

# Urban Night Sky Place Certification for Oak Knoll Park and Shaw Park

Sustainability Advisory  
Committee Meeting

08/20/2024, 4:30 PM



# DARKSKY INTERNATIONAL



Mission: "To restore the nighttime environment and protect communities and wildlife from light pollution" (DarkSky International)

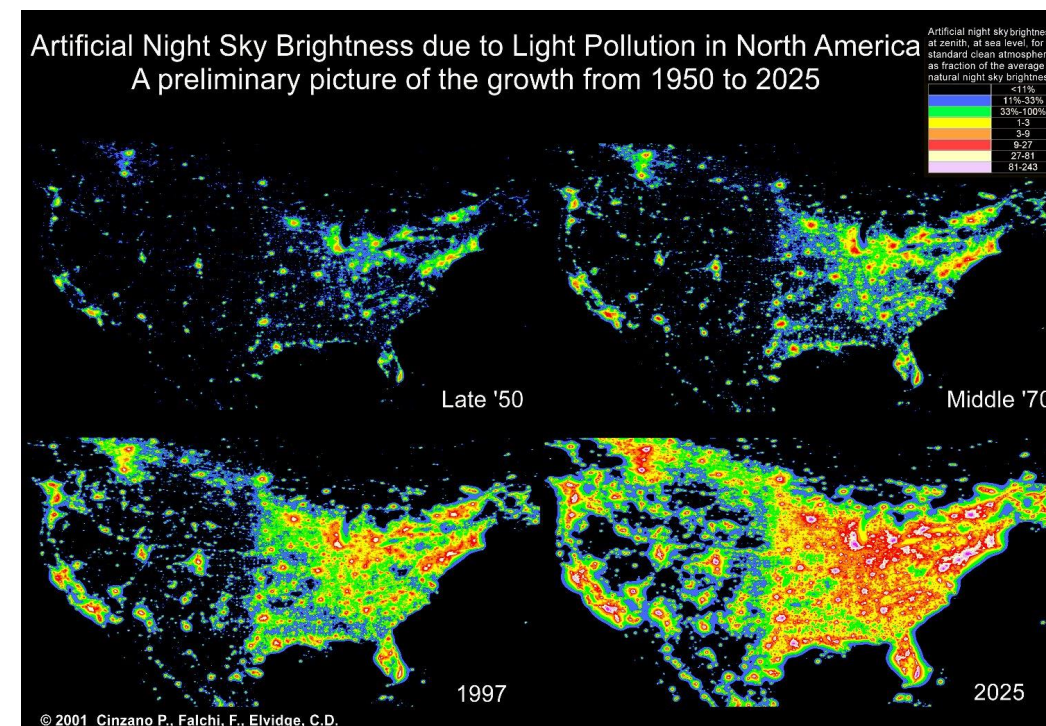


- International Dark Sky Places
- DarkSky Approved
- Responsible Outdoor Lighting
- Education and Outreach



Why Limit Light Pollution?

- Protect the planet, wildlife and human health
- Save money and energy



Stephanie Todd - *The Effects of Light Pollution and What You Can Do*

# URBAN NIGHT SKY PLACE (UNSP)



“Urban sites that promote an **authentic nighttime experience** despite being in the midst of **significant artificial light**”

Local Example: **Stacy Park** - Olivette, MO



*Stacey Park, DarkSky International*

# SAFETY FIRST



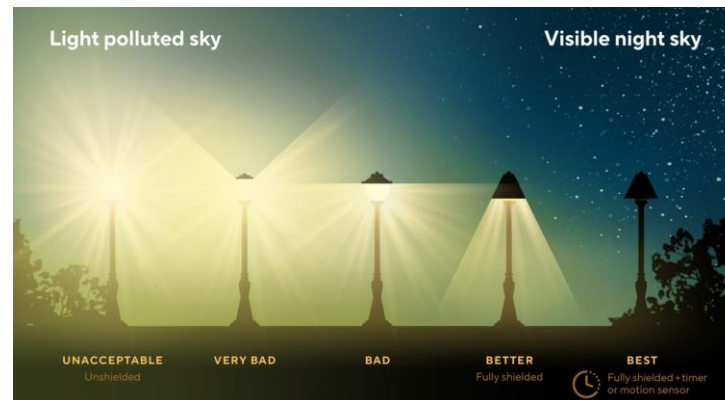
**NOTE:** UNSP designation does **not** mean park lights must be off at night!

