

# Lessons Learned from Supporting Partner Initiatives over the Past 10 Years.

OHIO  
**NORTHERN**  
UNIVERSITY



**Dr. Bryan Boulanger**

Chair, Kokosing Department of Civil and Environmental  
Engineering

Engineering Centennial Alumni Endowed Chair

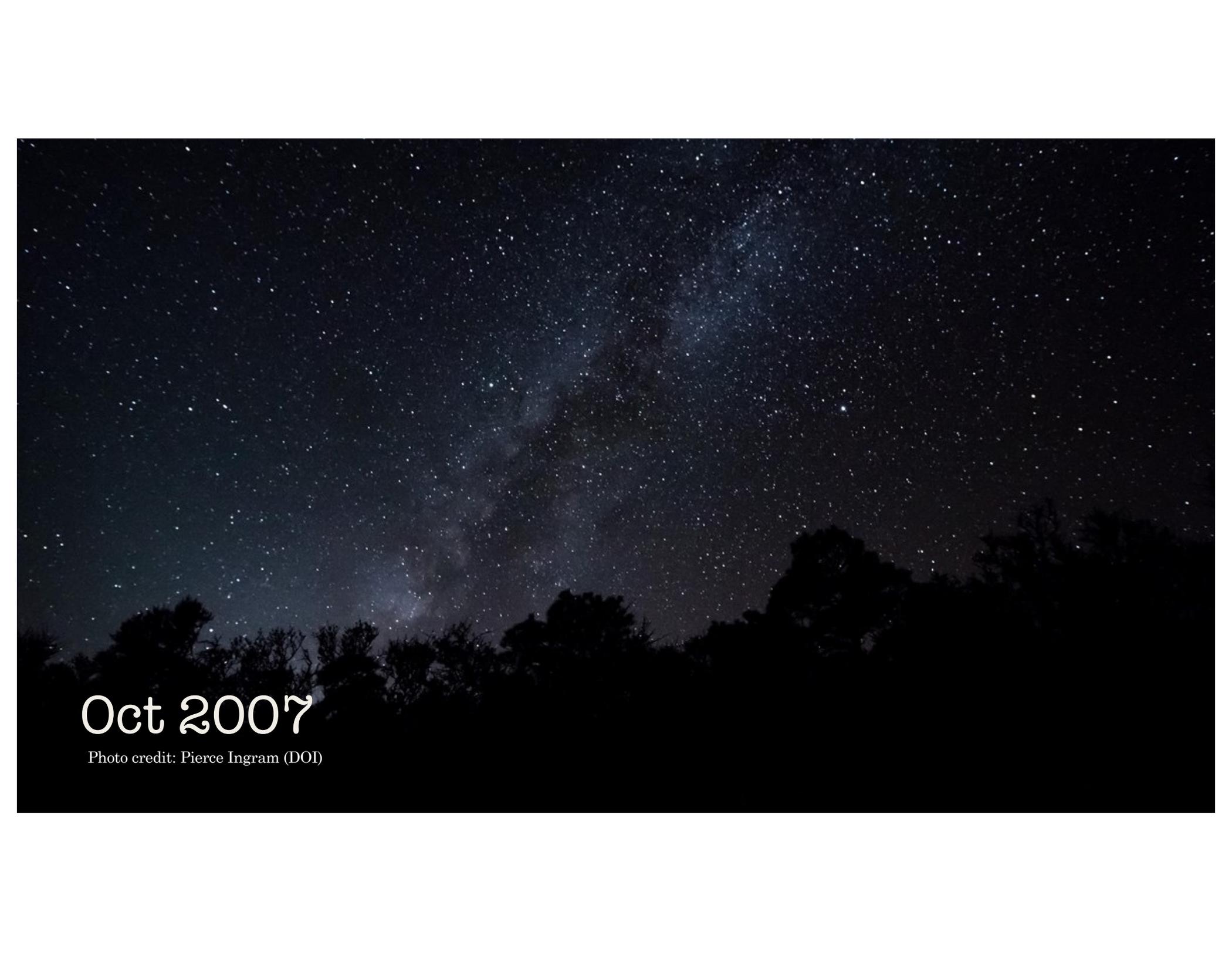
525 S. Main Street | Ada, OH 45810

227A James Lehr Kennedy Engineering Building

419-772-2375 | [b-boulanger@onu.edu](mailto:b-boulanger@onu.edu)

