



CENTRAL IDAHO DARK SKY RESERVE **ANNUAL REPORT**

YEAR
02

October 2019

*I never knew a man who felt
self-important in the morning
after spending the night in the
open on an Idaho mountainside
under a star-studded summer sky.*

Frank Church, U.S. Senator

Cover Photo –
Steve Dondero

CENTRAL IDAHO DARK SKY RESERVE

OVERVIEW - YEAR TWO

2019



Photo
Gary Gadwa

In our second year, we continued to focus on maintaining and building a core group of dark sky advocates. Through our combined efforts, we worked to:

- Preserve and enhance the natural nighttime experience to improve quality of life
- Highlight the benefits of reducing artificial light at night
- Enhance local educational opportunities through astronomy and other dark sky related programs
- Promote our dark skies as a unique community asset and part of our local and national heritage

The Central Idaho Dark Sky Reserve was designated in December 2017, the first such Reserve in the United States. Central Idaho constitutes one of the last large 'pools' of natural nighttime darkness left in the United States. The Central Idaho Dark Sky Reserve encompasses 906,000 acres (1,416 square miles) most of which is public lands within the Sawtooth National Forest. The Reserve includes the communities of Stanley, Lower Stanley, Smiley Creek, Ketchum, and Sun Valley and portions of Blaine, Boise, Custer, and Elmore counties.

The Reserve is situated in the spectacular scenery of the Sawtooth National Recreation Area (NRA). The Reserve's dual core areas are in the heart of Sawtooth Valley and include portions of two designated Wilderness areas in addition to other public land. In 1972, Congress established the 756,000-acre Sawtooth NRA with the passage of Public Law 92-400 which sought to preserve and protect the Area's "natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the recreation values associated therewith." Preserving the natural night sky complements all of these values and contributes to the solitude and primitive quality of the associated Wilderness areas making the Reserve a particularly good fit for this area.

ASTRO-TOURISM VISITORS & PROGRAMS

Central Idaho has a long history as a hub for tourism and the new interest as a dark sky hot spot brings new visitors in search of new adventures. Although it is difficult to extract the exact numbers of specific dark sky visitors, each of the six main visitor centers within the reserve report several specific dark sky inquiries each month.

Potential visitors inquire about travel information for a planned dark sky adventure and once they arrive want to know how and where to experience the area's dark skies. The idahodarksky email account receives an additional three to four inquiries per month related to astro-tourism questions plus media requests, lighting questions from local residents, and questions from other locations considering dark sky designation about our process and operations.

The CIDSr website provides information about program opportunities, astronomical events, light pollution, and other reserve updates. The website received 27,000 visits by over 20,000 users so far this year.



[Dark-Sky Tourism: Under the Idaho Sky, a Sense of Belonging](#)
New York Times, Jan 24, 2019



Programs and Events

It has been another banner year for astro-tourism in central Idaho and we continue to see heightened interest in both astronomy programs and light pollution information.

With Reserve volunteers presenting programs and working with several partner organizations we have collectively offered 37 dark sky related programs throughout the past year with over 1000 participants plus 4 broader outreach events reaching an additional 9,500 people.

LIGHTING

PROJECTS AND MANAGEMENT

Lighting within the Reserve is improving as the various jurisdictions work to ensure that new lighting is dark sky friendly and work with homeowners to address existing problem lighting. The night-time environment is remarkably dark throughout the reserve but there are still some questions about dark sky lighting. Most questions and complaints are related to light trespass rather than light color or skyglow. No new non-compliant lighting was installed within the Reserve to our knowledge.

KETCHUM

Ketchum addresses lighting compliance through the building permit process. The city also uses a complaint-based model to bring other lighting up to code. It is estimated that about a dozen lighting-related complaints have been lodged and investigated by our Community Service Officers.

