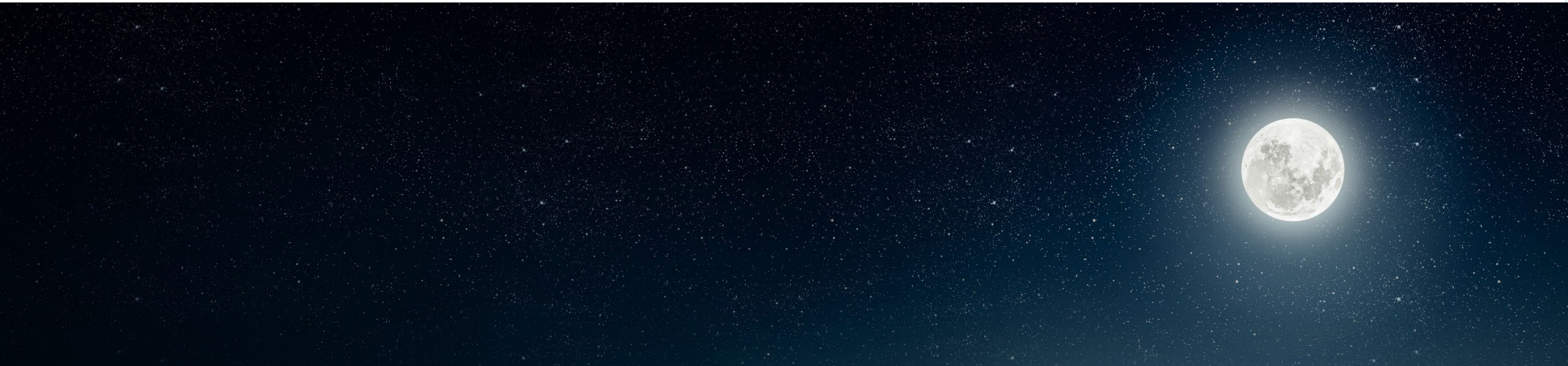


Photo of light pollution in the state of Nevada



Good News!

IT'S SOLVABLE!



Five Lighting Principles for Responsible Outdoor Lighting



DarkSky



Illuminating
ENGINEERING SOCIETY

Responsible outdoor lighting is

1 Useful

Use light only if it is needed

All light should have a clear purpose. Consider how the use of light will impact the area, including wildlife and their habitats.



2 Targeted

Direct light so it falls only where it is needed

Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.



3 Low Level

Light should be no brighter than necessary

Use the lowest light level required. Be mindful of surface conditions, as some surfaces may reflect more light into the night sky than intended.



4 Controlled

Use light only when it is needed

Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.



5 Warm-colored

Use warmer color lights where possible

Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.



Rev. 04-2023

Preserving our resources

Nevada

- Three Dark Sky International designations in Nevada.
 - Massacre Rim
 - Death Valley National Park
 - Great Basin National Park
- Red Rocks Conservation Area, Spring Valley State Park currently pursuing Dark Sky International Certification
- NDOR is working with Carson City Parks, Recreation & Open Space and Gerlach, NV on certification.
- Continuing to build a network of advocates across the state.



Photo of a license plate



What is needed?

Education.Advocacy.Outreach

Photo Credit: Roy Chavez

Photo of a night sky

Sky Quality Meter



FRIENDS of NEVADA WILDERNESS



Photo of a Sky Quality Meter

Determines the amount of light pollution in the night sky

- Relatively inexpensive- \$138-\$155
- Easy to use and provides quick data
- Ongoing measurement of the night sky
- Measured in astronomer units (magnitudes per square arcsecond) on a scale of 16-23 mpsa
- [Globe at Night](#)



Scan the QR Code to learn more about taking Sky Quality Measurements

IDA Sky Quality Data Field Sheet: Enter your Sky Quality Meter (SQM) readings that you take in the field with this form. You may edit this form to document the total number of locations taken for a replicate, and you may print out as many versions of this sheet for each replicate you conduct in a given year. As a reminder, the first measurement is always inaccurate due to a device error, so discard or do not record the initial measurement. Then, record 5 readings and provide the average for each location. Please note the weather conditions or any unusual environmental/astronomical conditions at the time of your observations.