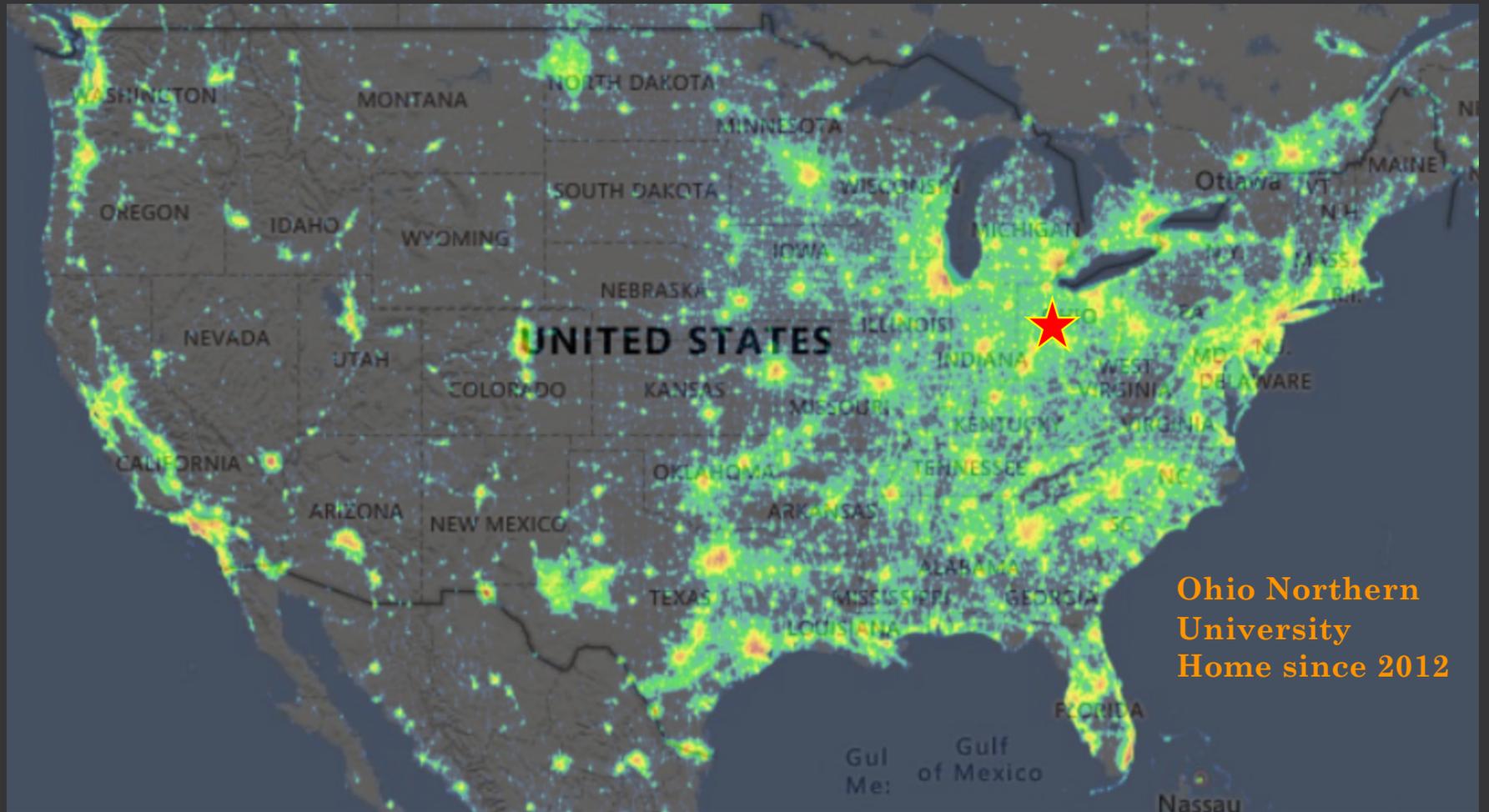
Thanks  
My Background  
Lessons Learned





Oct 2007

Photo credit: Pierce Ingram (DOI)



**Ohio Northern  
University  
Home since 2012**

[lightpollutionmap.info](http://lightpollutionmap.info) VIIRS 2022 Data



Community Ordinances &  
Lighting Design

3 Counties

7 Communities (4)

1 Reserve area (1)

Park Lighting Projects

28 US Park Service Units (10)

1 BLM Unit / 1 FWS Unit

3 International Projects (1)

7 State and Local Parks (1)

Dark Sky Places (16) – 18,200 mi<sup>2</sup>

Total Partners (51)

# Lessons Learned

1. Broaden Participation
2. Known Lighting Goals
3. Supported Decision Making



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## Broaden Participation

- Decide who should be involved, then broaden participation
- Identify champions
- Have patience



Photo Credit – “Downtown at Night” courtesy of Visit Hot Springs - used with permission.

