

The Cameron County Dark Sky Park Virtual Meeting will start shortly



5:30 Presentation – general Q&A

- Sign in to the **chat box** (name and affiliation)
- Type your question into the **chat box**

After Review displays on-line using the following link
(<https://www.lardnerklein.com/cameron-dark-sky>)
Fill out questionnaire using QR code at right or
<https://www.surveymonkey.com/r/CamCoDarkSkyPark>





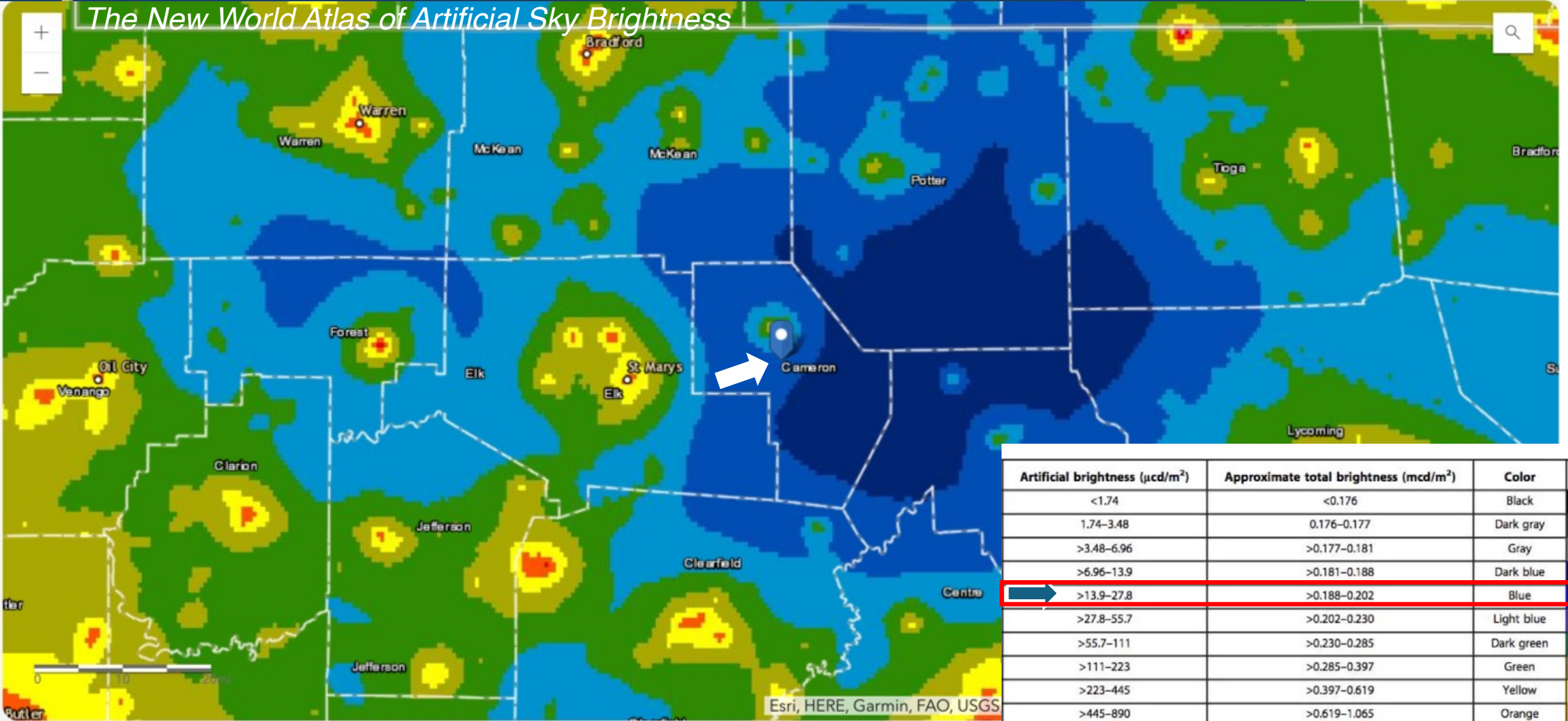
Help us Plan for the Cameron County Dark Sky Park



Provide an opportunity to learn about the Dark Sky Park Master Site Plan and meet with project planners and partners in the planning effort to review and discuss initial ideas early in the study process.

