

## **Dark Night Sky Report 2017 Death Valley National Park**

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In 2017, Death Valley National Park hosted approximately 1.2 million visitors.

### **Lighting**

Death Valley National Park continues to maintain compliance with the lighting management plan. Our park neighbors in Death Valley, including Furnace Creek Resorts and the Timbisha Tribe, recognize the value of the night sky and have modified their lighting. The Furnace Creek Resorts are undergoing extensive renovations, including a name change to The Oasis at Death Valley. Project managers have assured us that they share our goal of preserving Death Valley's dark sky and will be utilizing appropriate lighting strategies.

### **Sky Quality, Conservation and Research**

Astro volunteer Marni Berendsen completed an addendum to our 2015 report in November 2016. That report is attached. No additional SQM measurements were taken since last fall; our goal is to take measurements again in November 2017.

### **Grants**

In 2017, Death Valley hosted an Astro Volunteer from the National Park Service Dark Sky Program. This amateur astronomer has returned year after year to train rangers both in how to use telescopes and in how to provide interpretive programming related to the night sky.

### **Outreach**

The park features a night sky calendar in the park newspaper.

Park staff presented 52 night sky programs and two major events that included telescope viewing. Approximately 3,000 people participated in these programs.

### **Community and Media Relations**

Death Valley's neighbor at Furnace Creek is the Oasis at Death Valley, a resort owned by Xanterra. The property is undergoing extensive renovation at this time. Park Managers have requested that they plan any changes in lighting with the dark sky in mind. Local staff have agreed that this is important, but it's unclear how much control they have over the situation. Xanterra promotes their hotels in Death Valley using the International Dark Sky designation, so it's likely they will complete the project with this goal in mind.

## ADDENDUM: Dark Night Sky Report 2015 Death Valley National Park

### Sky Quality

Five sites within Death Valley have been selected to take Sky Quality Meter (SQM) measurements at least annually. These five sites cover the extent of the Park that visitors regularly visit from north to south within the Park.

Site (North to South)	Long	Lat	Elev (m)	Elev (ft)
Ubehebe Crater	-117.45	37.01	791	2594
Mesquite Sand Dunes	-117.12	36.61	-14	-46
Harmony Borax Works	-116.87	36.48	-58	-190
Dantes View	-116.73	36.22	1660	5445
Ashford Mill	-116.68	35.92	-27	-89



Table of sites and SQM measurements taken in November 2016:

Site	Long	Lat	Elev (m)	Elev (ft)	Local Date	Local Time	SQM at Zenith	Equiv Visual Mag (cal'd)	Temp (C)	Temp (F)	Observer	Weather Notes
Dantes View	-116.73	36.22	1660	5445	22-Nov-2016	19:04	21.51	6.390	15	59	M Berendsen	Clear except for thin clouds on horizon, no wind
Ubehebe Crater	-117.45	37.01	791	2594	24-Nov-2016	18:33	21.68	6.474	8	46.4	M Berendsen	Clear, winds 5 mph
Mesquite Sand Dunes	-117.12	36.61	-14	-46	24-Nov-2016	19:57	21.45	6.359	14	57.2	M Berendsen	Clear, calm
Ashford Mill	-116.68	35.92	-27	-89	29-Nov-2016	18:22	21.61	6.439	15	59	M Berendsen	Clear, calm
Harmony Borax Works	-116.87	36.48	-58	-190	29-Nov-2016	19:48	21.67	6.468	15	59	M Berendsen	Clear, calm