Instead, lighting must follow 5 guidelines:

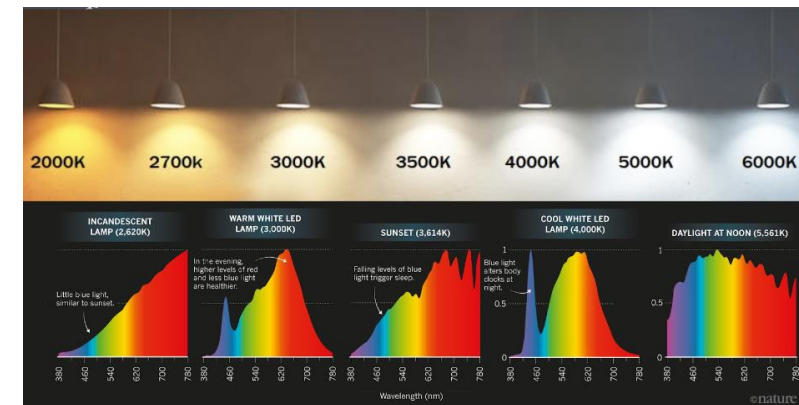
- Useful
- Targeted
- Low Level
- Controlled
- Warm-Colored



Stephanie Todd - The Effects of Light Pollution and What You Can Do



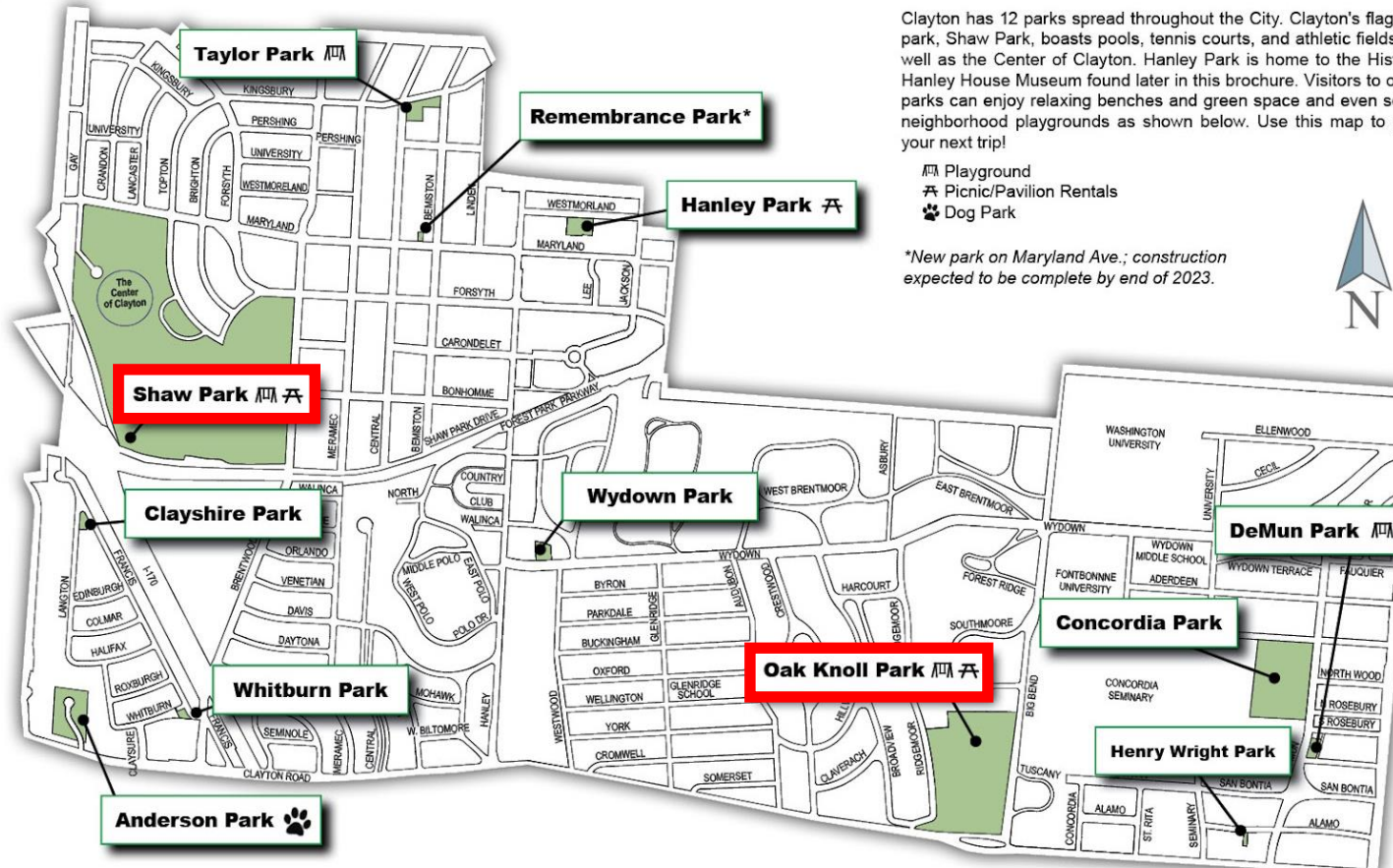
DarkSky International



Stephanie Todd - The Effects of Light Pollution and What You Can Do

# Parks Up for Certification

## Clayton Parks



Clayton has 12 parks spread throughout the City. Clayton's flagship park, Shaw Park, boasts pools, tennis courts, and athletic fields, as well as the Center of Clayton. Hanley Park is home to the Historic Hanley House Museum found later in this brochure. Visitors to other parks can enjoy relaxing benches and green space and even some neighborhood playgrounds as shown below. Use this map to plan your next trip!