## Known Lighting Goals

- Establish Lighting Management Plan
- Understand Lighting Upgrades
- Set Goal



Photo Credit: © Mike Cavaroc, Jackson from Snow King  
Used with Permission from Wyoming Stargazing.

## Dinosaur National Monument's Goal

Resort to Natural Darkness

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## Boulder City Nevada

remain committed  
high-quality, well-maintained  
responsible lighting  
value to the entire community  
maintaining the charm of our historic areas  
reasonably illuminated streets and paths  
residents and visitors

Photo Source: Las Vegas Weekly

## Supported Decision Making

- investment required
- external involvement moves projects forward
- keep processes and communications simple

THE COLORADO PLATEAU DARK SKY COOPERATIVE

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# GUEST SPOTLIGHT



**SHOW ME THE DATA:  
LIGHTING INVENTORY INNOVATIONS**

**BRYAN BOULANGER**  
Professor of Environmental Engineering,  
Ohio Northern University

### AN UNFAMILIAR EXPERIENCE

For the majority of us, what we see of the night sky from where we live is a partial reality. In fact, most of humanity is now living under a lesser version of the natural night sky without even realizing what has been lost. If you are reading this, you most likely already know this fact and have had your own realization about why and how you should become involved in night sky awareness and conservation efforts. My own realization happened in a remote location in far West Texas while camping and climbing with some friends near Guadalupe Mountains National Park.

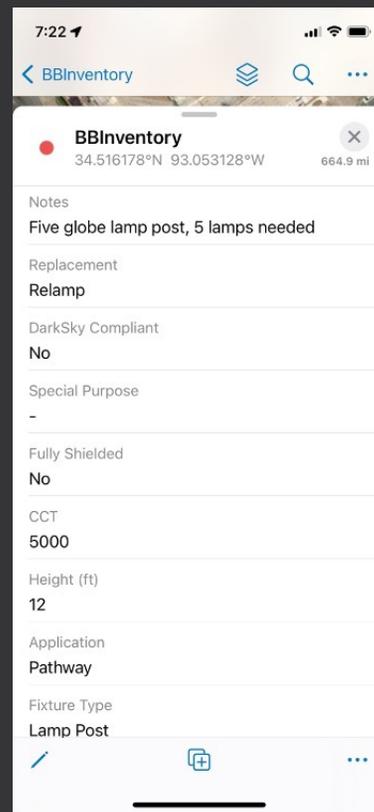
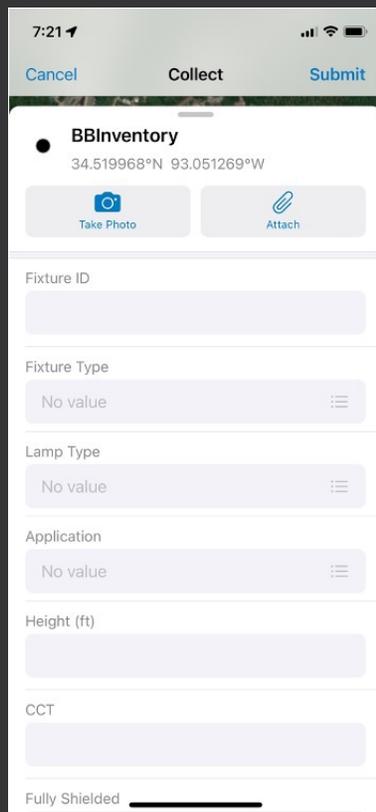
Far from the nearest settlement we found a place to camp, grabbed only our sleeping bags, and prepared for a cold night camping in the open desert. As we settled into our sleeping bags for the night, I saw a beautiful, completely star filled sky that was entirely unfamiliar. The version of the night sky that had been most familiar to me throughout my life consisted of only a few planets and stars, some partly recognizable constellations, and light dome filled horizons.