Since the adoption of the updated Dark Sky Ordinance (No. 1171) on May 15, 2017, all new construction projects and remodels/alterations that have gone through the building permit process have been required to fulfill the International Dark Skies Association minimum standards for lighting. As of September, 292 privately-owned properties throughout the City of Ketchum are officially in compliance with our updated dark sky-friendly code.

SUN VALLEY

The City of Sun Valley continues to support the Central Idaho Dark Sky Reserve through education and enforcement of exterior lighting regulations. Promotional materials about the CIDSR are available to the public at City Hall and on the City website. Staff members in the Community Development Department address questions from the public and provides information on Dark Sky compliant lighting.

The City of Sun Valley continues their enforcement efforts by requiring that all existing exterior lighting be brought into compliance before a building permit or development application approval is issued. Additionally, when the City receives a lighting complaint, the Police Department and the Community Development Department work together to investigate the issue, determine whether the lights are noncompliant, and take enforcement action. The City sent 8 lighting enforcement letters in 2019 and 7 letters in 2018 to address complaints/questions received.





LIGHTING

PROJECTS AND MANAGEMENT

continued

STANLEY

In 2019 Stanley worked with Lumican, Inc. and Salmon River Electric Cooperative to analyze the retrofit of all Stanley street lights. This included an analysis of the proper wattage and lumens for each light to provide proper illumination of all intersections and streets. Subsequently, the city purchased fourteen 2200 Kelvin lights from Lumican and Salmon River Electric is in the process of installing these lights. The city is currently working with business owners and Lumican to retrofit the remaining non-compliant business lights. The city has received three complaints about these lights during 2019.

The Stanley Elementary School replaced two outdoor noncompliant wall lights with shielded dark sky compliant lights. These lights had been the subject to several complaints from local residents because the school sits on a hill and the lights were visible from most of the town.

The city worked with two private landowners in Lower Stanley to resolve their complaints about a neighbor's light trespass from a non-shielded light. Even though these lights were not within Stanley's municipal jurisdiction, the city was able to help the landowners work with administrators from Custer County to enforce the provisions of the county's dark sky ordinance.

BLAINE COUNTY

The County responds to all dark sky lighting complaints and questions with a goal to resolve the issue in compliance with the county ordinance. Outdoor lighting compliance letters were sent to only three properties in 2019 and all three complied with the lighting regulations. The low number of complaints may be partly due to a general lack of understanding of the lighting ordinance and an unwillingness to call and report neighbors.

County staff identified an ongoing challenge with fixtures that were grandfathered at the time the ordinance was signed. Most residents contacted are agreeable with modifying those fixtures in a way that is less intrusive but a few are reluctant to make voluntary changes to their lighting fixtures or bulbs. The county recognizes that more outreach is needed with respect to education about the ordinance and options to improve lighting.

FOREST SERVICE

The Sawtooth National Recreation Area installed dark sky friendly lighting on a new bunkhouse constructed at the Stanley Ranger Station. Reserve representatives also worked with several Forest Service permittees (camps and resorts) to address lighting issues which resulted in shields added to some fixtures. One particularly glaring light at Redfish Lake that had been on for years was just turned off once everyone noticed it just wasn't needed. Sometimes all you need to do is ask!

OTHER AREAS

The cities of Hailey and Bellevue are just outside the southern boundary of Reserve and both have dark sky lighting ordinances. Hailey receives about 6 inquiries a year related to lighting including how-to questions and some complaints about lights. Most of those contacted about non-compliant lighting are receptive to suggested changes and ordinance requirements. Bellevue reported that the city did not receive any questions about dark sky lighting issues in the past year. They have a continuing project working with Lumican to retrofit some of the streetlights on Main Street but further replacements are on hold due to funding restraints.

SKY QUALITY READINGS

Continued sky quality measurements confirm that the night sky within the reserve remains exceptionally dark. Additional non-compliant lighting within the Reserve is not as likely given the extensive public land base. Increased lighting outside the Reserve, even as far away as Boise could be a bigger issue in the future. With that in mind, the Reserve advisory group actively reaches out to surrounding communities to share information about the Reserve and how those communities can help limit outside threats to the Reserve's pristine night sky.



