Responsible lighting and protecting the night sky: updating the NM Night Sky Protection Act



DarkSky
NEW MEXICO

### Goals for this meeting

Provide you with information so that you can help to preserve dark skies in NM by passing revisions to the 1999 Night Sky Protection Act

Get input and ideas from you on how to help

Determine actions and get commitments to taking them!

#### Outline

- Brief summary of NM DarkSky
- Brief summary of 2024 activities related to dark skies
- Overview of current Night Sky Protection Act (NSPA)
- Why does NSPA need revision? Proposed revisions
- Q&A
- Senator Liz Stefanics
- Q&A
- Communicating clearly on dark skies
- Q&A
- Legislative schedule
- How you ca help
- Breakout groups: ideas, requests, commitments!

# New Mexico DarkSky

- Chapter formed in 2023 in response to effort from DarkSky International
  - > 100 members in the state
  - Activities led by State Council
- With DarkSky International, held a stakeholder workshop a year ago

#### Widespread interest in dark skies

Stakeholder meeting in December 2023 attracted interest from many perspectives:

- DarkSky International and NM Chapter
- Illuminating Engineering Society
- Xerces Foundation
- NM Biopark
- Mesilla Valley Audubon
- Carroll Petrie Foundation
- New Mexico Wilderness Alliance
- Wilderness Society
- Santa Fe Conservation Trust
- Apache Point Observatory / NMSU
- New Mexico Tech
- Very Large Array

- NM True
- NM State Land Office
- BLM
- National Park Service
- Bandalier National Monument
- New Mexico Oil and Gas Association
- Starfire Optical Range
- Albuquerque Astronomical Society
- Magdalena Astronomical Society
- Dark Sky Land
- Warehouse I-10 Art Gallery
- Santa Fe New Mexican

#### New Mexico 2024 DarkSky related activities

- · Legislation/ordinances
  - Efforts to update NM Night Sky Protection Act
  - Supported revised Albuquerque ordinance
  - Provide input for development of Santa Fe and Las Cruces proposed ordinances
  - Support/assistance for efforts in Taos and Angel Fire
- Education/outreach/engagement
  - Development of Protect the NM Night Sky brochure
  - Development of web site, <a href="http://nmdarksky.org">http://nmdarksky.org</a>
  - Development of outreach materials
  - Multiple tabling events, e.g. NM State Fair, multiple others
  - Talks with various interested/stakeholder groups
- DarkSky places
  - Start initiatives for multiple new DarkSky places
  - Support DarkSky proposal for Gila Cliff Dwellings NM
  - · Adopt reporting for Cosmic Campground
- Economic impact
  - Work with Chris Erickson (NMSU) to put together economic impact report

#### http://nmdarksky.org

New Mexico DarkSky



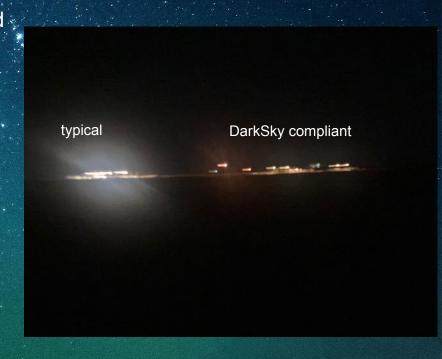


New Mexico Night Sky



#### New Mexico 2024 DarkSky related activities

- Dark for the Park Alliance established with Carlsbad Caverns NP, representatives from New Mexico Oil and Gas Association (NMOGA), and several other stakeholders to address significant concerns about light pollution from Carlsbad Caverns (and other locations)
  - Program established with DarkSky International to certify DarkSky friendly oil and gas facilities
  - Pilot program completed with Franklin Mountain Energy at several of their sites
- Demonstrates that (at least some of) oil and gas industry is open to discussion about the topic