1 Cameron County Dark Sky Park

The New World Atlas of Artificial Sky Brightness



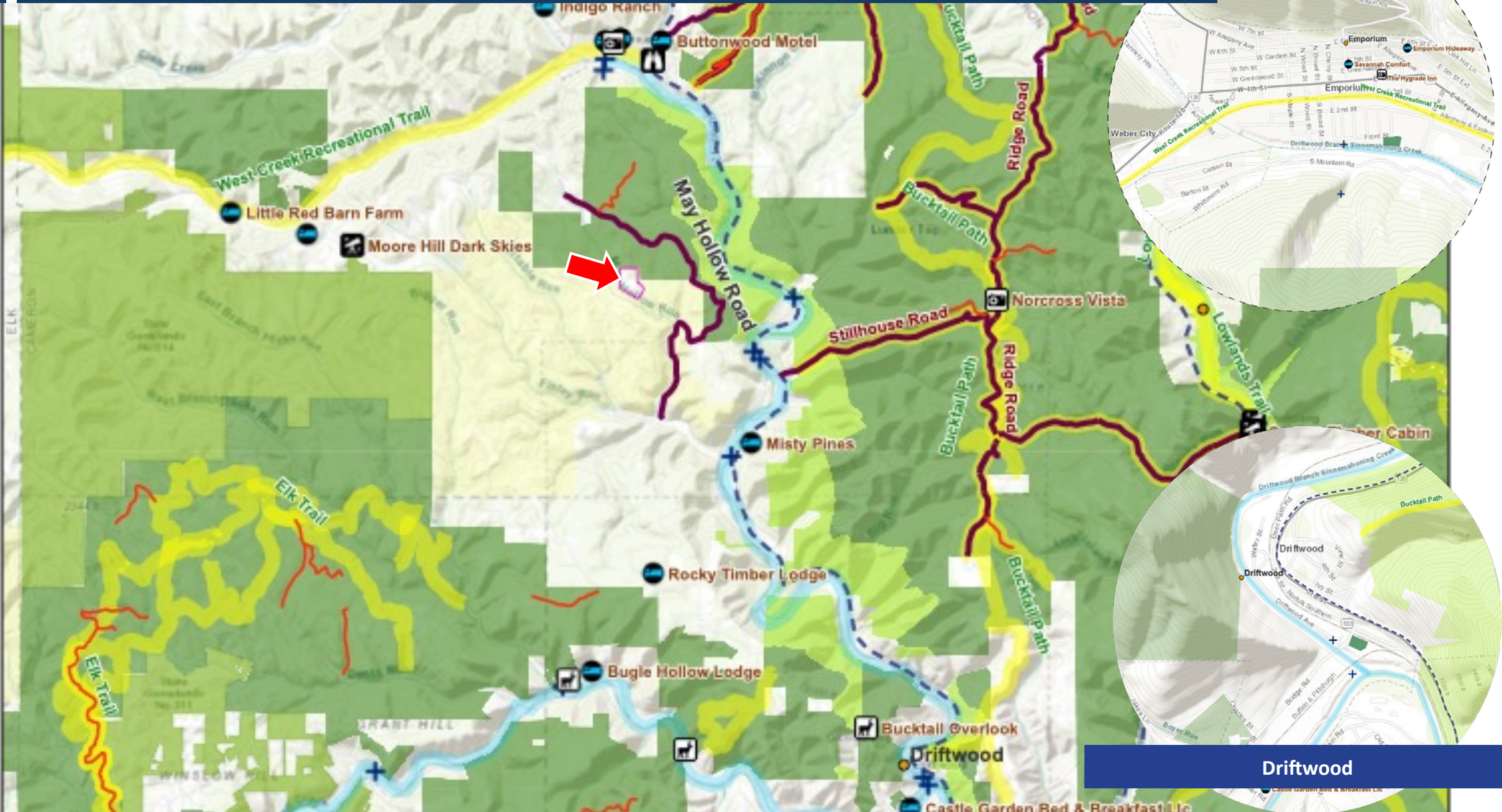
https://cires.colorado.edu/Artificial-light/Falchi%20et%20al.pdf

Artificial brightness ($\mu\text{cd}/\text{m}^2$)	Approximate total brightness (mcd/m^2)	Color	
<1.74	<0.176	Black	
1.74-3.48	0.176-0.177	Dark gray	
>3.48-6.96	>0.177-0.181	Gray	
>6.96-13.9	>0.181-0.188	Dark blue	
>13.9-27.8	>0.188-0.202	Blue	
>27.8-55.7	>0.202-0.230	Light blue	
>55.7-111	>0.230-0.285	Dark green	
>111-223	>0.285-0.397	Green	
>223-445	>0.397-0.619	Yellow	
>445-890	>0.619-1.065	Orange	
>890-1780	1.07-1.96	Red	
>1780-3560	>1.96-3.74	Magenta	
>3560-7130	>3.74-7.30	Pink	
>7130	>7.30	White	

INTERNATIONAL DARK SKY PLACES PROGRAM CERTIFICATION
 Sky Quality: Above 21.2 mags/arcsec Zenith Luminance?