There has not been any noticeable increase in sky brightness within the Reserve. We do not have a permanently installed meter so we rely on volunteers to collect sky quality information. The Reserve has developed a draft SQM protocol that will make it easier to collect the data in the future. We are recruiting a small volunteer cadre and will implement a more consistent monitoring program in 2020. In the past year the Reserve received a generous donation of three Unihedron meters to use for our monitoring program.

Sky quality data collected this year (shown in the table) has been added to the master CIDS monitoring spreadsheet.

Central Idaho Dark Sky Reserve 2019 Sky Quality Readings

Date	Reading	Location	Time	Notes
29-Jan-19	21.93	Stanley	00:25	Moon Waning Crescent, not visible, sky clear, ground snow covered
29-Jan-19	21.88	Stanley	00:30	
29-Jan-19	21.38	Stanley	00:40	
29-Jan-19	21.68	Dry Creek	01:06	Moon Waning Crescent, not visible, sky clear, ground snow covered
29-Jan-19	21.86	Dry Creek	01:10	
29-Jan-19	21.84	Dry Creek	01:15	
30-Jan-19	21.97	Stanley	11:22	Moon Waning Crescent, not visible, sky clear, ground snow covered
30-Jan-19	21.88	Stanley	11:28	
30-Jan-19	21.8	Stanley	11:32	
30-Jan-19	21.87	Fish Hatchery	11:46	Moon Waning Crescent, not visible, sky clear, ground snow covered
30-Jan-19	21.74	Fish Hatchery	11:48	
30-Jan-19	21.8	Fish Hatchery	11:54	
24-Jul-19	21.62	Dry Creek	00:02	Moon Waning Gibbous, not visible
24-Jul-19	21.85	Dry Creek	00:08	
24-Jul-19	21.91	Dry Creek	00:13	
26-Jul-19	21.73	Trap Creek	01:15	Moon Waning Crescent, sky clear
26-Jul-19	21.86	Trap Creek	01:19	
26-Jul-19	21.64	Trap Creek	01:25	
23-Aug-19	21.68	Stanley	11:13	Moon Waning Crescent, sky clear
23-Aug-19	21.73	Stanley	11:18	
23-Aug-19	21.6	Stanley	11:26	
24-Aug-19	21.78	Fish Hatchery	00:05	Moon Waning Crescent, sky clear
24-Aug-19	21.86	Fish Hatchery	00:10	
24-Aug-19	21.68	Fish Hatchery	00:14	

OUTREACH

PROGRAMS & EVENTS

Ketchum Solstice Celebration



Summer Camp Program

Stanley Star Party with
Boise Astronomical Society



OUTREACH

PROGRAMS & EVENTS

CIDSR sponsored or worked with partners to provide a wide variety of programs and events throughout the year. While some of our partners had already been offering occasional night sky programs, with the designation of the Reserve, there has been growing interest in astronomy and dark sky related programs. We estimate that approximately 1,100 people were reached through 37 formal programs and an additional 9,500 people through four informal events.

Highlights

The Sawtooth Interpretive and Historical Association (SIHA) our primary education partner offered eight Dark Sky related programs as part of their summer interpretive programs in the Stanley area. Brian Jackson with the Boise State University physics department presented a program about Astronomy Before Galileo as part of SIHA's Forum and Lecture Series at the Stanley Museum.



SIHA also offered informal New Moon Star Parties three times during the summer led by a board member in various locations around Stanley.

CIDSR had an information booth again this year at the Salmon Festival sponsored by Idaho Rivers United at the Stanley Museum in August. We offered kids activities and talked with lots of folks about the importance dark skies, impacts of light pollution, and ways they can help. I talked with several folks from other Idaho cities who were interested in initiating dark sky efforts in their communities. Brochures provided by IDA for this event were much appreciated by the attendees.