- 🏞️ Playground
- 🍷 Picnic/Pavilion Rentals
- 🐾 Dog Park

\*New park on Maryland Ave.; construction expected to be complete by end of 2023.

# WHY THESE PARKS?



**OAK KNOLL PARK**



**SHAW PARK**

# ELIGIBILITY



Public/Private Owned



Within 50 km of an area with 10,000 or more people



An identified urban community impacting the park's sky quality



Ability to mitigate light pollution

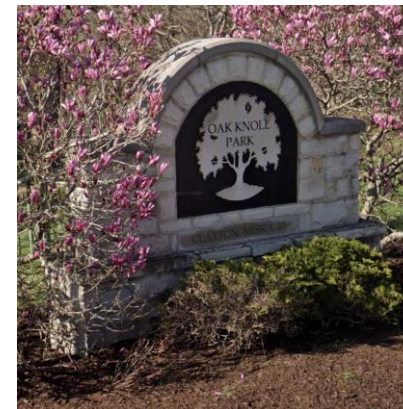
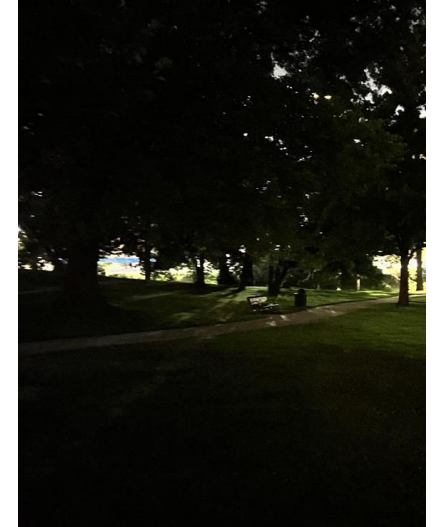


Entire area is included

Greater St. Louis Inc.



Shaw Park at Night

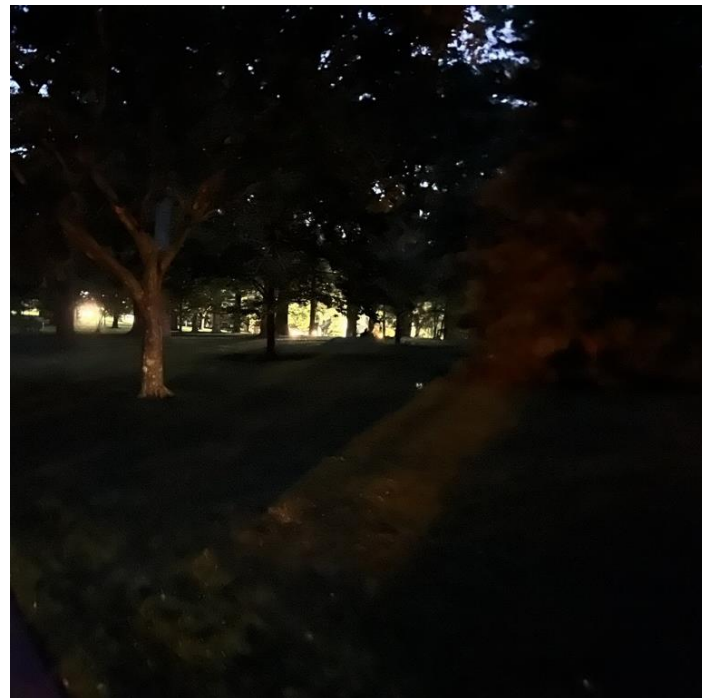


Google Maps

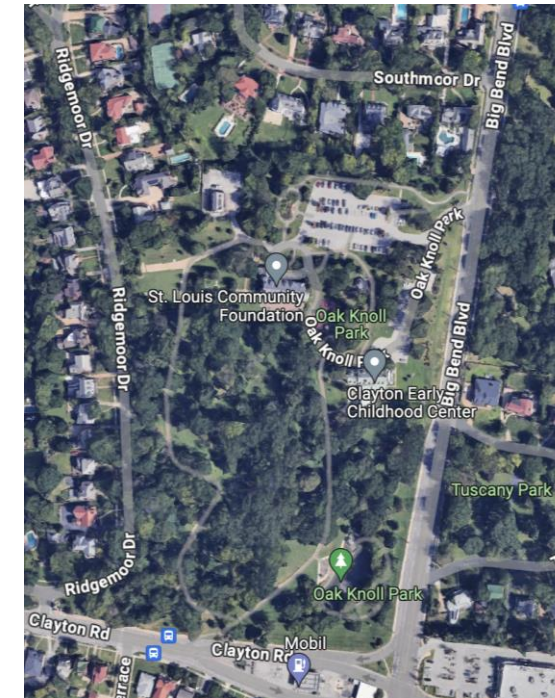
# APPLICATION PROCESS

1. Pre-Application Approval
2. Full Application Including:
  - Letters of Support
  - Maps of Area
  - Evidence of Eligibility
  - Public Access Policy
  - Lighting Inventory
  - Lighting Management Plan
  - Sky Quality Measurements
  - Public Outreach and Education
3. Annual Reports by Oct. 1

