General

- Current information for the site IDA contact(s)
- Does the site currently have a Provisional status? If so, what work has been done in the past year to resolve concerns that resulted in the Provisional designation?

Contact: Annie Gilliland, Lead Astronomy Ranger: annie gilliland@nps.gov or 775-234-7523

We do not have a provisional status, we are gold-tier already.

Parks/Reserves:

- Does the site plan to apply for a tier status upgrade in the future? If so, what work has been done in the past year furthering the application?
- Estimate number of site visitors in the last year. Of those, how many participated in dark-skies programming?

We do not have plans to upgrade.

Last year, Great Basin had 144,846 visitors. Our visitations is increasing substantially with each year. Of those, 4369 attended astronomy programs. However, this is likely a low estimate as we had errors with keeping accurate statistics last year.

Parks/Reserves:

- Were any new lighting projects completed this year? If so, describe.
- Is any lighting within the Park/Reserve non-compliant with the LMP (as permitted at the time of IDAdesignation)? If so, what is the plan to bring the remainder into compliance within the allowed window of time?
- Was any new territory added to the Park/Reserve? If so, does any lighting on it comply with the LMP? If lighting on new territory doesn't comply, is there a plan to bring it into compliance?

We have one fairly new project that was planned and mostly implemented before we became an International Dark Sky Park. The lighting is currently red, and we are working on a plan to make sure all the lights are in compliance. This will require adding more shielding to the fixtures.

No new territory has been added to the park.

The park is currently constructing a new amphitheater where astronomy programs will be held. All lighting will be dark-sky friendly.

Communities:

- Were any changes made to local/municipal outdoor lighting policy in the past year? If so, describe and include text of any code language added or changed.
- Were there any new municipal lighting installations (or similar, large-scale installations on commercial property) built in the last year to show as examples built to your dark sky-friendly code?

The local community in Baker, Nevada has always been and continues to be very supportive of the park's dark sky efforts. Local businesses promote educational opportunities in the park and many work with us on lighting. Skyglow from Ely, NV can still be seen from parts of the park but is not overly intrusive.

Sky Quality

- Were sky quality data taken in the past year? If possible, include a table or figure showing the information
- Did sky brightness increase over the previous year? Decrease?
- Is a permanently mounted sky monitor installed, or are there plans to install one?

No new sky quality data was taken this year. We do not have a permanently mounted sky monitor. I am in contact with the Inventory and Monitoring Program in the Mojave Desert Network to inquire about monitoring opportunities in the future.

Conservation and Research (Parks/Reserves)

- Any ongoing conservation and/or research programs at the site? If so, who runs them, and what are the goals?
- Are there any new research results to report? Have any been published this year?

The Great Basin Observatory was completed last year and is currently being used for research. This is a 28inch dome telescope is used by students and professors at our partner universities: Concordia University, University of Nevada Reno, Western Nevada College, and Southern Utah University. One of their continuing research projects involves looking for exoplanets. The park communicates with these researchers and our partner foundation (Great Basin National Park Foundation) but the telescope is run remotely. Because of the excellent darkness and sky quality here, they can use a telescope that would need to be bigger and more expensive in many other places. Although no results have been published yet, within the next few months an Educational Portal will go live online to share science and research with students, teachers, and park visitors.

Funding

- Currently administering any grants related to dark-skies programming? If so, describe.
- Were any new grants won this year?
- Are there plans to apply for any future grants?

The park is not administering any new grants and currently does not have specific plans for future grants. We work closely with the Great Basin National Heritage Area, a partner organization that helps with a large percentage of our funding. The Foundation continues to fund astronomy equipment, like new parts for telescopes, as well as some events.

Arts and Culture

• Is any programming ongoing or planned blending the arts/culture with dark skies? If so, describe

Tony Berendsen was our keynote speaker at the Astronomy Festival this year. Tony combines astronomy and poetry, and read several of his poems to us. I also invited Trent Griffiths to speak about Shoshone traditions involving the stars. Both events were well attended. We also had our traditional ranger talent show, where all talents must relate at least tangentially to astronomy. This featured lots of music, as well as poetry.

Outreach

- Were any new outreach programs started this year?
- If so, are they complete or ongoing?
- Are statistics available (e.g., how many visitors served, donations, etc.)?

The park cooperates with the Great Basin National Park Foundation to plan and execute outreach involving our new observatory. I travelled to Reno, NV to teach a fifth grade class about astronomy, as related to the observatory. We made a model of our solar system, invented new planets, and talked about the significance of looking for exoplanets with the observatory. The students also got to look through solar telescopes. This event is expanding into a more formal curriculum that will continue with other events. There is currently a plan to offer a similar event at Sundance Books in Reno, although likely without park staff presence. More recently, I taught the same lesson to a science class at the school in Baker, NV.

Great Basin's astronomy intern also hosted an eclipse viewing opportunity in the park. Visitors built their own devices to safely view the eclipse and enjoyed looking through a solar telescope. This event was very well received.

Community and Media Relations

- Any new media coverage you would like us to know about? May include e.g., PDFs as attachments
- Any engagement with local governments, community organizations, or private landowners in the past year to report?

Great Basin National Park was featured on CBS's Sunday Morning series, in a segment called On the Trail. This aired on 12/25/16 and focused mainly on the dark skies of the park. It also highlighted the Star Train, a cooperative event between Great Basin's Dark Rangers and the Nevada Northern Railway. A historic train takes people out of Ely, NV into the desert where we have set up telescopes. Along the ride, a dark ranger conducts a program and offers astronomy trivia questions for small prizes from Western National Park Association. After this segment aired, every upcoming star train sold out quickly. We also received many more phone calls than usual asking about astronomy programs.

Great Basin's dark skies were also featured in the magazine Travel Nevada and in several articles in the Reno Gazette Journal.