A new effort this year was to have an entry in the Hailey 4th of July Parade. Our educational entry – and volunteer Star-Walkers handing out CIDSR stickers and Starburst candy for kids – received rousing applause from the 9000+ spectators lining Main Street.

The City of Ketchum and CIDSR hosted two Solstice Festivals in December and June to celebrate all things astronomical with food and beverage vendors, live music, and guest speakers. CIDSR had an exhibit set up for both events and we were able to provide information for local residents who may not otherwise attend specific programs. A new lighting display board comparing the glare of older style lights and bulbs with newer dark sky friendly fixtures and bulbs with warmer colors generated the most interest.



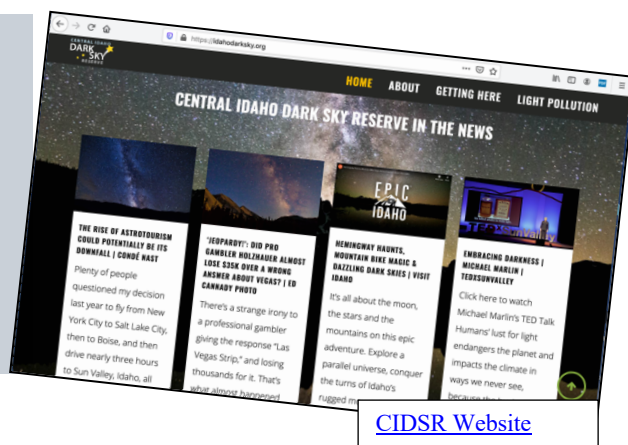
CIDSR representatives provided programs about the development of the Reserve for three astronomical societies. The Boise and Magic Valley (Twin Falls) Astronomical Societies are in Idaho. Tim Frazier presented a similar program in Florida for the NE Florida Astronomical Society so our outreach efforts are truly reaching out. We provided dark sky information to the Environmental Resource Center to support a series of school programs that were presented throughout the county.

This fall we were asked to do a presentation for the statewide Idaho Master Naturalist Rendezvous since the event was held at an organization camp within the Reserve. Participants from across the state had lots of questions about how to work with their local homeowner associations and city councils/commissioners to initiate dark sky efforts in their area

OUTREACH ONLINE MEDIA

The Central Idaho Dark Sky Reserve has continued to be a popular topic for local social media. While we do not track every post on every social media outlet, Visit Sun Valley has provided insight into how many views/hits their various media have received.

Information provided by Visit Sun Valley, a local marketing company.



WEBSITE

The Visit Sun Valley website was revamped in the Spring with more prominent links for information about the Reserve and stargazing.

<https://www.visitsunvalley.com/things-to-do/attractions/>

<https://www.visitsunvalley.com/to-do/central-idaho-dark-sky-reserve/>

VISIT SUN VALLEY NEWSLETTERS

- o [August 2019](#)- ~32K people, 14% open rate
linked to Perseids event listing AND the Dark Sky blog
- o [July 2019](#)- ~29K people, 14% open rate
featured the 'Exploring the Dark Skies with the Fam' blog

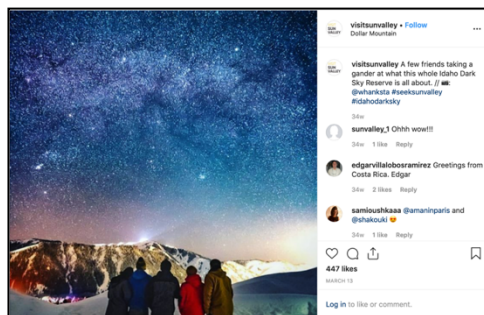


INSTAGRAM & FACEBOOK

These are just a sampling of Instagram and Facebook posts. A random search of 10 Facebook posts on the Visit Sun Valley page showed a reach of 1500-3000 for each post and 50 to 300 engagements. When people experience CIDSR's dark skies, they just can't help but post about it.