Oak Knoll Park at Dusk



Satellite Map of Oak Knoll Park



SQM Reading - 1	SQM Reading - 2	SQM Reading - 3	SQM Reading - 4	SQM Reading - 5	Location Average	Location Median	% Cloud Cover
16.62	16.62	16.5	16.49	16.56	16.56	16.56	30%
16.71	16.73	16.73	16.76	17.09	16.80	16.73	30%

Shaw Park SQM - Summer



# BENEFITS

- Raises awareness
- International recognition
- Join 200+ DarkSky Places
- DarkSky logo
- Clayton + DarkSky Partnership

*The Gellman Team*

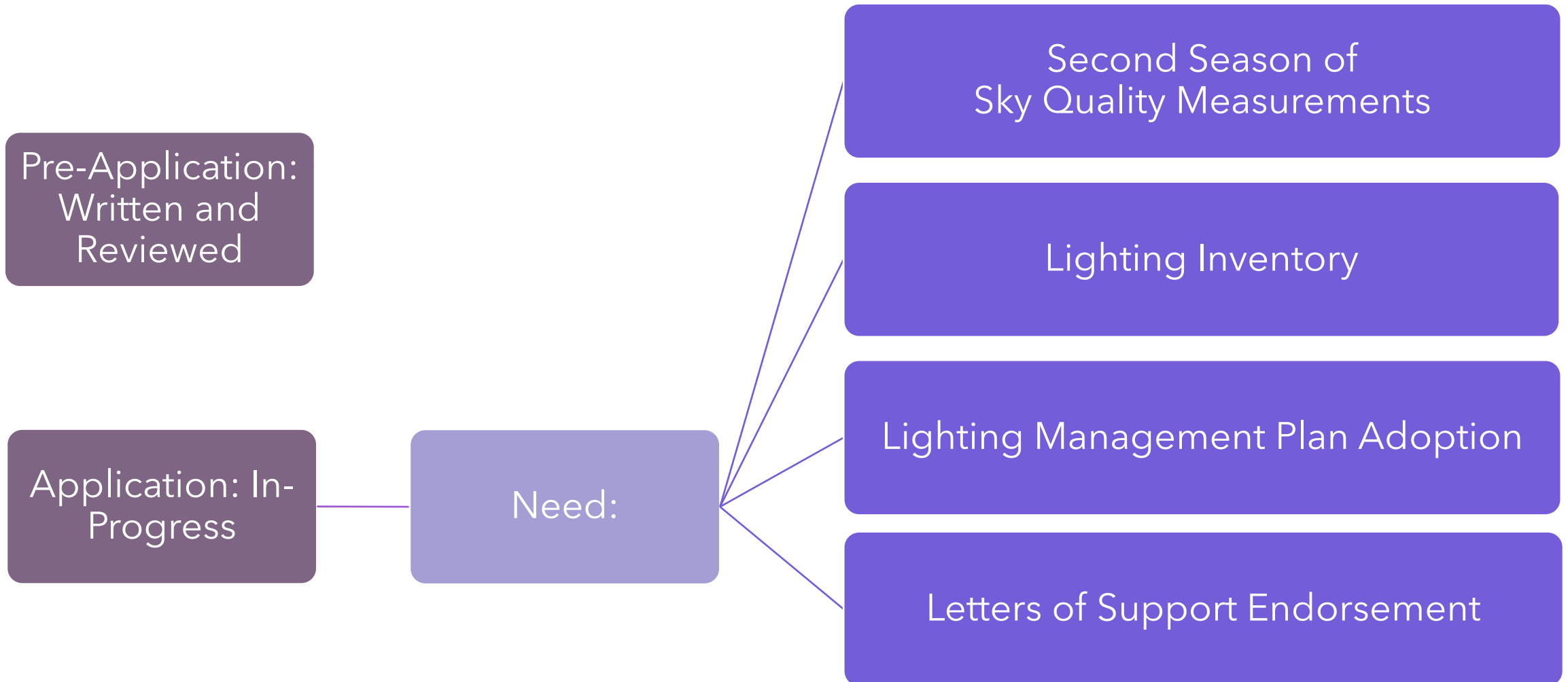


*KO Nature Photos*



*Enchanted Events*

# CURRENT STATUS



The background features a light purple gradient with several thin, dashed purple lines that meander across the page. There are two large white circles: one in the top-left corner and another in the bottom-right corner.

