

# **DARK SKY COMPLIANCE**

**Challenges for the Future**

# FLAGSTAFF – DARK SKY CITY

**The City of Flagstaff was recognized as the World's first International Dark Sky City on October 24, 2001, for its pioneering development and implementation of lighting codes that balance the need to preserve Flagstaff's dark sky resource with the need for safe outdoor lighting practices. This division is to help assure that dark skies remain a resource to be enjoyed by the Flagstaff community and its visitors, minimize light pollution and Light Trespass across property lines, maintain an environment that the City's astronomical industry depends upon, reduce energy consumption, minimize the potential disruption to nocturnal ecosystems, and to allow safe and efficient outdoor lighting.**

# RESIDENTIAL CHALLENGES

- **Countless code violations citywide**
- **Limited resources to address complaints while still generating staff driven cases**
- **Decorative & Landscape lighting**
  - **String lights**
  - **Bright LED lighting**
  - **Uplighting**
  - **Misconceptions of brighter is better**
- **Prioritizing Residential complaints vs. Commercial complaints**
- **New builds changing fixtures after C of O**



# COMMERCIAL CHALLENGES



- **Compliance timelines can be lengthy and may need to include electrical engineers, consultants and other specialists**
- **Lack of financial resources for work to be performed**
- **Lack of prior knowledge regarding required permitting for Outdoor Lighting**
- **Contractors bypassing the permitting process**
- **Unshielded string lights**
- **Safety concerns (misconceptions)**

# SECURITY & SAFETY

## SECURITY

• Data shows that crime does not decrease as light increases. Effective lighting design utilizing fully shielded fixtures can enhance security while using less energy and lowering impact.



## SAFETY

• Bright, unshielded white lights may negatively affect safety and adversely affect the ability to see due to the glare and darker shadows created. Brighter lights create darker shadows!



# FEEDBACK FROM THE FIELD

- **Driving down any given street in Flagstaff can yield numerous residential cases**
- **Lighting of LTR's & STR's generate calls from neighbors, citing violation of the "Dark Sky Ordinance"**
- **Contacting one residential case will commonly generate complaints from the contacted resident, multiplying the case load exponentially**
- **String lights are becoming more popular with residents wrapping their trees, bushes, decks, fences, and roof lines**
- **Holiday lighting is remaining up and illuminated year-round**
- **Largest emitters of light pollution/lumens are commercial**
- **Most commercial entities report changing to high color temperature LED referencing safety concerns**
- **Local hardware outlets promote bright lights for security purposes**
- **Lumens will continue to rise citywide as more development takes place**

# **LOGISTICS & PRACTICE**

**Investigative field work will yield as many residential and commercial cases as are feasible to handle. In addition to patrol generated cases, Outdoor Lighting Violations are submitted through a variety of mediums by residents. At any given time, there can be in excess of 20 active cases, requiring regular communication between the Dark Sky Specialist and the party in violation. This communication will often include electrical engineers, contractors, business owners and residents. It is not uncommon to need to educate these parties in Code requirements, permit submission, and the nuances of Flagstaff's procedural flow.**

**Additionally, the Dark Sky Specialist is tasked with reviewing all Outdoor Lighting Permit and final lighting inspections, requiring flexibility with the existing case load. It is a dynamic job requiring a great deal of time management and a realistic vision of prioritization, which frequently requires the residential cases to be triaged behind plan review, final lighting inspection, and commercial cases.**

# POTENTIAL SOLUTIONS

- **Community Outreach**
  - **Local Schools**
  - **Educational “Fireside Chats” at supportive venues**
  - **Home Owners Associations**
  - **Apartment Complexes**
  - **Patrol Ridealongs**
- **Resource Materials for Public/Community Distribution**
- **Neighborhood Watch type program**
- **Social Media to heighten awareness**
- **Develop Curriculum for Instruction**
- **Utilize NAU & CCC and Potentially Interns**



**THANK YOU!!**

**Robb Faus**

**Dark Sky Specialist**

**City of Flagstaff**

**QUESTIONS?**