



Parashant International Night Sky Province 2017 Annual Report

Grand Canyon - Parashant National Monument

International Dark Sky Association

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2017 Annual Report

Submitted by Eathan McIntyre

Status

Grand Canyon-Parashant National Monument (PARA), with over a million acres, located in the northern corner of Arizona and borders along the Colorado River corridor towards its south. PARA shares its boundary with Gold Butte NM, Lake Mead NRA, Grand Canyon NP, and the BLM Arizona Strip Field District as well as encompassing a small percentage of state (3%) and private lands (2%). The Dark Sky Park Designation is still intact with dark sky friendly facilities, interpretive outreach staff hosting various events, and ongoing monitoring of sky qualities. PARA continues to preserve its undeveloped qualities, via no paved roads and no formal campgrounds, allowing the starry skies to exemplify the solitude.



Figure 1 Milky Way view along the remote Whitmore Canyon located in Grand Canyon-Parashant National Monument.

Visitation to PARA remains steady at ~12k people; with two-thirds of the visitations consisting of day visits only, with a third being overnight camping. Most visitations are accounted by daytime recreation such as OHV touring. Nighttime activities still remain limited to overnight primitive camping, largely during the 6-8 weeks of deer hunting season in the autumn.

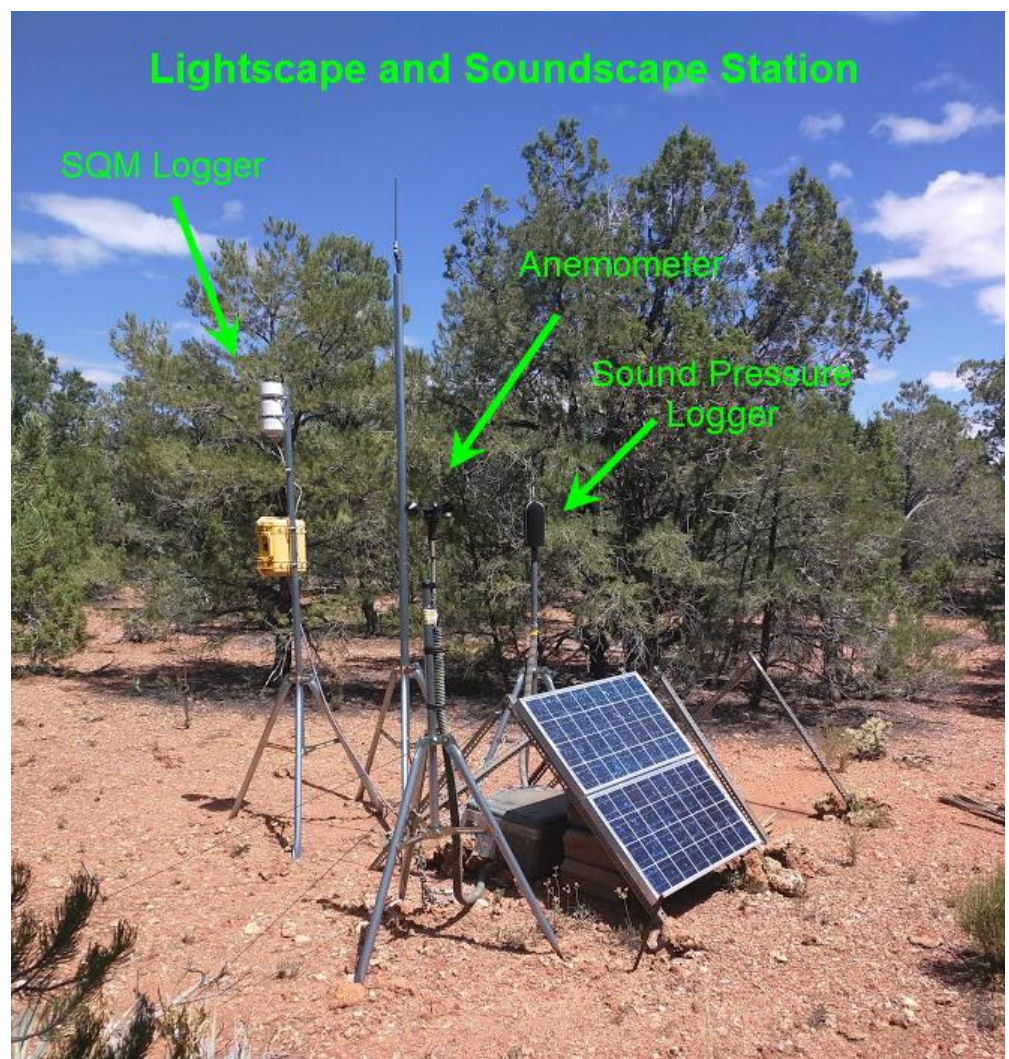
PARA was part of the Monument Review conducted by the current Secretary of Interior involving a call for data on Monument objects, to include the significance of the IDA Dark Sky Designation. It was determined that no further action was needed regarding PARA's boundary nor changes to its management, on August 4th.