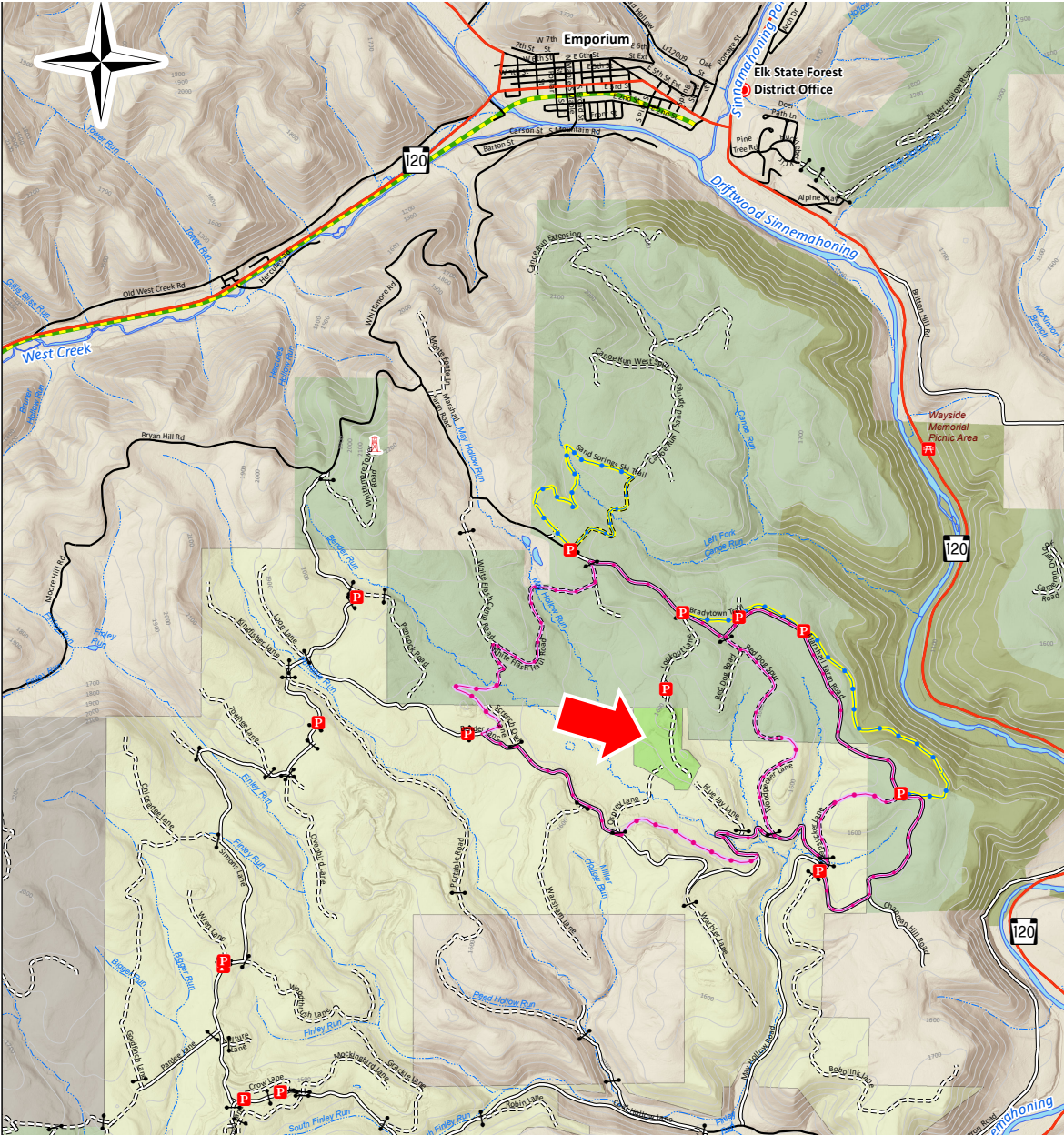
2 Cameron County Dark Sky Park Context


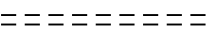

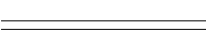


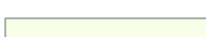

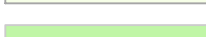












Emporium



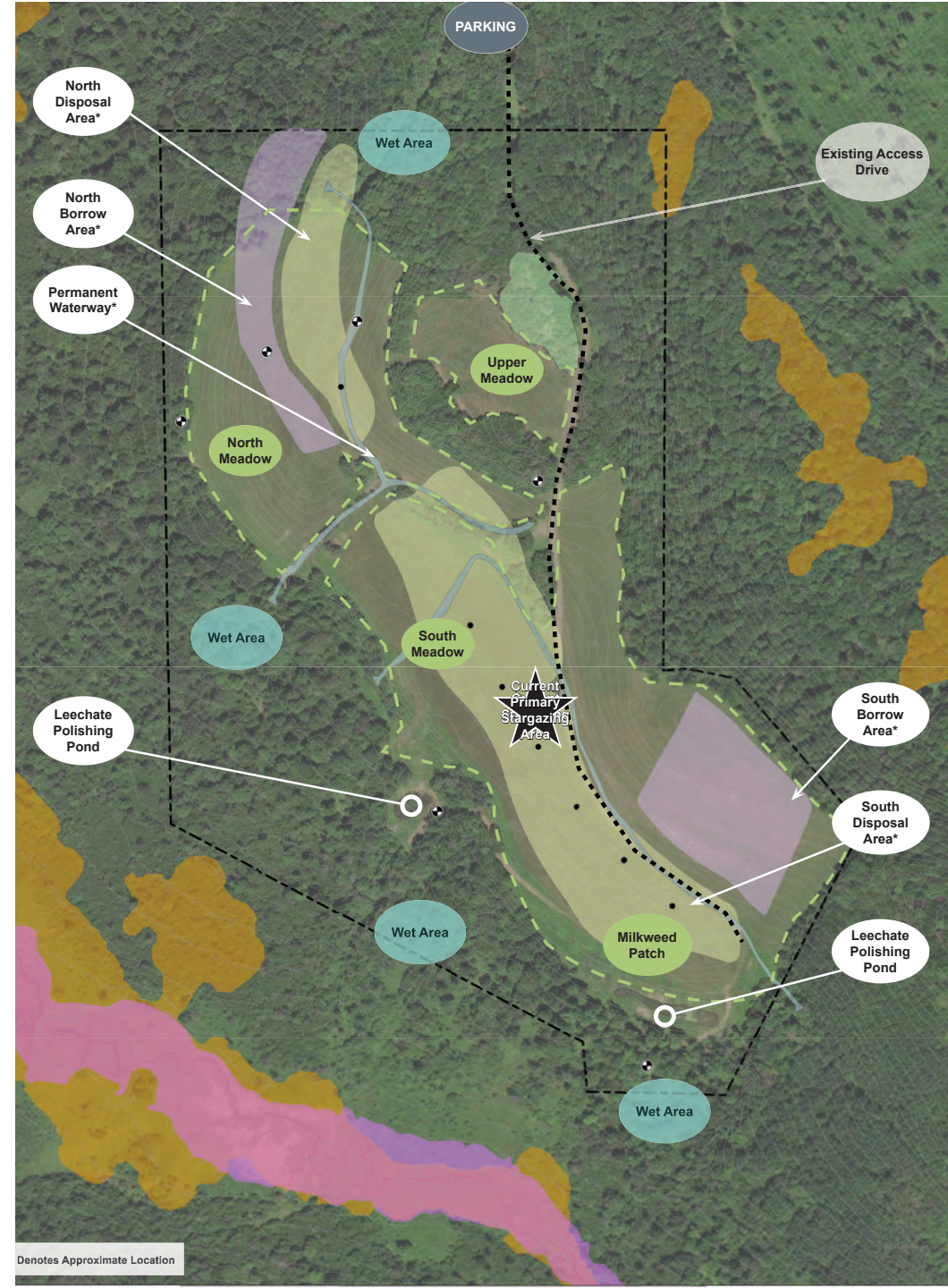
Driftwood

2 Nearby Bike, Hike, and Ski Trails (DCNR)



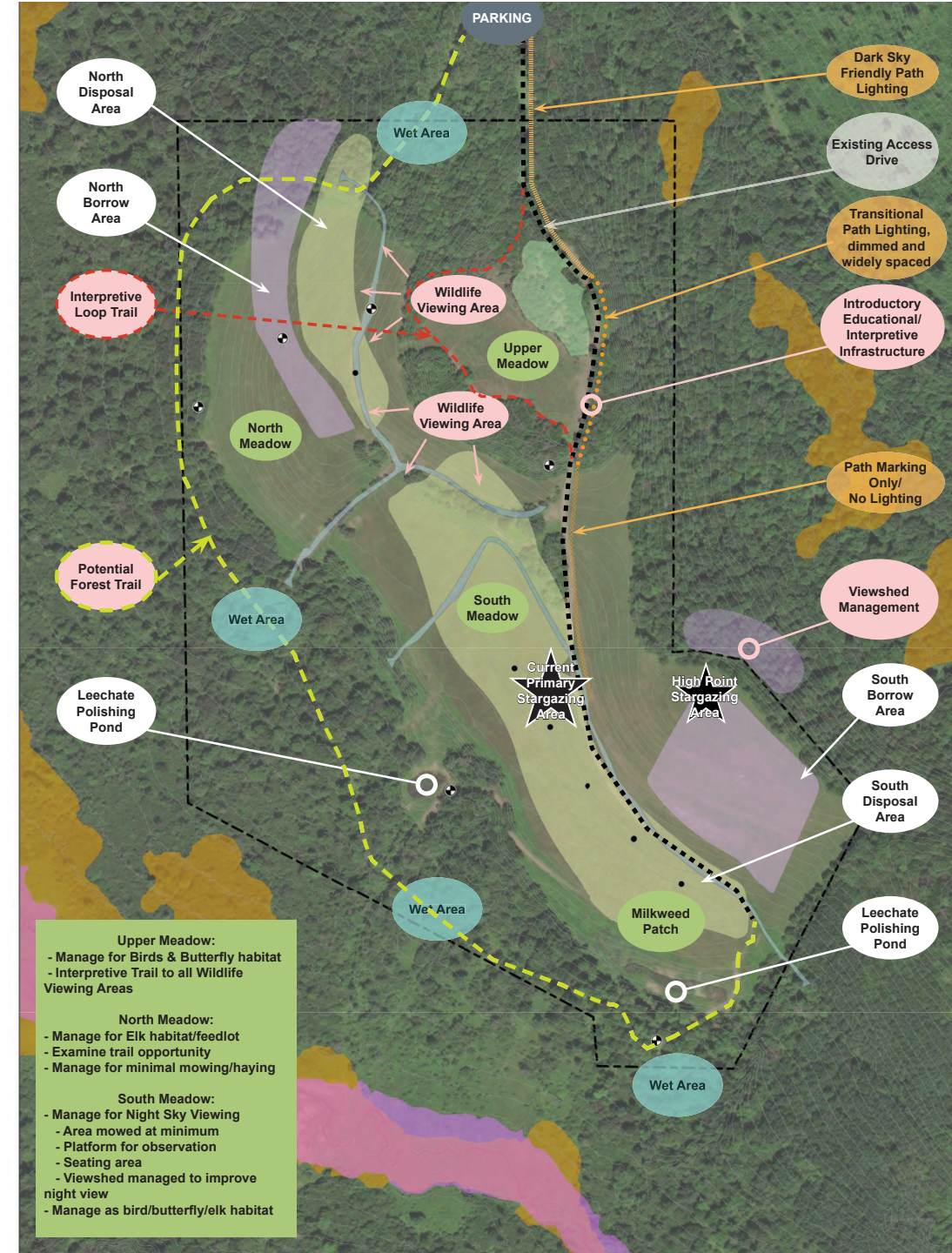
- | | | | |
|---|------------------------------------|---|---------------------------|
|  | State Forest Land |  | Administrative Road |
|  | State Forest Natural Area |  | Improved Dirt/Gravel Road |
|  | State Gamelands |  | Paved Road |
|  | Conservation Easement |  | State Highway |
|  | County Land |  | Gate |
|  | MFR Bike Trail |  | Parking |
|  | MFR Bike Trail on Public Roads |  | PicnicArea |
|  | MFR Bike Trail on Gated Roads |  | Fire Tower |
|  | Cross Country/Hiking Trail on Road |  | Forest District Office |
|  | Cross Country/Hiking Trail | | |
|  | West Creek Rail Trail | | |
|  | Equestrian Trail | | |

