

Staunton River State Park

Dark Sky Park Annual Report – 2017

Staunton River State Park was designated as a Dark Sky Park in June 2015. The popularity of Staunton River State Park as an astro-tourism designation has continued to increase, and 2017 has been a banner year.

Ranger-led programming was increased in 2017 to capitalize on the interest in our dark skies. Staunton River has also benefitted from a loaner scope program courtesy of the Chapel Hill Astronomical Observational Society (CHAOS). Loaner telescopes were originally donated to the park by CHAOS in the fall of 2014, and have been very popular. This program was enhanced by an additional donation of 3 more telescopes, with popularity increasing to the point we now accept reservations for telescopes. We also continue to host the Staunton River Star Party every March and October, and this has become the premier astronomy event in our region.

Highlights from 2017 are as follows:

2017 Programming

Dark sky and astronomy-related programming have become our signature programs with which we have had great success. Each year since we achieved the Dark Sky Park designation, we have seen an increase in guests coming to Staunton River simply to view the night sky. The following points break down our dark sky and astronomy programming to date.

- Staunton River Star Party – October 24-30, 2016 (event occurred after submittal of 2016 annual report, so it is included here)
 - Our fall star party for 2016 was our most successful event to date. At the peak of the event, we had over 225 astronomers from across the country on our observing field. We worked with the Halifax County Tourism Department to promote this event, which was a success. Participants of the star party host a public night during this event, and over 200 guests came out to look through telescopes and learn about the night sky and dark sky preservation.
- Staunton River Star Party – March 22 – 26
 - While still successful, cloudy skies for the majority of the spring star party kept attendance right around 100. Rain on the afternoon of the public night also kept crowds at bay, but we still had around 40 guests come out and we got lucky with several breaks in the clouds.

- Governor's Visit – April 16, 2017
 - Virginia Governor Terry McAuliffe, along with his entire family and several staff members, visited Staunton River State Park on April 16. This visit completed Governor McAuliffe's tour of Virginia State Parks, and made him the first sitting governor to have visited all 37 Virginia State Parks during his tenure. He and his family were treated to dinner at the park with park staff and members of CHAOS, where we were able to have lots of discussion about our efforts to protect our sky as well as the programming we offer guests. Following dinner, Governor McAuliffe formally designated our event field as Virginia's first Dark Sky Observation Area. The First Family stayed in park cabins overnight, and were treated to an observing session with members of CHAOS. The sky was beautiful that night, and Governor McAuliffe and his family had a great time and learned a lot. The Governor event woke up at 3am to come back to the observing field to see Saturn.



- Astronomy Nights – April 28, May 19, June 23, July 21, Aug 11, Aug 19, Sept 22
 - Astronomy nights are planned ranger and volunteer led programs that focus on observing the sky as well as allow park staff to discuss the importance of night sky preservation underneath a perfect example. For the guided events listed, we had 254 guests participate.
- Perseid Meteor Shower Observing – Aug 12
 - We hosted 76 guests to view the Perseid meteor shower, and we had beautiful skies with lots of meteors visible.
- Solar Eclipse Viewing – August 21

- While not necessarily dark sky related, we used the solar eclipse to promote our dark sky and astronomy programming. A full afternoon of events was scheduled around the eclipse, and while we were only treated to 92% coverage, we still had over 970 guests come out to the park to view the eclipse. Many guests commented on how the park was such a great place to view the stars, that they figured it would be just as good to view the eclipse.
- Upcoming Events
 - Fall Staunton River Star Party – October 16-22
 - Geminid Meteor Shower Observing – Dec 9

Sky Quality

Sky quality measurements were taken quarterly at 12 permanent locations throughout the park. Five readings were taken at each site over the course of 2 hours. The tables below show the results of multiple readings at each location throughout the year.

Average SQM Readings for 12 Park Locations - 2017		
Site	Reading	
	Feb 11	June 29*
1	21.29	21.18
2	21.36	21.25
3	21.37	21.29
4	21.33	21.27
5	21.38	21.23
6	21.30	21.20
7	21.28	21.21
8	21.40	21.04
9	21.33	21.01
10	21.43	21.12
11	21.34	21.09
12	21.45	21.14
Average	21.36	21.17

**June 29 readings were taken under cloudy skies.*

Lighting

Funding was not allocated for conversion of the remaining light fixtures at the Dan River Boat Ramp and the beginning of our fiscal year, however as the fiscal year closed out, some unallocated funding was made available and we were able to convert 2 of the 6 remaining fixtures at the Dan River Boat Ramp to fully shielded, low temperature LED fixtures. These

fixtures are a tremendous improvement, as they provide adequate lighting for the parking lot as well as being fully shielded to eliminate light pollution. Other than the soft glow on the ground, when approaching the parking area it's difficult to tell that the lights are even on. We will replace 2 more fixtures this fiscal year, then the final 2 the following, which will put us 100% compliant prior to the 5 year designation anniversary.

Community and Media Relations

- Park Manager Adam Layman was appointed to the Halifax County Tourism Department Board of Directors, which has allowed for an even closer working relationship with local leaders and allowed for additional promotion of dark sky and astronomy programming in the park.
- Park staff worked with the staff of nearby Occoneechee State Park as they converted their facility lighting to dark sky friendly fixtures. OSP is located adjacent to a large town, and doesn't have exceptionally dark skies, however they wanted to do their part in reducing light pollution and set an example for the town. Staunton River's efforts to date were the catalyst for this change, and park staff assisted by inventorying light fixtures and finding suitable dark sky friendly replacement fixtures.
- Park staff are working with CHAOS members to facilitate an information session during the fall Star Party between the Town of Halifax Manager and several North Carolina town officials. The Town of Halifax has an existing lighting ordinance that other localities would like to emulate.
- A nearby former summer camp was purchased and opened as the east coast base for AstroCamp, a STEM-based summer camp for youth, this summer. Park staff have had several discussions with camp staff, and will begin working with them to offer joint programming in 2018. The CEO of AstroCamp told the county Board of Supervisors that the primary draw to purchasing this property was the proximity to an IDA Dark Sky Park. We look forward to new opportunities working with AstroCamp.