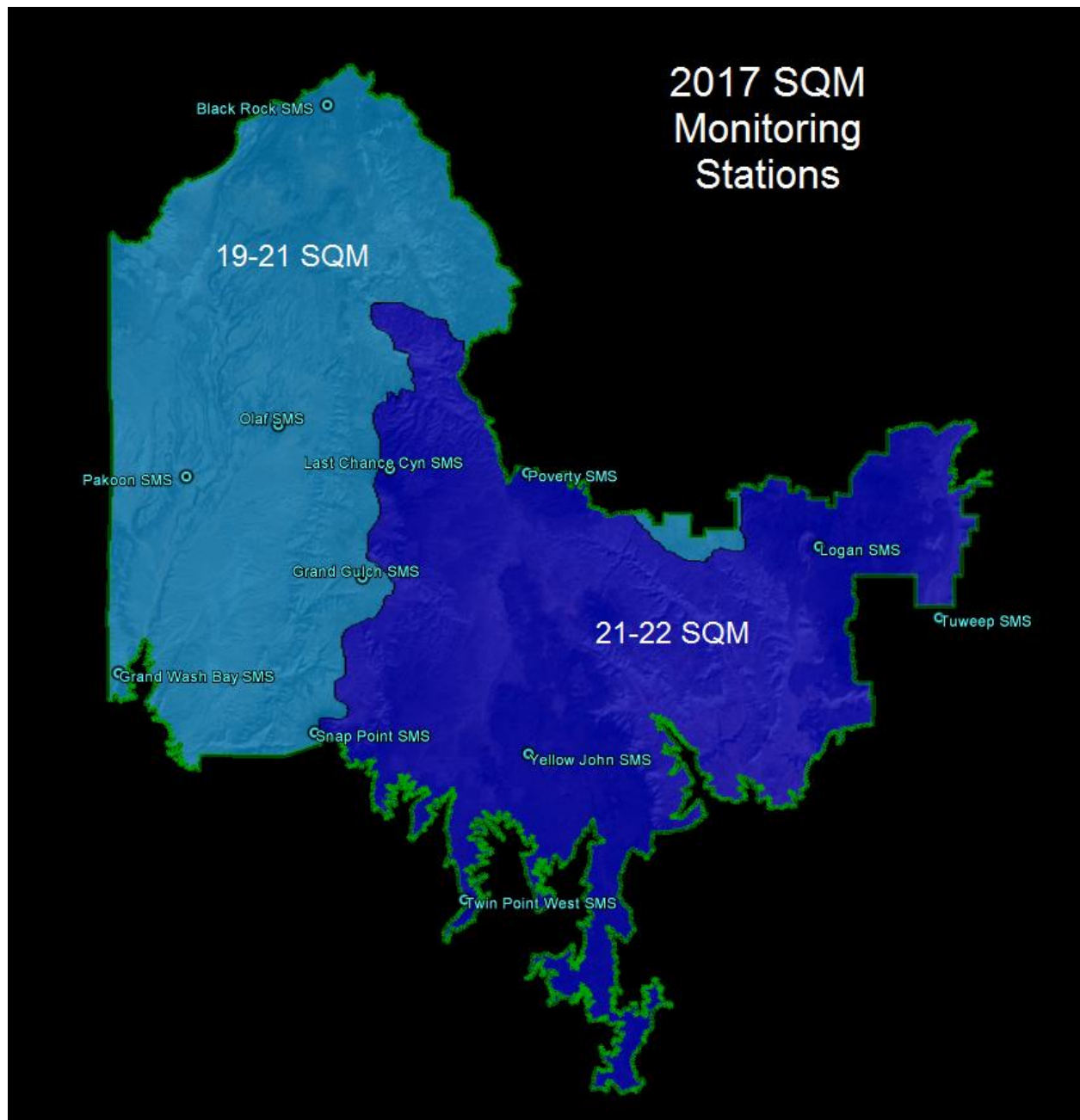
Lighting

Lighting levels remain unchanged with 24 light fixtures located at 3 Administrative cabin sites on PARA. All Lights are still in compliance with LMP, with IDA approved shielded light fixtures, a 10pm light curfew, and motion triggered driveway lights at 2 of the sites. Sources of light from private in-holdings remain minimal as all power sources are from solar or fuel generators. In addition, there has been no effort to extend power lines to neighboring private parcels.

Sky Quality

Remote monitoring of light levels, within Parashant DSP has been ongoing with 5 SQM stations and 3 All sky cameras providing continues SQM measurements and images, powered on solar, with periodic site visits to off-load the data. Sky quality has maintained near 2014 levels with the darkest portions adjacent to the Colorado river, and the most impacted areas stemming from the I-15 interstate corridor.





Currently 4 SQM stations are deployed with the Unihedron SQM sensor orientated towards the apex of the sky. A fifth station has been deployed in the Twin Point area with the sensor orientated towards the horizon, focusing on light levels emitting from the tourist attraction across the Grand Canyon, the Grand Canyon Skywalk as there has been more development and light sources emerging.

Ongoing Efforts with Neighboring Partners and Community

Two of PARA's neighbors Grand Staircase Escalante NM and Gold Butte NM, still remain under the Secretary Zinke Monument Review with recommendations to reduce boundaries. This has caused a postponement on the efforts to pursue Dark Sky Designations on these units, until these issues are fully resolved. The focus has now shifted towards Vermillion Cliffs NM, located ~60 miles east of PARA as candidate for a Dark Sky Sanctuary. More dialogue is expected with the Colorado Plateau Dark Sky Cooperative workshop in November 2017.



Figure 2. Shooting star over Poverty Mtn in Grand Canyon-Parashant National Monument.

Funding

PARA Dark Sky Designation will be enjoying funds in 2017-2018 from a BLM recreation grant to update signage showcasing our Dark Skies as nearly half our signs continue to be stolen (perhaps a compliment?). Below is an image of the newly installed PARA entrance signage with Dark skies as being a highlight along with cultural landscapes, and wilderness. This grant will also fund a separate sign which will be placed in tandem with these entrance signs, and will illustrate the PARA DSP designation and the IDA logo.