# New Mexico Night Sky Protection Act

### What is the Night Sky Protection Act (NSPA)?

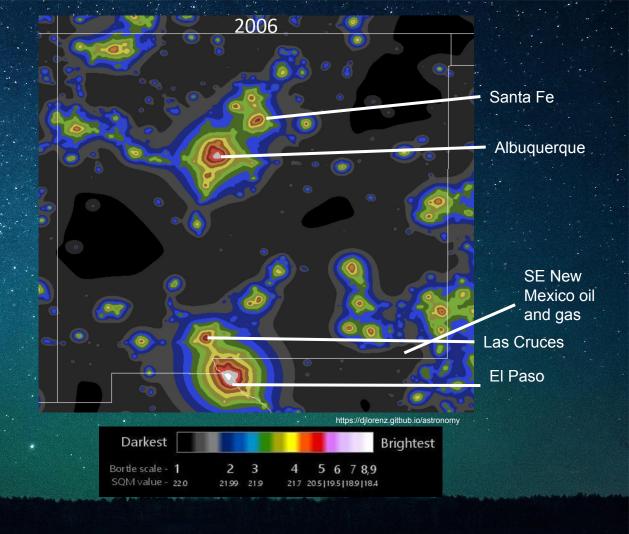
- NM was a pioneer, passing the NSPA in 1999.
  - Required new lighting to be shielded, where shielded was defined as cutoff at 90 degrees from straight down
  - Included several notable exceptions/exemptions:
    - Low wattage fixtures
    - Non-compliant fixtures if turned off after 11:00
    - Highway advertising
    - Lighting at farms, ranches, dairies, feedlots or industrial, mining or oil and gas facilities "for worker safety"
- Modifications in 2001 and 2009 added and clarified enforcement
  - Enforcement is responsibility of state Construction and Industries Division (CID) for state properties; all other is left to political subdivisions

# Why update the NSPA?

- Much has changed since 1999
  - New technology: LEDs! Wattage is no longer an appropriate specification
  - More appreciation of the importance of natural night skies
  - More appreciation of the value of responsible lighting
    - Responsible lighting can be as safe or safer
    - Responsible lighting can be effective
  - More appreciation of the value of astrotourism
  - Recognition that enforcement is a challenge
- Our dark skies are disappearing as artificial light at night has continued to bleed across the state

# Light pollution is growing in New Mexico

Globally, light pollution estimated to be increasing by 10% per year



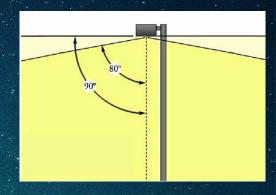
#### Bill development and feedback

- Have been working for several months with Senator Liz Stefanics to draft a bill with revisions
- Presentations made to
  - Water and Natural Resources Interim Committee in September
  - New Mexico Oil and Gas Association committee in October
  - Courts, Corrections and Justice & Economic & Rural Development Interim Committees in November
- Feedback
  - Legislators are not necessarily aware of the existing Night Sky Protection Act
  - Many recognize value of dark skies
  - Concerns raised about cost of modifying existing lighting, removal of exemptions, legislative approach
  - Clarity of language and of what is and is not being asked for is critical
  - NMOGA generally supportive of shielding requirement (already required by BLM, although at 90 degree definition), but want to review actual legislation
  - Advertising industry aware of proposal and wants to discuss
- Some modifications made on the basis of feedback

# What are we proposing? Stop the bleeding!

We propose to modify the existing Night Sky Protection Act in some small, but impactful, ways

- require all new lighting to be shielded to the current standard recommended by DarkSky International (at least 95% of the total light from a luminaire to be directed below an angle of 10 degrees from a horizontal plane), with a few common sense exceptions
- remove exemptions that are no longer justified.
- no requirements for modification of existing lights or their operation until they are replaced.



#### Proposed revisions with details

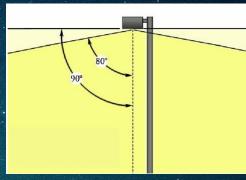
We propose to modify the existing Night Sky Protection Act in a small, but impactful, way: we will require all new lighting to be shielded to the current standard recommended by DarkSky International (at least 95% of the total light from a luminaire to be directed below an angle of 10 degrees from a horizontal plane), with a few common sense exceptions:

- we establish a partial exception for brighter lights near the ground that are illuminating upward: these must be directed at something and not at the sky.
- we establish an exception for fainter lights (<1000 lumens) near the ground .
- we establish an exception for strings of small lights and temporary holiday lighting.
- we maintain an exemption for highway lighting signs.
- we add a total exemption for temporary lighting associated with film or television production, construction, or emergency services.

#### We remove exemptions:

- for new noncompliant lights that are turned off after 11:00
- for new advertising signs (signs can be lit from above).
- for new lights at farms, ranches, dairies, feedlots or industrial, mining or oil and gas facilities, but delay the implementation of the shielding requirement for these facilities until 2027, to allow implementations currently in progress to proceed without modification. Shielded lighting is as safe or safer.

There are no requirements for modification of existing lights or their operation until they are replaced.