# Thank you!

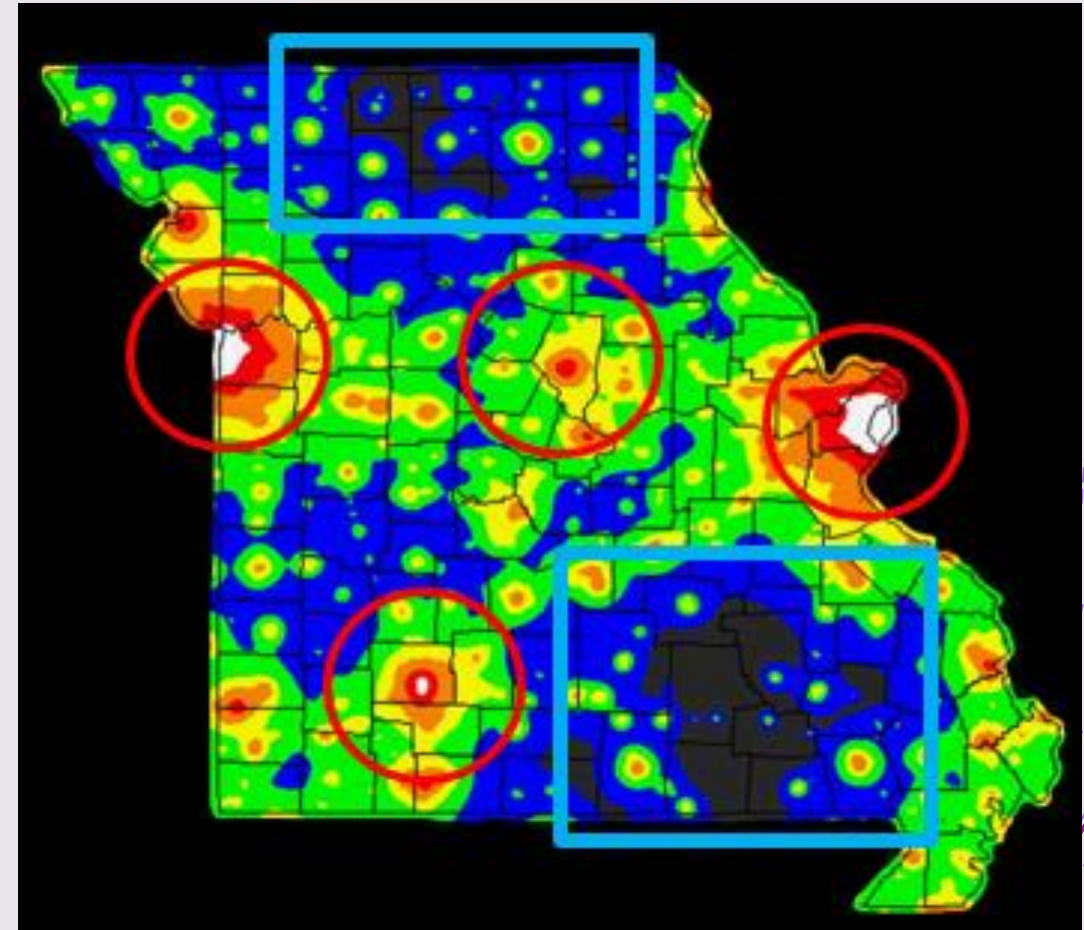
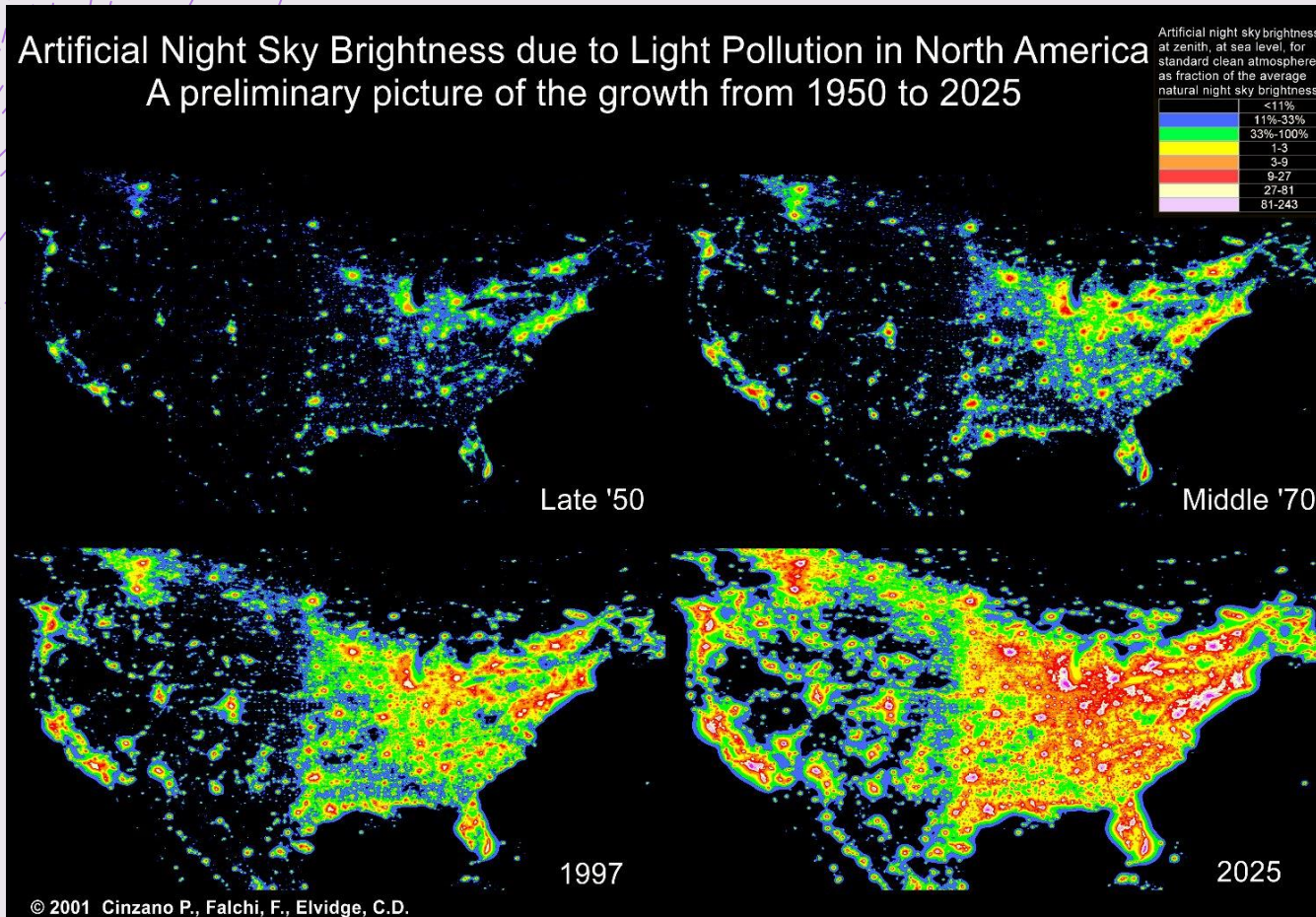