[Instagram](#)



[Instagram](#)



[Facebook-VisitSunValley](#)

OUTREACH

PRINT MEDIA

Media interest in the Reserve has continued to be strong but has decreased from the buzz of our first year when the first Dark Sky Reserve in the U.S. was big news. We get requests from both local and national media at least once a month through our website or broader searches for dark sky stories. Some surprise media coverage came in May when one of the questions on [Jeopardy](#) linked the first dark sky reserve in the U.S. with Sun Valley.

These are a few of the articles that have featured the Central Idaho Dark Sky Reserve.

- New York Times: [Your Next Trip? It's Written in the Stars](#) – September 2018
- Los Angeles Times: ["The top 10 places to visit in 2019, from Belize to Tasmania and Napa/Sonoma in between"](#) – December 2018
- Travel + Leisure: ["Why You Should Plan a Stargazing Road Trip in Idaho"](#) – March 2019
- Cowboys & Indians: <https://www.cowboysindians.com/2019/03/the-west-on-wheels-starry-starry-nights/> April 2019
- Trivago Magazine: [Astrotourism: 7 Best Places to Stargaze and Where to Spend the Night](#) – May 2019
- Local Freshies: [Summer's The Right Time... To Stargaze In A Dark Sky Preserve](#) – June 2019
- SF Gate: [10 Stellar Places for Stargazing](#) – June 2019
- Sunset: [Sun Valley Just Became Our Favorite Destination for an Arts & Culture Getaway](#) – June 2019
- Nat Geo: [10 perfect ways to cool off in the U.S](#) – July 2019
- Conde Nast: <https://www.cntraveler.com/story/the-rise-of-astrotourism-could-potentially-be-its-downfall> - July 2019



The Idaho Tourism Office often features stargazing opportunities in its statewide promotions. The 2019 Idaho [Tourism Guide](#) showcased the state's dark skies with a cover story about the Central Idaho Dark Sky Reserve, Craters of the Moon Dark Sky Park, the Dark Sky Community of Ketchum, and dark sky programming offered at Bruneau Dunes State Park.

LOCAL GOVERNMENTS & COMMUNITY ENGAGEMENT

Jurisdictional Oversight Group

Another major accomplishment this past year was to develop a Memorandum of Understanding (MOU) between the Jurisdictional Oversight Group members. The MOU defines the purpose, mutual benefits, and how the jurisdictional oversight group members work together on dark sky related matters. It also defines how the efforts of oversight group align with and support the efforts of the Idaho Dark Sky Alliance.

Local officials from Stanley, Ketchum, Sun Valley, Blaine County, and the Sawtooth National Forest gathered in May 2019 to sign the MOU that confirms their collective commitment to address light pollution and support dark skies in central Idaho.

Nearly two decades of planning efforts and policy decisions by city and county leaders, local businesses and organizations, and public land managers culminated in the designation of the Reserve in December 2017. Working together, these partners continue to focus on preserving the quality of the night-time environment and reducing the impact of light pollution in central Idaho.



Stanley Mayor Steve Botti,
Sawtooth NRA Area Ranger Kirk
Flannigan, Sawtooth NF
Supervisor Jim DeMaagd,
Angenie McCleary Blaine County
Commissioner, Dark Sky advocate
Stephen "Dr Dark" Pauley,
Ketchum Mayor Neil Bradshaw,
and Sun Valley Mayor Peter
Hendricks.

Photo – Nils Ribi

FUNDING

We have received some small individual donations but do not have any new grants or other funding to report on. In 2018 Blaine County provided funds to support education and signage within the Reserve and four welcome signs were purchased this year. County crews installed two of the signs this fall at access points located in Blaine County and the Reserve is working with the Idaho Transportation Department to get the other two signs installed.





Photo
Nils Ribi

YEAR

02

CENTRAL IDAHO DARK SKY RESERVE - - www.idahodarksky.org

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