Comments from Senator Stefanics and Q&A for the Senator and on Night Sky Protection Act and proposed revisions

# Strategy: talking about dark skies

#### Clear and logical communication is critical

#### Framework for discussions on the issue:

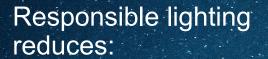
- 1. Why are dark skies important?
  - Many reasons ...
- 2. Dark skies can be achieved with responsible lighting
  - Basic principles of responsible lighting
- 3. What is needed to preserve our skies?
  - Combination of efforts, of which legislation is an important one
- 4. What are we proposing?
  - Simple revision of the NM Night Sky Protection Act

#### 1. Values of responsible lighting and a natural night sky

- A valuable natural resource : NM has something special!
- Human appreciation of our place in the Universe
- · Cultural resource: multiple cultures have connections with the night sky
- Economic impact: tourism, residential communities, small businesses
- Ecological benefits: pollinators and migratory birds are adversely affected by poor lighting
- Energy and money savings: less wasted light, less wasted energy, more savings!
- · Energy conservation : relevant as demands grow on electric grid
- Respecting property rights: property owners have right to be protected from light trespass
- Scientific study: all three research universities have programs, with several major observatories
- Amateur astronomy: widespread interest, multiple amateur societies across the state
- Worker safety: responsible lighting can be safer than excess lighting
- Security: responsible lighting can provide greater security
- · National security: satellite tracking and monitoring, monitoring of near-Earth asteroids
- Human health: sleep better!

## 2. Achieving dark skies with responsible lighting

- Put light only:
  - where you need it
  - when you need it
  - only in the amount that is needed
  - Use redder light (lower color temperature)
- Responsible lighting does not mean no lighting!



 Sky glow: preserve our view of the night sky

#### Responsible lighting reduces:

Glare, which is bad for safety and security

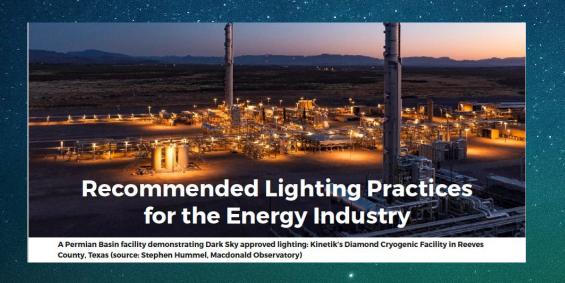


Responsible lighting reduces:

Light trespass:
preserve property owners
(including public property)
right not to be affected by
neighbors



# Responsible lighting is achievable and has positive impact



- "Consistent with our core values, HEP is always looking for ways to be a good steward of our environment and to give back to the communities where we live and work. The Dark Skies program not only helps us achieve this goal, but also makes the facility safer"
   --Jarrell Shircliff, Director of Operations for Howard Energy Partners
- "You get the right kind of lights and space them out in the right way and it's actually better lit up. There's fewer dark spots, you don't have guys tripping over stuff" -- Chris Gafford, safety manager at Callon Petroleum
- "The employees love it! One commented that he could actually see the equipment and where he was walking now" – Olivia McNamara, Manager HSE, WPX Energy

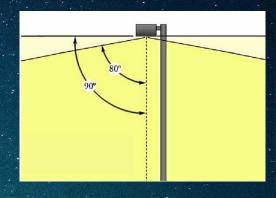
### 3. What is needed to preserve our skies?

- State legislation is one part of enacting meaningful change
  - Local legislation can be more specific and stringent (but not less)
  - Education about positive effects of responsible lighting is critical
  - Cultural shift is needed: more lighting is not better, responsible lighting is
- While general legislation is not the only component of a solution, demonstration of broad-based support at the state level through legislation can be very impactful

# 4. What are we proposing? Stop the bleeding!

We propose to modify the existing Night Sky Protection Act in some small, but impactful, ways

- require all new lighting to be shielded to the current standard recommended by DarkSky International (at least 95% of the total light from a luminaire to be directed below an angle of 10 degrees from a horizontal plane), with a few common sense exceptions
- remove exemptions that are no longer justified.
- no requirements for modification of existing lights or their operation until they are replaced.



# Strategy: passing legislation

# Legislative Process

- Every bill must run through the maze of the legislative process, jostling with many other bills, and against the sixty-day clock of the session.
- Our task is to access the process and push our bill along step by step.
- We will only succeed with the broadest support. As we address each of the steps, think about how you and your organization might contribute.

### Preparation for the Session

- 1. Building Awareness/Support
  Reaching out to legislators and the public to inform them about the issue and show them the constituencies (especially in their districts) supporting legislation.
- 2. Enlisting Sponsors
  Securing endorsements from a broad range of legislators Democrat & Republican, rural & urban, across regions.
- 3. Organizing Allies
- 4. Addressing Neutrals/Opponents Identifying other interested parties, assessing their stance, educating them, and if possible, negotiating their support or at least neutrality.