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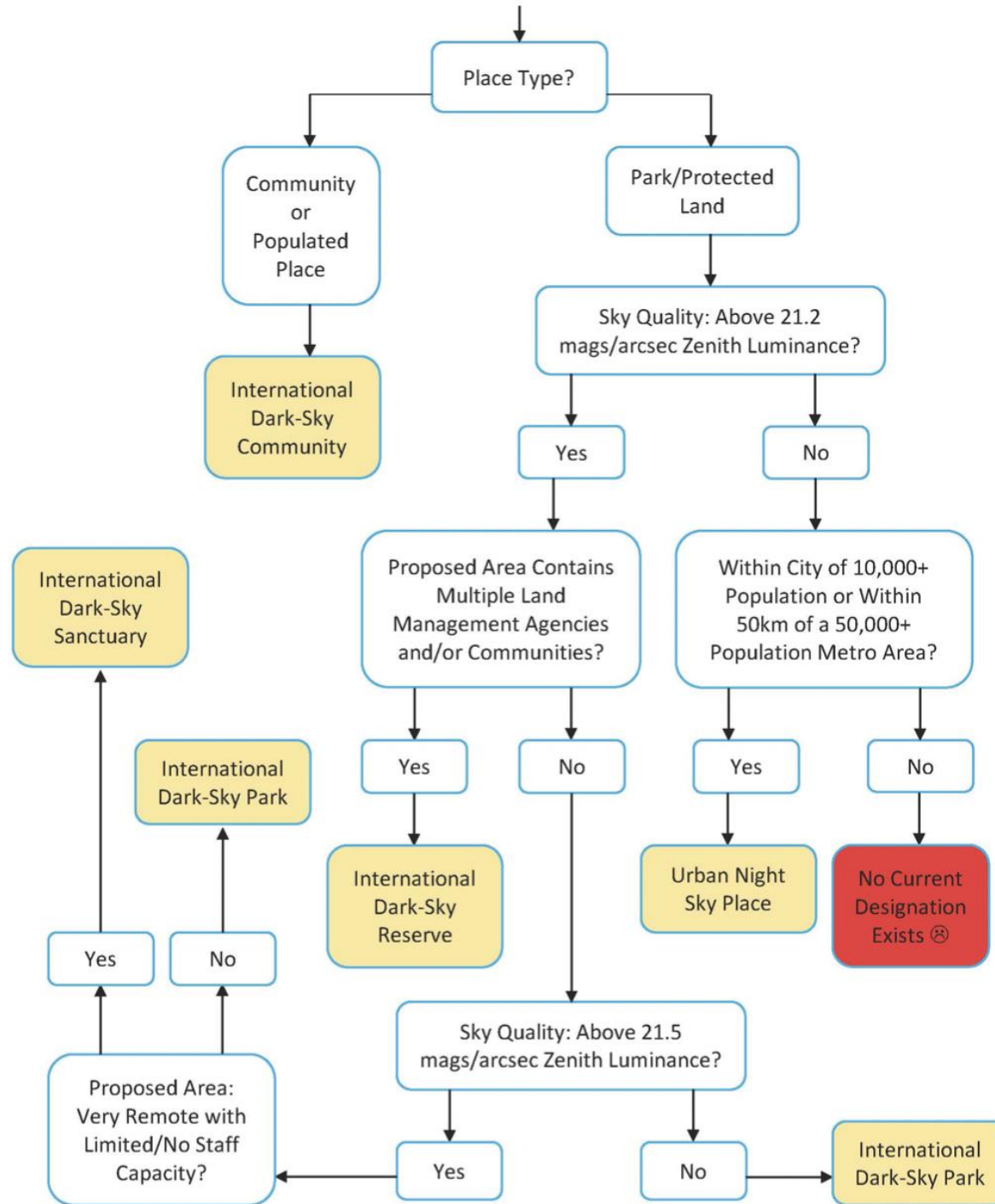
Any Questions?