3 Existing Site Conditions

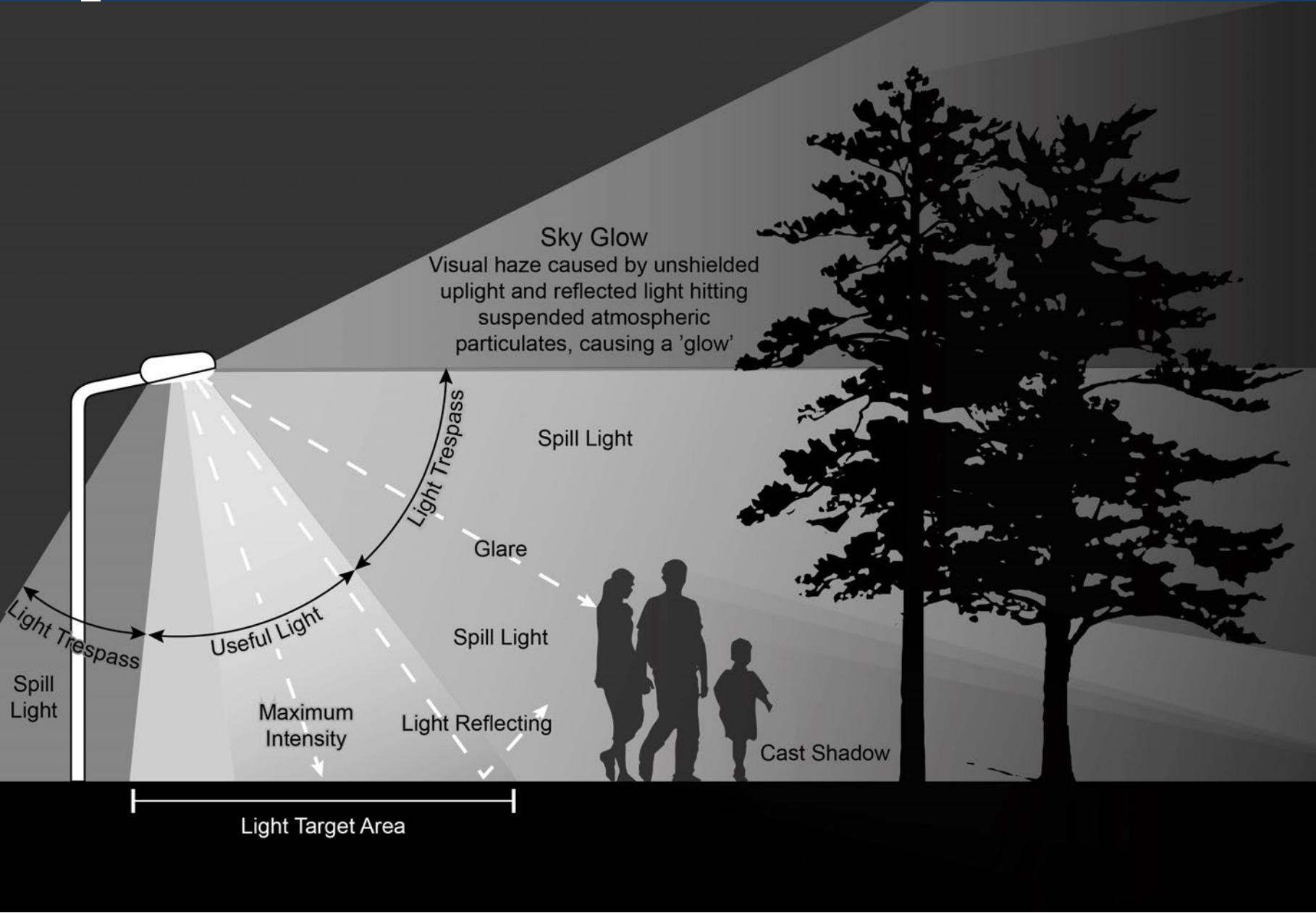


Denotes Approximate Location

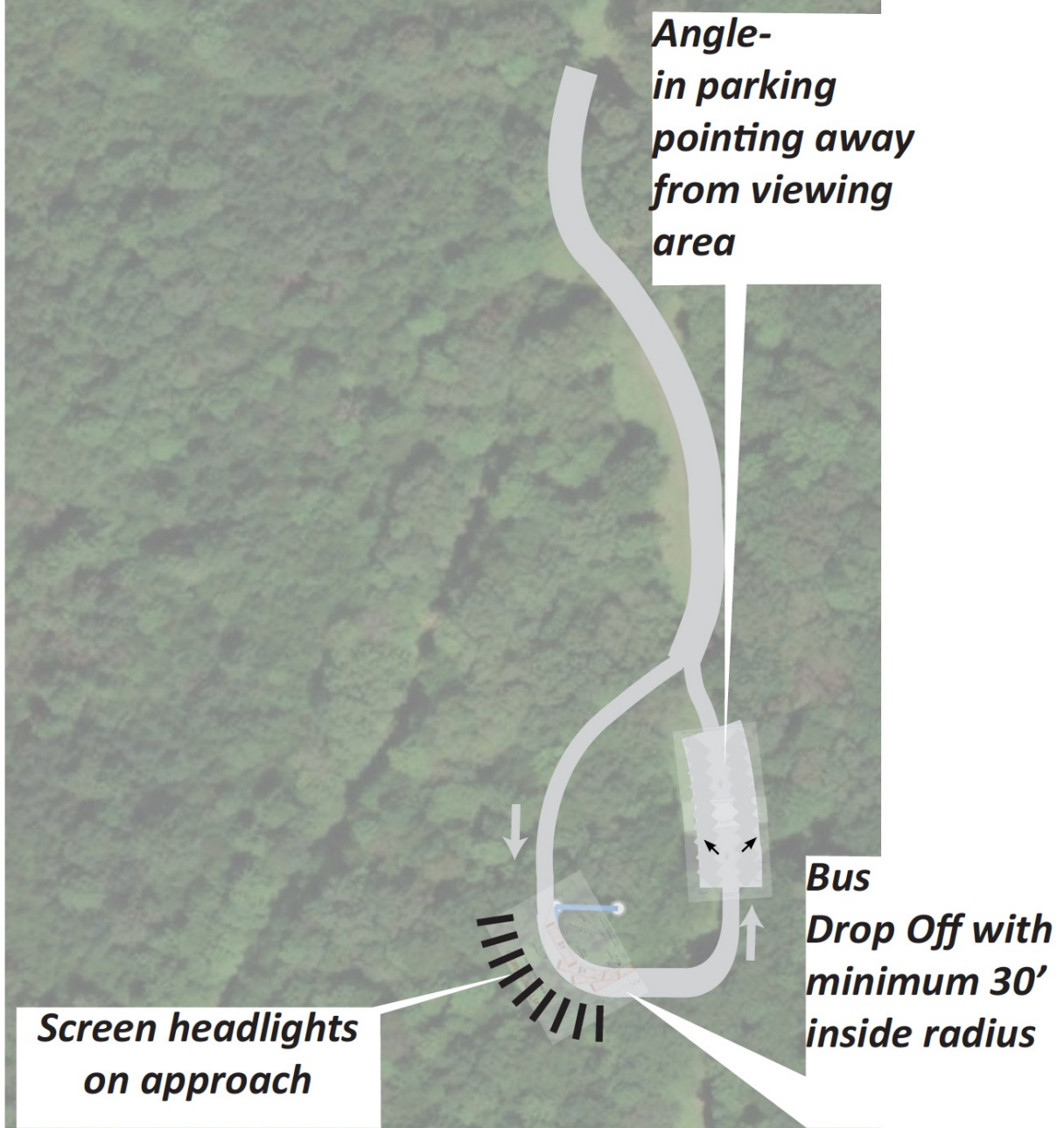
4 Site Opportunities



5 Program Elements: Parking Area Lighting



5 Program Elements: Parking Layout for Buses and Cars

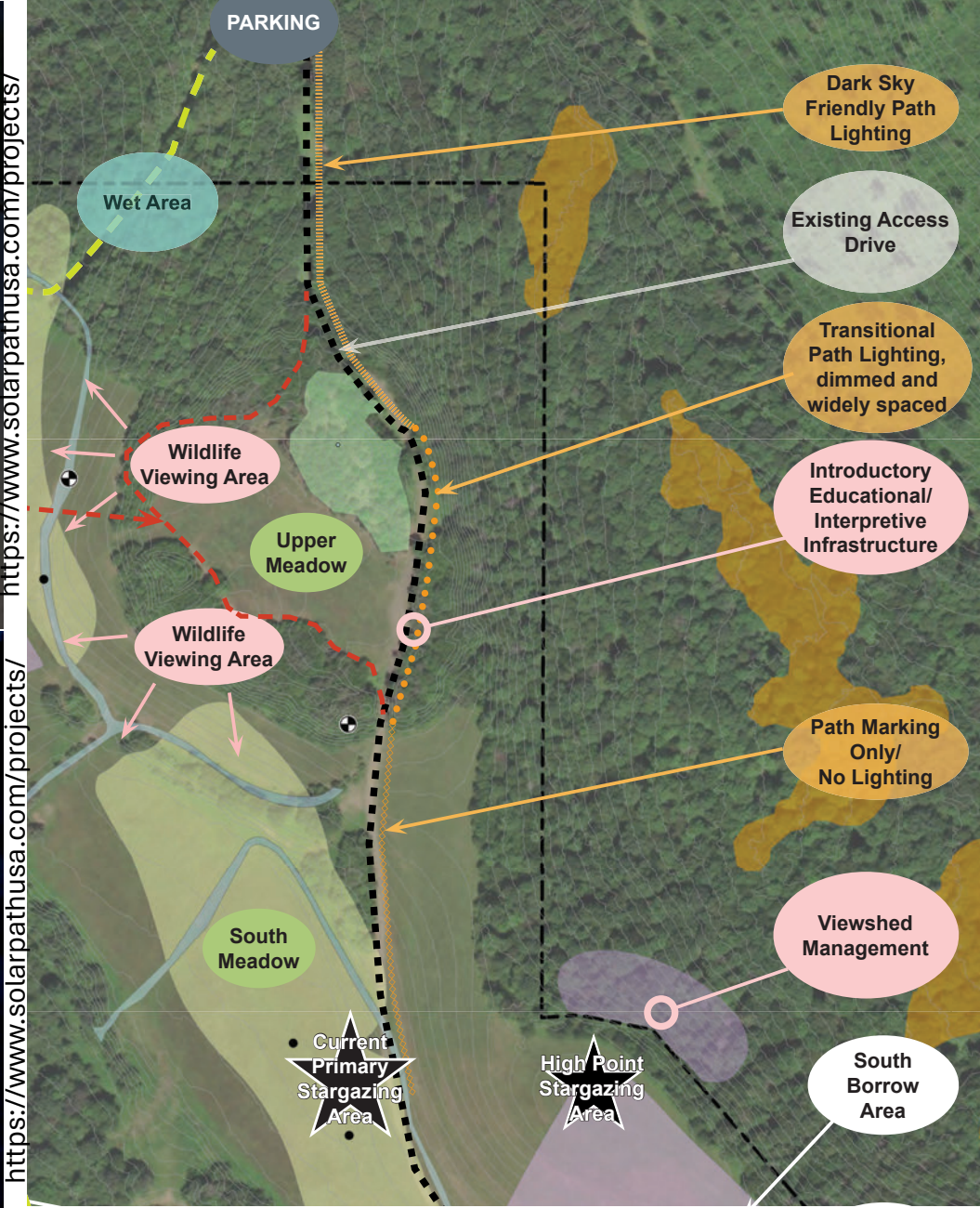


5 Program Elements: Pathway Marking and Lighting

From parking lot to start of upper meadow



Through upper meadow