### How to Help

- 1. Contacting Legislators
  Reaching out to legislators to inform them about the issue, to make them aware of public (especially constituent) concern, to ask for their support, and sponsorship.

  Meetings, calls, and emails all work.

  All legislators ultimately have a vote, but some have outsized influence including leadership and critical committee membership.
- 2. Building Awareness
  Writing opinion essays and letters to the editor.
  Appearing on radio and TV shows.
- 3. Recruiting Supporters Enlisting supporters in your organization or elsewhere to contribute to the effort.

# **Key Legislators**

- 1. Senate Leadership
  - Mimi Stewart, President Pro Tempore
  - Peter Wirth, Majority Floor Leader
  - Michael Padilla, Majority Whip
  - Bill Sharer, Minority Leader
  - Pat Woods, Minority Whip
- 2. House Leadership
  - Javier Martinez, Speaker
  - Reena Sczcepanski, Majority Floor Leader
  - Dayan Hochman, Majority Whip
  - Gail Armstrong, Minority Floor Leader
  - · Alan Martinez, Minority Whip

# **Senate Committees**

Conservation

Judiciary

#### House Committees

Energy, Environment, & Natural Resources

Judiciary

# Key Media

#### Newspapers

- Albuquerque Journal
- Alamogordo Daily News
- Carlsbad Current-Argus
- Deming Headlight
- Las Cruces Sun-News
- Las Vegas Optic

- Los Alamos Monitor
- Roswell Daily Record
- Santa Fe New Mexican
- Santa Fe Reporter
- Silver City Daily Press
- Taos News

#### Radio/TV

- KANW (Albuquerque)
- KSFR (Santa Fe)

- KOAT (Albuquerque)
- KOB (Albuquerque)
- KOAT (Albuquerque)
- KUNM (Albuquerque/Statewide)

#### Committee Phase

- Assigning Bill to Committees
   Our bill will be assigned to two (perhaps three) of the standing committees, usually based on their areas of expertise.
- 2. Scheduling Hearings
  The Chair of the committee has discretion to schedule bills for hearings.
- Committee Hearings
   The sponsor and select proponents/experts introduce the bill and respond to questions and comments.
   Others can express support by attending the hearing and speaking when invited.

#### How to Help

- Assigning Bill to Committees
   Reaching out to leadership to have the bill assigned to no more than two committees
   In the Senate, the President assigns bills, usually following the recommendation of the sponsor.
   In the House, the Speaker assigns bills.
- 2. Scheduling Hearings
  Reaching out to the chair to get the bill placed on the committee agenda.
- 3. Committee Hearings
  Attending the hearings and speaking when invited.

#### Floor & Executive Phases

- 1. Floor Action
  When recommended, with or without amendment, by the committees, a bill advances to the floor for consideration debate, amendment, and ultimately a vote.
- 2. Other Chamber/Reconciliation
  A bill then negotiates a similar path in the other chamber.
  If the chambers approve the different versions, the bill is reconciled, and returned to each chamber for final action.
- 3. Governor The bill then is sent to the governor for her signature or veto.

# Supporting You

- Tracking
   We will track the progress of the bill through the legislative process.
- UpdatingWe will send out updates to keep you informed.
- 3. Alerting
  We will send out alerts with opportunities for you to take action as they arise.

#### Resources

- We are collecting resources on our web site
- About Light Pollution and the NSPA
  - NSPA Update Talking Points
  - Frequently asked questions
  - Values of responsible lighting
  - Light Pollution Impacts
  - Good Outdoor Lighting Principles & Practices
- About the Process
  - How to Write a Letter to the Editor
  - How to Testify Before a Legislative Committee
  - How to Contact Public Officials

#### What You Can Do

- Contact Legislators
  - Email
  - Call
  - DarkSky postcards!
- Write Letters to the Editor & Opinion Essays
- Appear on Radio & TV Shows
- Testify Before a Legislative Committee
- Recruit Supporters to Join the Effort
- Request Your Organization to Endorse the Update
  - Supply a testimonial
  - Contact legislators on behalf of your group.
  - Get your group members to contact their legislators

#### Breakout room discussion:

- . Quick introductions
- . What actions can we take to support the revisions to the NSPA and/or to dark skies in general?
- . What resources can we provide?
- What specific commitments will you make? (google doc)

Put responses on **Google Sheet** 

# Breakout group reports

### Thank you for your interest and actions!



# DarkSky NEW MEXICO CHAPTER