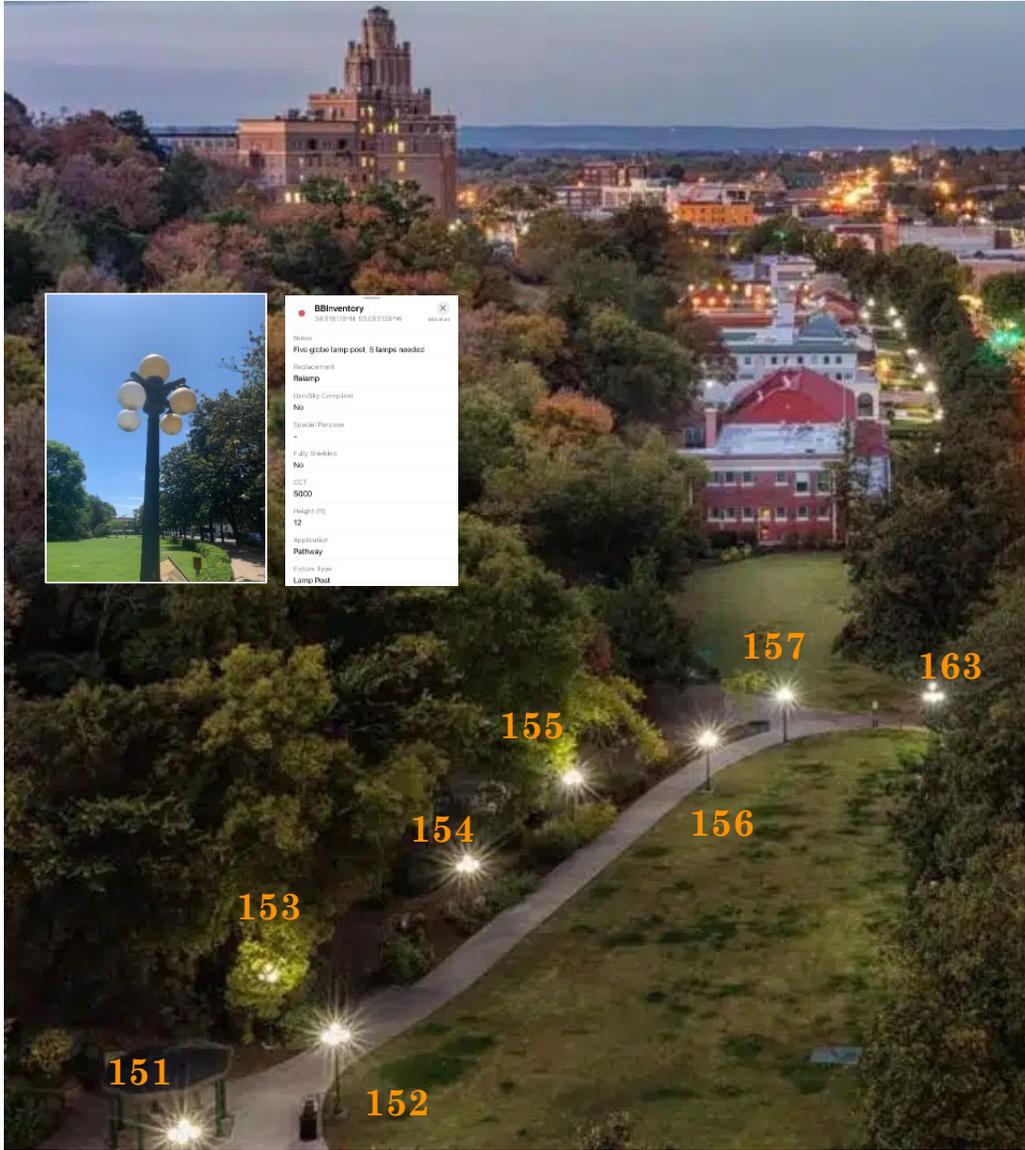
At this time I had just started my career as a professor of civil and environmental engineering and despite prior years of training and previous work experience at the United States Environmental Protection Agency, I had never once been introduced to the concept of light pollution nor to the fact that my profession was largely responsible. I determined that if my chosen profession had helped to create the infrastructure that was contributing so much to light pollution, then maybe engineers could also help reverse this trend.

I wish I could say that my experience in the Guadalupe Mountains led me to immediately get involved in night sky conservation efforts, but the reality is that it took another seven years, a change of institutions, and a bit of soul searching before I was able to engage in night sky conservation in a meaningful way. The recognition that occurred to me in West Texas changed my trajectory for the better – even though it took some time.

*Texas' Guadalupe Mountains National Park. Photo: A. Cohrs / National Park Service*

# Supported Decision Making





<b>BBInventory</b>
Notes
Five globe lamp post, 5 lamps needed
Replacement
Reinamp
Electricity Compliant
No
Special Purpose
Fully Shaded
No
OS
5000
Height (ft)
12
Application
Pathway
Fixture Type
Lamp Post



## Capital Costs Estimate

# of Units	Recommendation Description	Unit Cost	Total Cost
	Relamp	\$5	
	Remove	\$0	
	Wall Cylinder	\$250	
	Bollard	\$400	
	Flood	\$55	
	Tin Hat	\$300	
	Motion Sensor	\$40	
	Tin Hat Lamp Post	\$1000	
	Flag Pole Solution	\$1100	
	Ceiling Cylinder	\$250	
<b>Total Estimated Cost</b>			

# Lighting Design Layouts



## Collaboration

– Looking for partners

Organizations wishing to work with 3-5 partners  
over the next two to three years

Municipalities with interns who could complete  
work