5 Program Elements: Seating / Gathering Areas



myretreats.co.za_stargazing.jpeg

***Stargazing Hammock Camp
Located in Drakensberg, South Africa***



Cherry-Springs-State-Park-IMG_9682-001.jpg

***Cherry Springs State
Park***

5 Program Elements: Pavillion/Storage/Power Supply



<https://ironwoodtimberworks.com/mendoza-solar-pavilion>



<https://ironwoodtimberworks.com/mendoza-solar-pavilion>

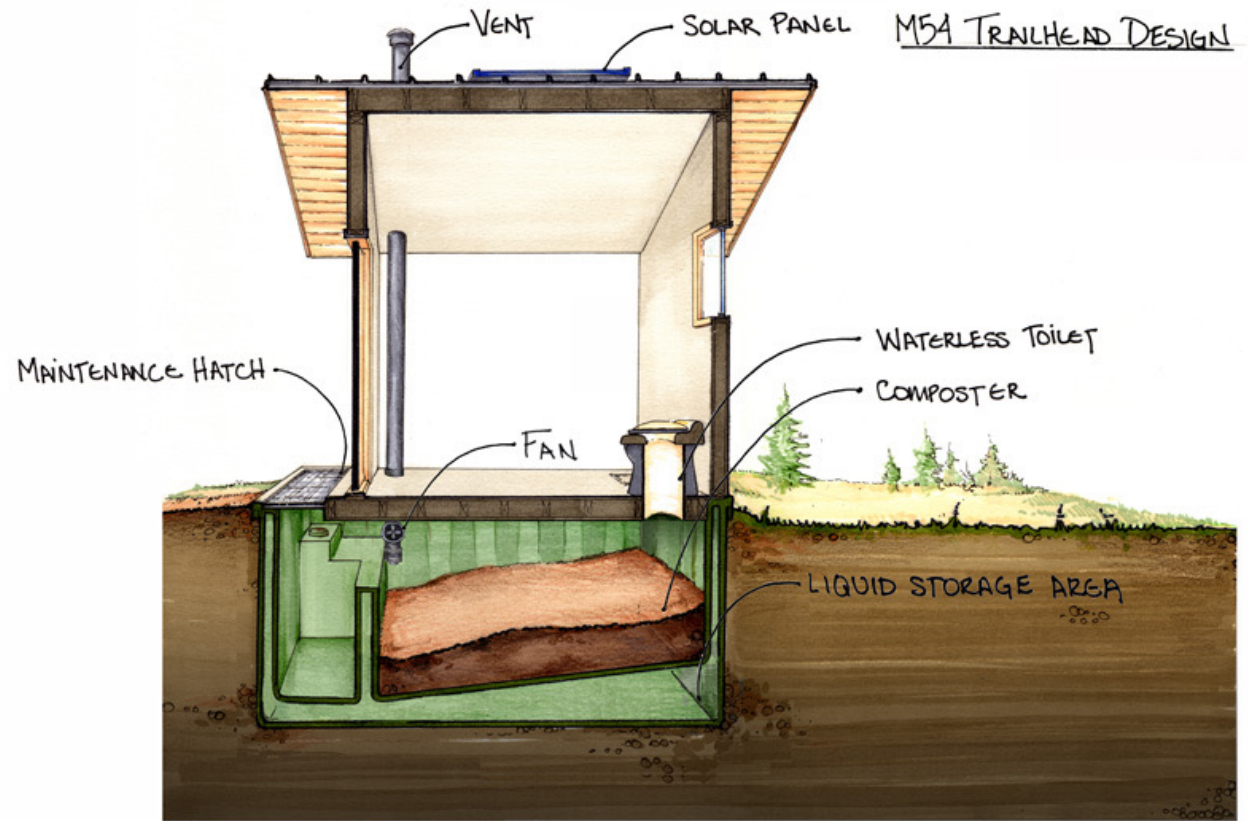
Guidelines for Pavilions:

- locate away from landfill cap (no excavation for footings within cap area)
- use roof for solar energy
- no lighting within open shelter if located in open area

5 Program Elements: Restrooms/Water



<https://clivusmulttrum.com/products-services.php#M54>



<https://clivusmulttrum.com/products-services.php>

- ***Composting Toilets (left) or Portable Facilities are under consideration***
- ***No potable water is available, but can be provided for events***

5 Program Elements: Restrooms/Water



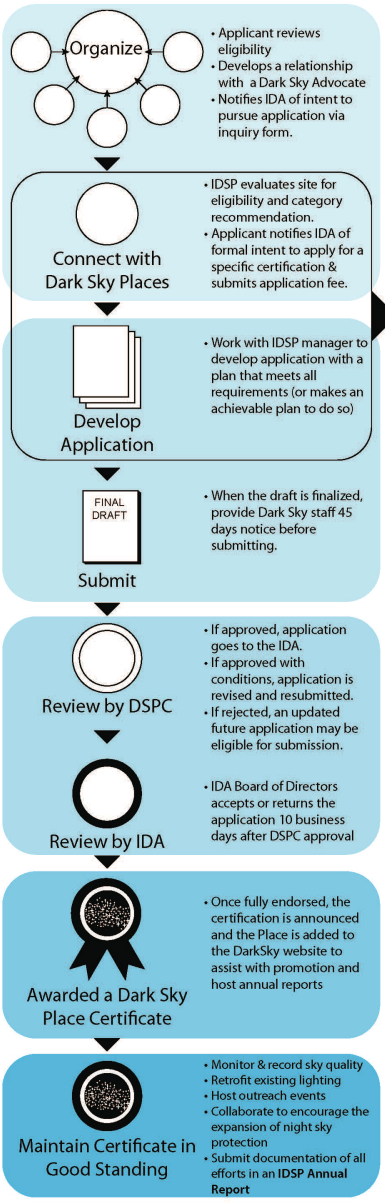
*Lennox & Addington Dark Sky Viewing Area
Ontario Canada*

Lennox & Addington DarkSky Viewing Area, Ontario Canada
<https://www.facebook.com/DarkSkyViewing/>



*Portable Platform on a
truck*

6 International Dark Sky Places Program Certification



Certification Types

Built Environment Category:

- Provides a nighttime experience of reduced light pollution
- Utilizes effective lighting policies that use light only when necessary and create safe public spaces
- Protects nearby areas that depend on natural darkness.

Conservation Approach:

- The Milky Way is visible to the unaided eye
- There are no artificial light sources nearby with significant glare
- Any light domes are dim, restricted, and closer to the horizon

Community or Populated Area

International Dark-Sky Community

Nighttime public access and outreach events

Dark-Sky Friendly Lighting Policy

Park or Protected Land with sky quality above or close to 21.1 mags/arcsec Zenith Luminance AND can be accessed by staff and visitors

International Dark-Sky Park

Protected, exceptionally Dark Sky

Land is Legally Protected

Nighttime public access and outreach events

Lighting & Restoration Examples

Park with sky quality below 21.2 mags/arcsec Zenith Luminance, AND inside a city of 10k+ OR within 50km of a 50k+ metro area?

Urban Night Sky Place

Authentic Nighttime Experience

Nighttime public access and outreach events

Dark-Sky Friendly Lighting Policy

Park or Protected Land with sky quality above or close to 21.1 mags/arcsec Zenith Luminance AND is very remote with minimal capacity for staff