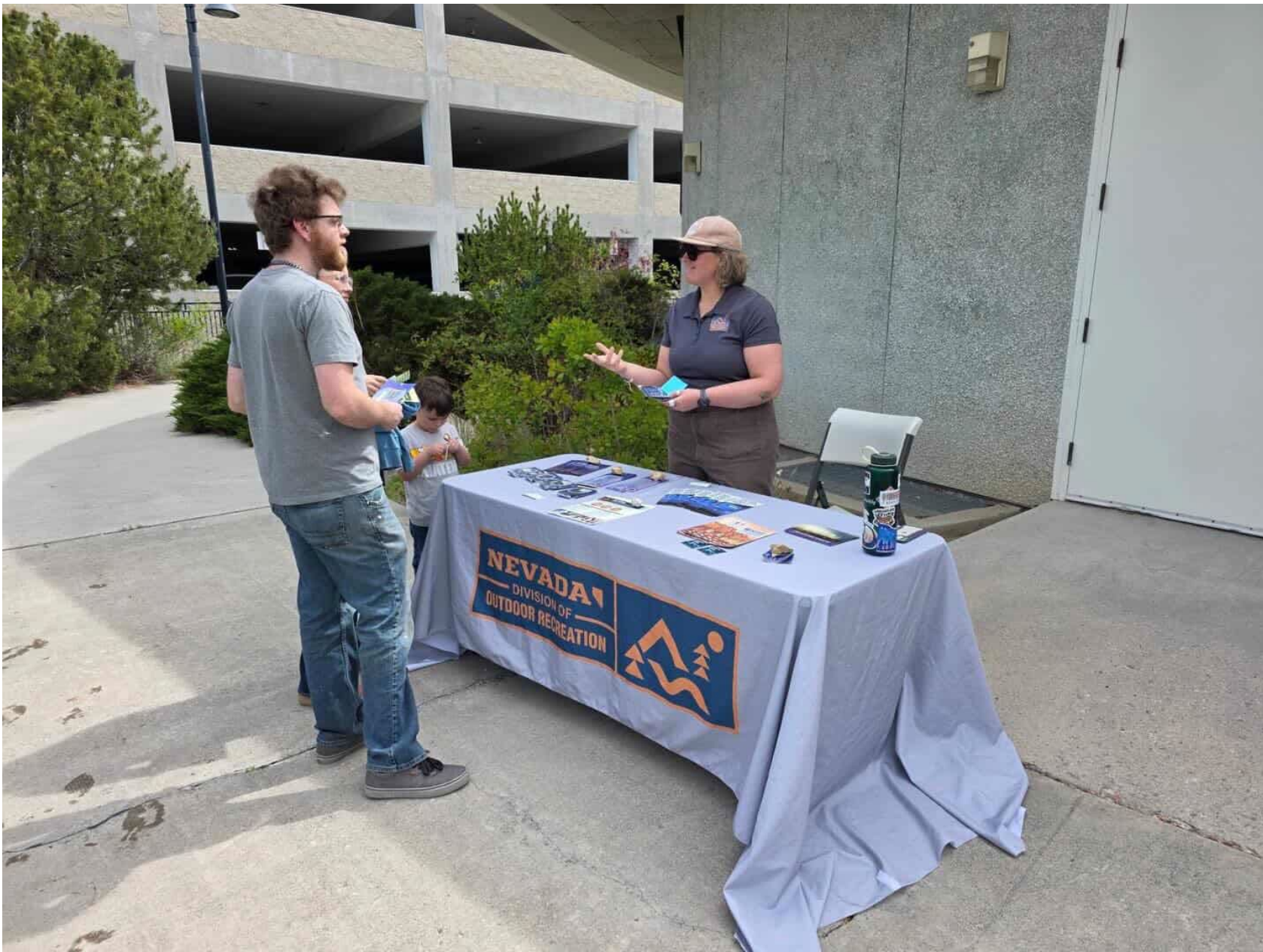
SQM Model	_2.19	SQM Serial Number	1265	Version (SQM or SQM-L)	SQM-L
		Total SQM Average	21.36		
Date	June 5-6, 2022	Total SQM Median	21.36		
	Location 1	Location 2	Location 3	Location 4	Location 5
Location Name	Campground 1	Campground 2	Visitor Center	Entrance	Backcountry Trail
Latitude	48.17	48.176947	48.181987	48.181607	48.167051
Longitude	-114.98	-114.966264	-114.891001	-114.857322	-114.795454
Time	22:00	22:16	22:47	23:10	0:13
SQM Reading - #1	21.44	21.4	21.33	21.22	21.49
SQM Reading - #2	21.38	21.35	21.34	21.23	21.51
SQM Reading - #3	21.39	21.36	21.29	21.26	21.47
SQM Reading - #4	21.37	21.41	21.32	21.21	21.48
SQM Reading - #5	21.37	21.36	21.3	21.19	21.46
Location SQM Average	21.39	21.38	21.32	21.22	21.48
Location SQM Median	21.38	21.36	21.32	21.22	21.48
% Cloud Cover	0	0	0	0	5
% Moon Visibility	0	0	0	0	0
Air Temperature (F or C)	37 F	37 F	35 F	32 F	31 F
Other Notes					Some cloud cover appeared at the end of the night; estimated at 70 degrees above the horizon, not covering the zenith

DARK SKIES: A JEWEL OF NEVADA

Dark Skies Toolkit



FRIENDS of NEVADA WILDERNESS





Our Mission

Bring more value to NV Energy business customers through a host of services designed to help reduce energy use, lower operating cost and improve facility operational efficiency through the implementation of energy efficiency measures.



Thank you!

Chelsea Kincheloe

Email: c.Kincheloe@ndor.nv.gov

Contact: 775-684-2701