# Resources

- + "DarkSky International restores the nighttime environment and protects communities from the harmful effects of light pollution through outreach, advocacy, and conservation." *DarkSky International*, n.d., <https://darksky.org>.
- + "Five Principles for Responsible Outdoor Lighting." *DarkSky International and Illuminated Engineering Society*, n.d., PDF Download.
- + Todd, Stephanie. "The Effects of Light Pollution and What You Can Do." n.d., Powerpoint Presentation.
- + "Clayton Parks Map." *City of Clayton*, n.d., <https://www.claytonmo.gov/government/parks-recreation/parks/clayton-parks-map>.
- + "Google Maps." *Google*, n.d., <https://www.google.com/maps>.
- + Gellman, Mark. "Shaw Park." *The Gellman Team*, 30 Sept. 2022, <https://www.thegellmanteam.com/blog/shaw-park/>.
- + "About Us." *Enchanted Events: Character Entertainment*, n.d., <https://enchantedeventstl.com/f/top-venues-for-kids-birthdays-in-stl>.
- + Leonard, Pat. "Chicago Tops List of Most Dangerous Cities for Migrating Birds." *Cornell Chronicle*, 1 April 2019, <https://news.cornell.edu/stories/2019/04/chicago-tops-list-most-dangerous-cities-migrating-birds>.
- + "BirdSafeSTL." *St. Louis Audubon Society*, n.d., <https://stlouisaudubon.org/birdsafestl/#:~:text=the%20Mississippi%20Flyway-,St.,this%20highway%20in%20the%20sky>.

# Light Pollution Today





# LIGHT TO PROTECT THE NIGHT

## Five Principles for Responsible Outdoor Lighting



**Illuminating**  
ENGINEERING SOCIETY



DarkSky International

### USEFUL



#### ALL LIGHT SHOULD HAVE A CLEAR PURPOSE

Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.

### TARGETED



#### LIGHT SHOULD BE DIRECTED ONLY TO WHERE NEEDED

Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

### LOW LIGHT LEVELS



#### LIGHT SHOULD BE NO BRIGHTER THAN NECESSARY

Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.

### CONTROLLED



#### LIGHT SHOULD BE USED ONLY WHEN IT IS USEFUL

Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.