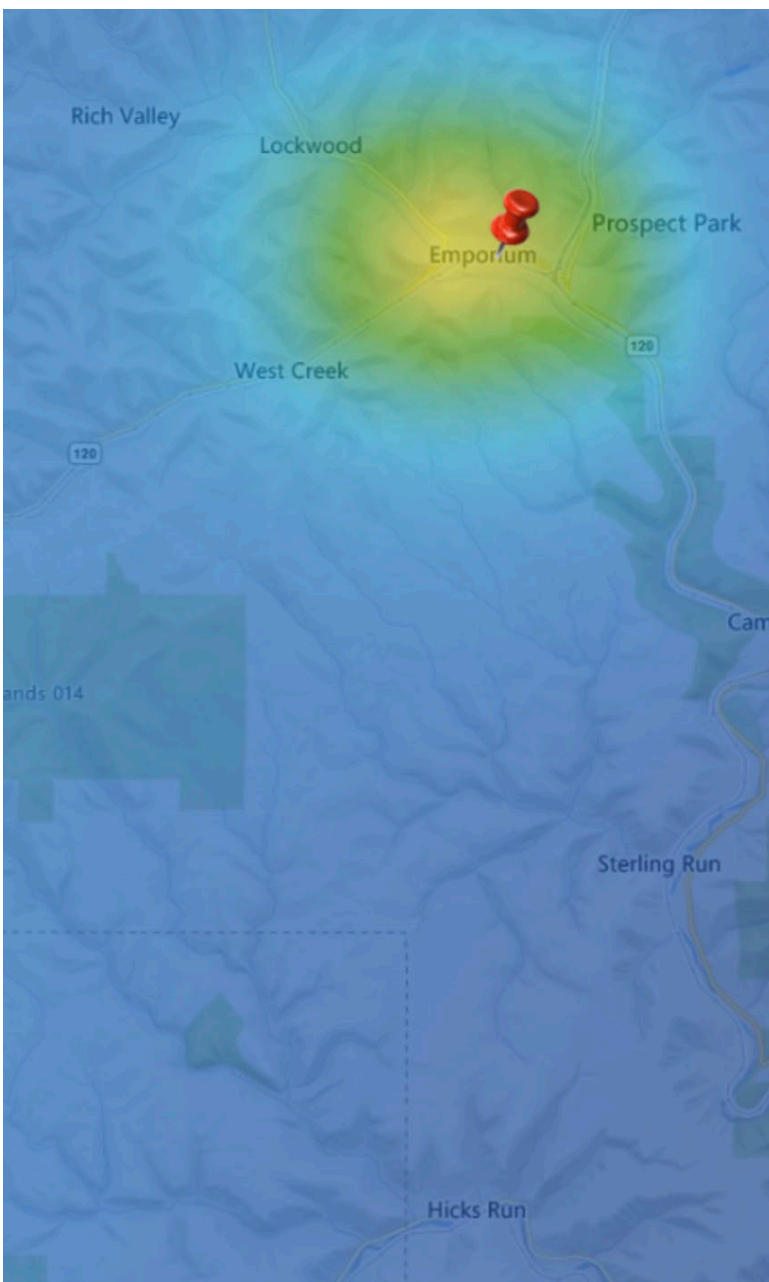
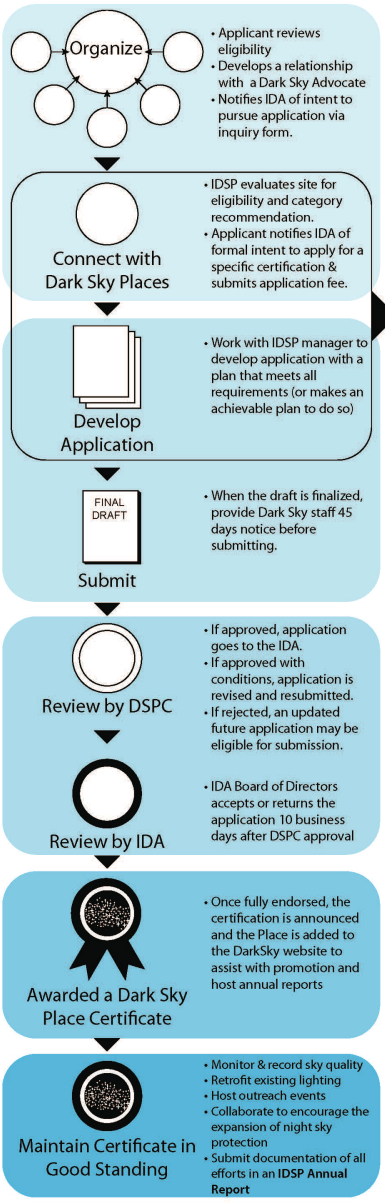
International Dark-Sky Sanctuary

Nighttime public access and outreach events

Protected, exceptionally Dark Sky

Increased External Communication

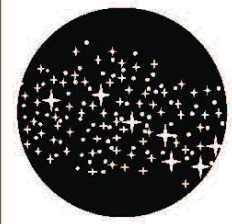
6 International Dark Sky Places Program Certification



Cameron County
Dark Sky Park

International
Dark-Sky Park

Requirements



Protected,
Exceptionally
Dark Sky

- Utilize the Bortle Scale to estimate sky quality
- Measure sky quality with a Unihedron SQM-L
- Record your data, document with photography & details
- Track and record changes over time



The Land is
Legally
Protected

- Public lands are managed with clear objectives for conserving and protecting lands for use and enjoyment
- Conservation easements or covenants can be used to provide similar protections to private land



Nighttime
public access
and outreach
events

- At least 4 educational events a year are required; more is preferable
- Extensive publications, flyers, press releases, media, social media, or other methods of outreach may be acceptable substitutions



Lighting &
Restoration
Examples

- Each light must comply with the Five Principles for Responsible Outdoor Lighting
- Interpretive signage or other guidance should be available to educate community members and visitors on methods that can be used to reduce light pollution

How to provide input

- 1) *Write comments on the back of this agenda and leave with the planning team*
- 2) *Leave sticky notes on displays or mark up table top maps*
- 3) *Fill out the questionnaire*
- 4) *Send an email to:*
darkskypark@lardnerklein.com
- 5) View presentation and displays here:
<https://www.lardnerklein.com/cedar-forest-dark-sky>

Please provide input by JUNE 23

NIGHT SKY VIEWING ENHANCEMENTS

Please identify potential enhancements (compatible with dark sky viewing) that would increase your interest in visiting the Dark Sky Park.

DAYTIME USE

Please identify any compatible daytime uses at the Dark Sky Park that increase your interest in visiting the park.

COMFORT LEVEL

Please indicate any enhancements that would increase your comfort level visiting the Dark Sky Park at night that would not interfere with night sky viewing

OTHER GENERAL COMMENTS OR SUGGESTIONS

The presentation and meeting displays will be posted here at the time of the meeting:
<https://www.lardnerklein.com/cedar-forest-dark-sky>

Send your comments or questions to: darkskypark@lardnerklein.com

This project is financed in part by a grant from the Community Conservation Partnerships Program and the Heritage Areas Program under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation.

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