Annual Report for IDA from Dead Horse Point State Park

General:

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2018 has been a wonderful year for dark skies and Dead Horse Point State Park. Our annual visitation for the Park was about 765,000 estimated visitors. Our night sky oriented programs had an attendance rate of 1,290 visitors. This is a slight decrease from the past year. Many of the programs experienced weather issues so attendance was down a bit.

Outreach:

We did start a new program in cooperation with Arches National Park, Canyonlands National Park, and the University of Utah Physics and Astronomy Department. We hired two astronomy interns to increase our outreach for night sky programming. The program was really well received by the park visitors. We believe this will continue into the future.

Lighting:

All lighting within the Park was updated by December 2017. In 2018, we had a new campground, a house, and additional yurts added to the Park. The lighting for the new project was not night sky compliant. We have already replaced all lighting except for the new duplex unit. Those fixtures have just arrived and will soon be switched out. An updated lighting inventory is attached.

| D | Dead Horse Point State Park's Exterior Lighting Inventory updated 8/13/2018 | | | | | | | |
|-----------------------|---|-----------------------|-------|----------------------|-------------------------------|--|--|--|
| Location | Fixture | Full- shielded | Photo | Application | Conformity to LMP | | | |
| Entrance Gate | 1-Stop light | No | | Safety | Yes | | | |
| Entrance Gate | 1-Caution light | No | | Safety | Yes | | | |
| Entrance Gate | 1-Flag light | Yes with Rock | | Flag illumination | Yes | | | |
| Entrance Gate | 1-Sign light | Yes | | Informational | Yes | | | |
| Entrance Gate | 4-Exterior lights | Fully shielded | | Building egress | Yes | | | |
| Entrance Gate | 1-Envelope light | Fully shielded | 948 | Informational | Yes | | | |
| Moenkopi Yurt Site | 4-pavilion light | Partially shielded | | Building egress | No (No changes planned) | | | |

| Moenkopi Yurt Site | 2- bathroom light | Fully shielded | | Building egress | Yes |
|-----------------------|-------------------------|-------------------|---|--------------------|---|
| Residence 1 | 3-porch light | Fully shielded | | Building egress | Yes |
| Residence 1 | 8-solar led | Fully shielded | 1 | Building egress | Yes |
| Residence 2 | 2-porch light | Fully shielded | | Building egress | Yes |
| Residence 2 | 1-sodium light | No shielding | | Grounds egress | Yes (Left up as a lightning rod to protect ponderosa nearby) |
| Triplex | 3-porch light | Fully shielded | | Building egress | Yes |
| Duplex | 2-porch light | No shielding | | Building egress | No (new fixtures just came in and will be put up over the next month Sept 2018) |

| Shop | 1-flood | Fully shielded | | Building egress | Yes (only used in emergencies) |
|-------------------|---------------------------|-------------------|----------------|--------------------|--|
| Fuel shed | 1-flood | Fully shielded | 8- | Building egress | Yes (No bulbs, never used) |
| Fuel shed | 1-solar light | Fully shielded | | Building egress | Yes |
| Visitor center | 10- emergency light | Fully shielded | | Building egress | Yes (Emergency lights 17W LED bulbs, only used during emergencies) |
| Visitor center | 5-exterior light | Fully shielded | | Building egress | Yes (Light is kept off after closing hours) |
| Visitor center | 1-sodium light | No shielding | | Grounds egress | No (Leaving up as a possible wifi transmitter pole. Will remove if not used.) |
| Visitor center | 1-bulletin board light | Fully shielded | me to Dead Hor | Informational | Yes (Painted red however light is off after closing) |
| Visitor center | 3-patio box light | No shielding | | Building egress | Yes (No bulbs and never used) |

| Kayenta Campground | 1-sodium light | No shielding | Grounds egress | No (Leaving up as a possible wifi transmitter pole. Will remove if not used.) |
|-----------------------|-------------------------|-------------------|--------------------|--|
| Kayenta Campground | 23-site light | Fully shielded | Ground egress | Yes |
| Kayenta Campground | 4- bathroom light | Fully shielded | Building egress | Yes |
| Wingate Campground | 4- bathroom light | Fully shielded | Building egress | Yes |
| Pump house | 1-entry light | Fully shielded | Building egress | Yes |

Community:

Moab City and Grand County have committed to becoming IDA Dark Sky Communities. They are currently in the process of reforming their lighting ordinances and applications. This is extremely exciting news for all of us that have been working hard to bring about these changes.

Night Sky Quality:

The University of Utah Physics and Astronomy Department placed a night sky quality monitoring station on the roof of the visitor center in August of 2018. We are excited to see the numbers that come from this station.

Night sky quality readings seem to be worse than in past years. We have adjusted all of the new buildings lights finally so hopefully that will help our numbers improve once more. The table is below.

| Night Sky Quality Surveys 2017-2018 | | | | | | | | |
|-------------------------------------|----------|-------|-------|-------|------------|-------|-------|-----------|
| Date | Time | Gate | Yurts | VC | Campground | Neck | Point | Residence |
| 8/30/2017 | 4:30 AM | 21.44 | 21.41 | 21.45 | 21.58 | 21.52 | 21.5 | 21.46 |
| 9/18/2017 | 10:30 PM | 21.22 | 21.36 | 21.35 | 21.46 | 21.31 | 21.36 | 21.3 |
| 1/16/2018 | 9:10 PM | 21.43 | 21.46 | 21.5 | 21.46 | 21.46 | 21.53 | 21.52 |
| 2/17/2018 | 9:20 PM | 21.43 | 21.37 | 21.35 | 21.26 | 21.43 | 21.45 | 21.37 |
| | | | | | | | | |
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2019 will be the year to approach Intrepid (potash company below the Park) about their lighting and its impact on the Park's resource.

Community and Media Relations:

Crystal White has been working through Moab Dark Skies with Grand County Council and Moab City or the reworking of their lighting ordinances. The ordinances should be considered sometime this winter.

Crystal has also been interviewed several times by local papers and a few US papers about dark sky conservation.

Crystal will also be presenting a session open discussion at this year's IDA annual general meeting in Snowbird. The session will be on working with government agencies in dark sky conservation and ordinance changes.

Night sky programming at the Park continues to be the most highly attended program. Followed closely by full moon hikes.