### COLOR



#### USE WARMER COLOR LIGHTS WHERE POSSIBLE

Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

# Insect Health

## Pollination



80% of Flowering Plants

## Pest Control



75% of Crop Species

## Food

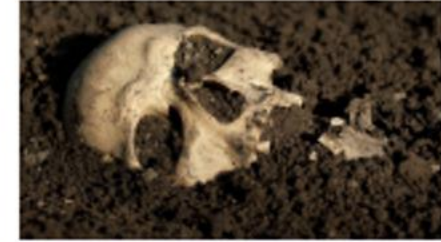


Control Pests Without Chemicals



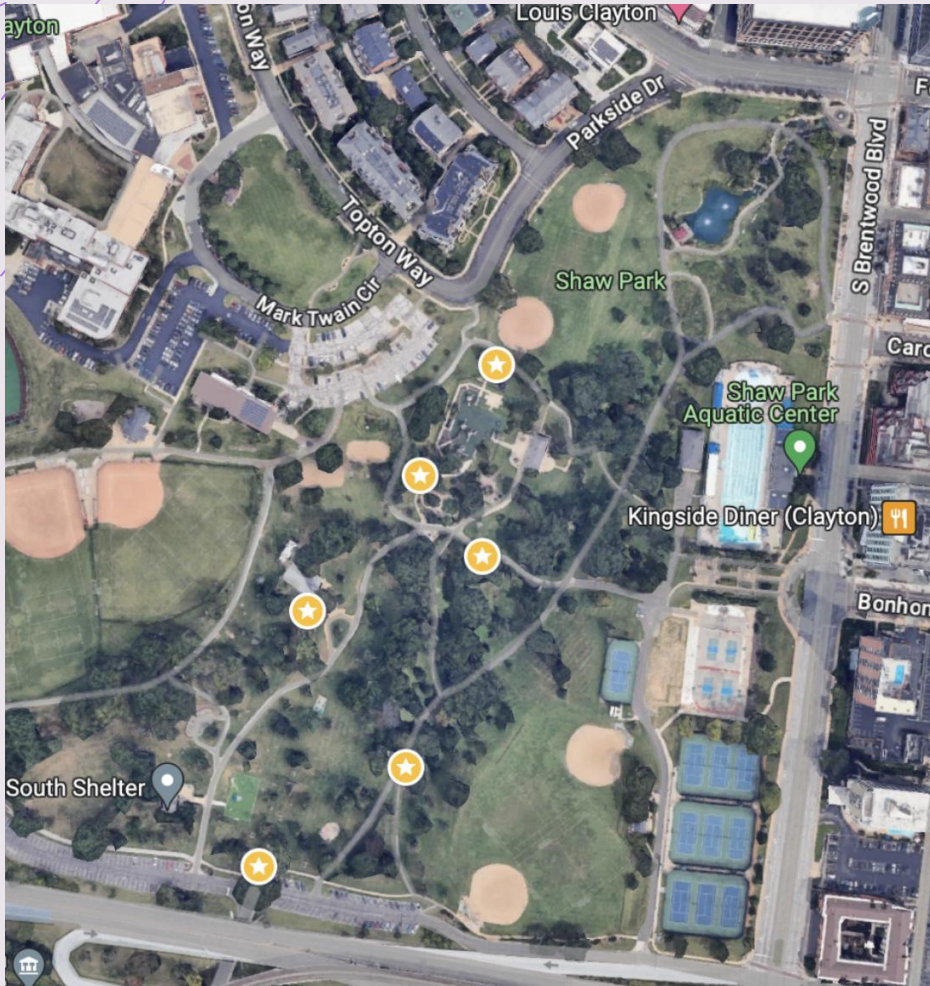
Many Vertebrates Eat Insects

## Decomposition

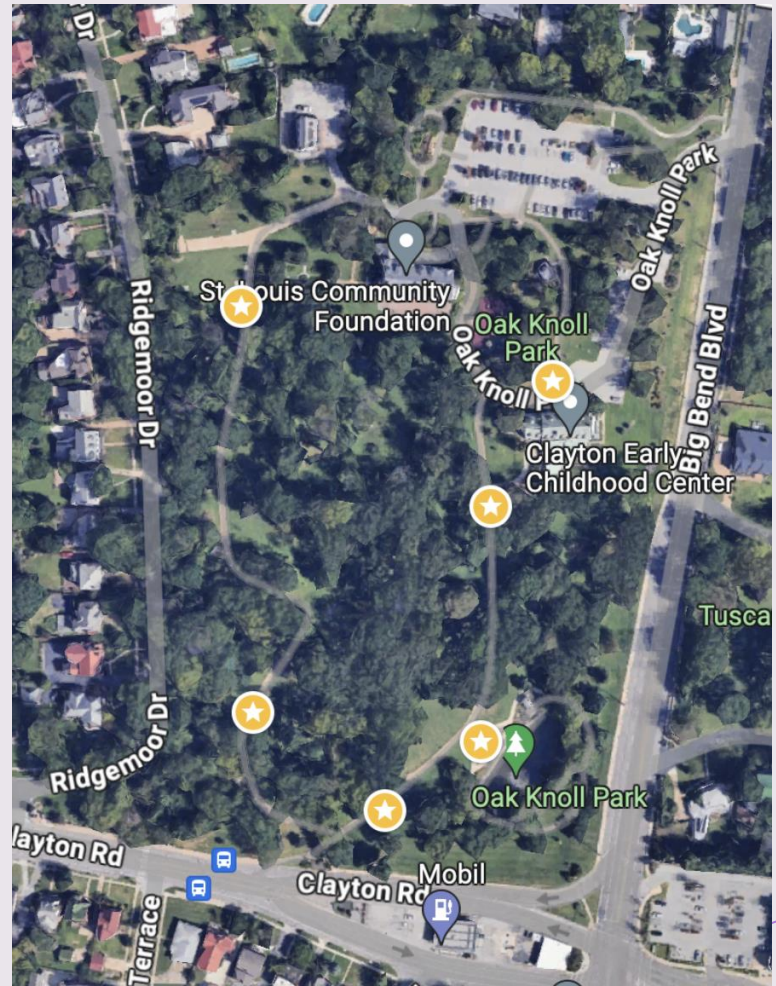


They are our waste Management





**SHAW PARK**



**OAK KNOLL PARK**

# Sample Lighting Management Plan Purpose and Philosophy

## **1. Purpose and Philosophy**

This Lighting Management Plan (LMP) is intended to guide the selection, placement, installation and operation of all new and replacement/retrofitted light in the park. Its function is to regulate the use of artificial light at night (ALAN) in the park in a way that prioritizes the safety of visitors and staff while minimizing the impact of such light on protected outdoor spaces, viewsheds and wildlife. Therefore, all instances of the use of ALAN in the park will adhere to the principle that outdoor light should be deployed only: (1) when it is strictly needed; (2) where it is needed; (3) in the appropriate amount for a specific task; and (4) with the appropriate spectrum.