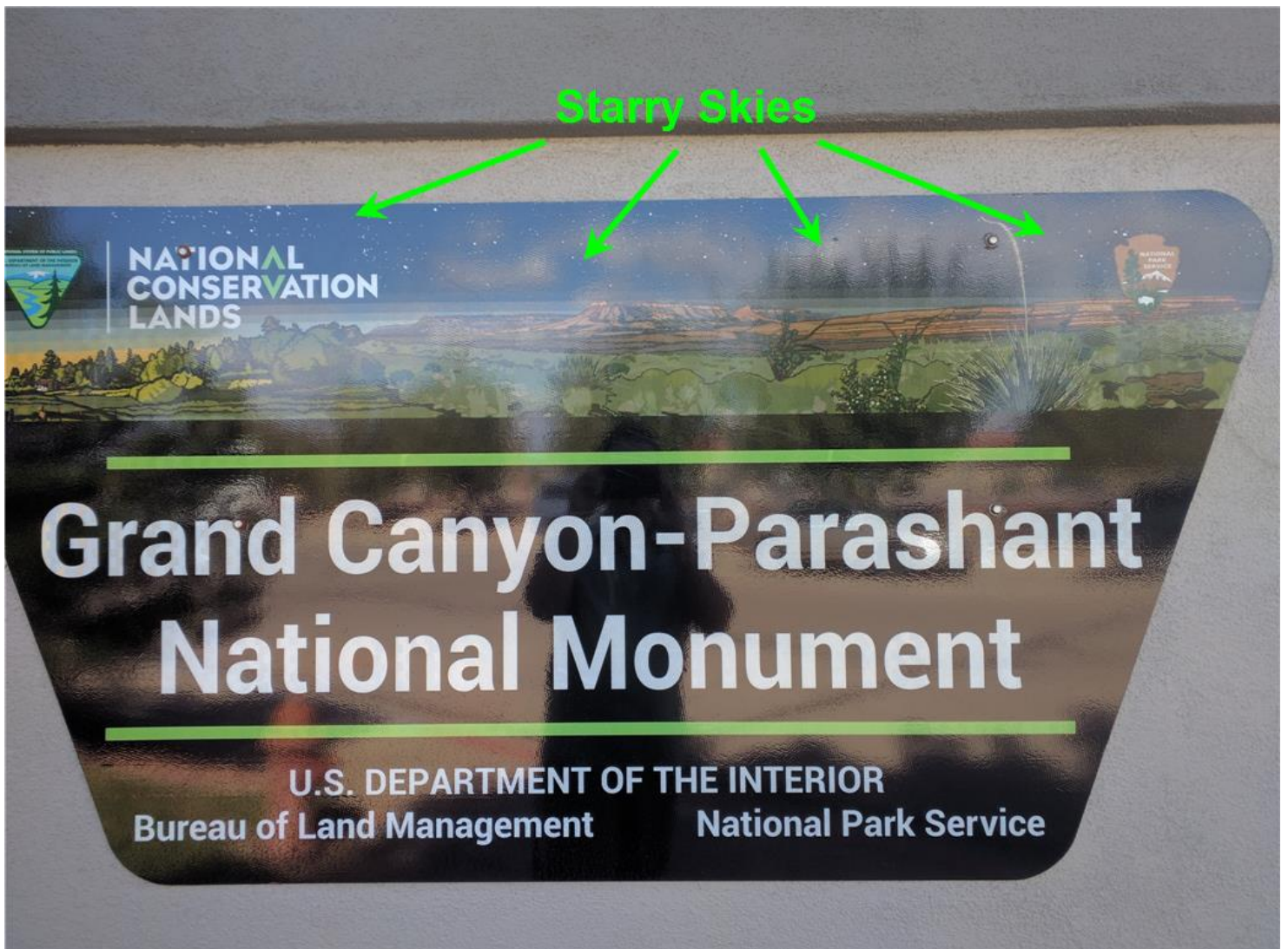


Figure 3. New signage for Monument Portals

Planned Programs, Outreach, Interpretation, Media relations



Figure 4. Starry night along the Hidden hills in Grand Canyon-Parashant National Monument.

Dark skies remain a priority for interpretation as nearly all events hosted by Grand Canyon-Parashant National Monument have a night sky component discussing light pollution, nocturnal ecology, astronomy, and cultural connections. Below are the numerous events, presentations, and media correspondence that have taken place for 2017.

Interpretation Events: *(Date, # of participants, and short synopsis)*

Attendees	Event
65	Dark Skies Presentation by Eathan McIntyre - Presented at the BLM Brown Bag lecture series
90	Concrete 2 Canyons - A 3 day 2 night camp for under-served students from Las Vegas and Mesquite, NV.
200	Tonaquint Star Party - A star party at Tonaquint Intermediate school.
15	Girl Scouts - Special request from the Girl Scouts for a night sky presentation
8	Outdoor Leadership Academy - College age students visit the monument to learn about natural resources
18	Springdale Library - A special request form the Summer reading program for a night sky themed presentation.
12	Partners In the Park - A 5 night 6 day camp for college honors students.
147	Get Outdoors Day - Provided a solar telescope with interpretation on the sun.
735	Southwest Astronomy Festival - Partnered with Cedar Breaks National Monument for an astronomy festival that covered 2 counties and several cities.

*Solar Eclipse activity scheduled for 8/21/2017 canceled due to overcast weather.

(Overall: ~1,290 attendees)