

Dark Sky Mentorship Program Town of Grand Lake, Colorado

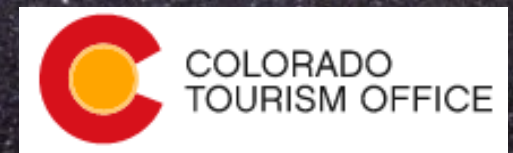


Board of Trustees Workshop
January 22nd, 2024

What is the Mentorship Program?

In 2022, HB22-1382 passed to Support Dark Sky Designation And Promotion In Colorado. As a result of this, the Colorado Tourism Office and DarkSky Colorado are partnering with communities to help achieve International Dark Sky Place (IDSP) certification and enhance Colorado's visitor experience via this mentorship program.

The Town will receive 70 hours of free consulting support from DarkSky Colorado to implement activities that reduce light pollution and protect access to Colorado's night skies. Successful implementation will increase Colorado's competitive edge as a destination and provide a wealth of benefits for Colorado communities.



Projected Mentorship Outcomes

- Reduced energy consumption, cost savings, and increased property value
- Increased local and regional quality of life through enhanced health and well-being, cultural heritage, and sense of place
- Increased awareness of the value of visible night skies and their benefit to local wildlife and ecology
- International Dark Sky Community Certification
- Collaborate with representative from DarkSky Colorado to develop a scope of work for use of the 70 consultation hours

Mentor “Astro” Mark Laurin

Experience, Expertise, and Equipment. “Astro” Mark Laurin brings over 53 years of passion to studying, teaching, and sharing the night sky. Mark is a member of the Denver Astronomical Society, the Astronomical League, DarkSky Colorado, DarkSky International, and an apprentice Operator of the historic Chamberlain Observatory’s Clark-Saegmuller telescope, at the University of Denver. Mark teaches astronomy as an adjunct instructor with Keystone Science School. He is an occasional scientific contributor for the Summit Daily, and writes a monthly stargazing calendar for DarkSky Colorado, Keystone Science School, and the Gunnison Chamber of Commerce. Mark was featured in Curbed, Exit 205, The Denver Astronomical Society’s Observer, and Elevations Outdoors magazines.



Town of Grand Lake Project Scope

- Updating local ordinances and land use codes to reduce light pollution and energy consumption
- Gathering local stakeholders and buy-in for IDSP certification
- Assistance in conducting assessments of local lighting infrastructure and measure darkness levels with a Sky Quality Meter
- Guidance with community dark sky awareness and stargazing events
- Provide assistance in development, enhancement, and promotion visitor experiences related to stargazing
- Recruit local partner organizations to help provide long-term sustainability of dark sky programming
- Structuring a successful application for IDSP Certification

Steps to Achieving Dark Sky Place Certification

1. Convene a Coalition for the Star
2. Conduct a Sky Brightness Measurement Program
3. Engage the Community With Dark Sky Education and Outreach
4. Develop a Lighting Management Plan
5. Set up a Policy Planning Framework
6. Inventory Outdoor Lighting
7. Submit the IDSP Community Application to DarkSky International

1) Convene a Coalition for the Stars

Goal: Establish a team of stakeholders willing to collaborate to preserve the night sky today, and tomorrow.

- Create a sustainable foundation and coalition of leaders, supporters and volunteers
- Create TOGL IDSP Community Application Project Team
- Create contact and email distribution lists
- Garner Memos of Understanding and Letters / Pledges of support
- Open file with DarkSky International: **DONE**

2) Conduct a Sky Brightness Measurement Program

Goal: Establish a minimum sky quality standard, and follow the evolution of light pollution.

- Acquire SQM Meters (Handheld and Continuous)- **DONE**
- Determine representative locations for SQM
- Recruit Volunteers / Measurement Teams and Individuals
- Use Best Practice in Measuring
- Recording Readings and Data Management
- Photographic Readings and Retention

3) Engage Community with Dark Sky Education and Outreach

Goal: Spread the word and commitment to protect and restore the night sky today and in the future.

- Create a sustainable long-range foundation
- Enlist local astronomers / stargazers individuals and groups to conduct outreach events (2 per year.)
- Enlist local tourism office / groups
- Enlist local chamber of commerce
- Enlist local schools to educate next generations
- Enlist state and federal land management agencies
- Establish a long-range outreach plan

4) Develop a Lighting Management Plan

Goal: To regulate artificial light and ensure that the already naturally dark sky in this region is not only protect, but enhanced by responsible light practices.

- Follow example of other IDSP Community LMPs
- Get familiar with current land use codes and ordinances
- Attend council and planning commission meetings.
- Key: Find government champions to help with the bureaucracy

5) Set-up a Policy Planning Framework

Goal: Engage policymakers through one-on-one meetings and or having dark skies as an agenda item at town council and planning commission meetings.

- Engage policy managers / land managers to create dark sky policy framework, plan, and ordinance
- Engage policymakers / land managers one-on-one
- Attend town council and planning commission meetings
- Create a sustainable foundation for on-going communication

6) Inventory Outdoor Lighting

Goal: Conduct a formal audit of outdoor lighting within the proposed dark sky community boundaries and rate of compliance.

- Gather data for public lighting on public in ISDP Community boundary:
 - Fixture types
 - Lumens/watts/color temperature
 - Shielding
 - Adaptive controls
- Database is tracked and updated as outdoor lighting is updated

7) Draft and Submit Application

Goal: Upon completing Steps 1 – 6, gather all qualifying information into one application packet for submission.

- Follow DarkSky International's. application flow and steps
- Compare ToGL's application against "like" Community's application
- Secure final IDA member Letter of Support
- Submit for review
- Anticipate some revisions

Assistance from the Board

- Resolutions and Proclamations in support of TOGL's Dark Sky Cert.
- Incentives and Education Opportunities
- Master Plan Updates
- Long-term Support of the Coalition for the Stars
- Enforcement of lighting ordinances

Next Steps

- Recruit “Coalition for the Stars” team members and Project Teams.
- Kick off meeting with Mentor and Coalition for the Stars
- Establish a monthly Project Team meetings – Initial commitment is monthly for 5 months
- Assign a specific application step to each Engagement Teams meetings (initial commitment is monthly for 5 months)
- Secure Memos of Understanding and Letters of Support
- Schedule two (2) Education and Outreach events and activities per year:
 - Arbor Day
 - Songs and Stars
- Hand-held meters(condition of sky) and color analysis meters (lighting inventory)
- Staff as data admin. to document sky quality data into master database
- All mentorship hours (70 hours) to be used by the end of May, 2024
- Conservative timeline: summer 2025 submit application – need sky quality readings for a year.
- Get Town-owned lights up to code within 5 years (after lighting ord. is enacted)