



PAPERWORK REDUCTION and PRIVACY ACT STATEMENT: The Paperwork Reduction Act requires us to tell you why we are collecting this information, how we will use it, and whether or not you have to respond. We are authorized by the National Park Service Protection Interpretation and research in System (54 USC §100702) to collect this information. The routine uses of this information will be for the benefit of NPS Managers and Planning staff managers to understand the effects of lighting on visitor experiences at night in Great Smokey Mountains National Park. The data collected will be summarized to evaluate visitor's experiences with lighting conditions in campground comfort stations in Great Smokey Mountains National Park. Your responses to this collection are completely voluntary and will remain anonymous. You can end the process at any time and will not be penalized in any way for choosing to do so. All contact information collected for the purpose of the follow-up survey will be destroyed at the end of the collection period and no personal identifiable records will be maintained or stored for any purposes. Data collected will only be reported in aggregates and no individually identifiable responses will be reported. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB Control Number.

BURDEN ESTIMATE STATEMENT: Public reporting burden for this collection is estimated to average 11 minutes per response. You may send comments concerning the burden estimates or any aspect of this information collection to: Jim Renfro, Air Resource Specialist, Great Smoky Mounthains National Park, Jim_Renfro@nps.gov (email)

The focus of this study is to better understand visitor perceptions regarding the night skies and lighting, specifically in Great Smoky Mountains National Park's campground comfort stations/restrooms. These data will be used to inform park managers about the current visitor perceptions of the lighting and ability to view the night sky, and will be considered when making future management decisions about this area.

Your participation in the study is voluntary, and your answers will remain anonymous. Our results will be summarized so that the answers you provide cannot be associated with you or anyone in your group or household. The survey will take approximately 10 minutes to complete.

TOPIC AREA 3: CVIS1

- 1) Are you a first-time visitor to Great Smoky Mountains National Park?
- a. YES
 - b. NO (Skip to Question #3)

TOPIC AREA 3: CVIS1

- 2) Over the past twelve months, how many visits have you made to Great Smoky Mountains National Park? ____ Number of Visits

TOPIC AREA 5: NSKIES5

- 3) Have you visited [Smokemont/Elkmont Campground] within Great Smoky National Park **at night** before today?
- No Yes

TOPIC AREA 5: ACT47 (*modified wording*)

- 4) How many nights do you plan to stay in [Elkmont/Smokemont] Campground?.
- Number of Days _____

TOPIC AREA 2: ACCOM2 (*modified wording and options*)

- 5) Please select the choice below that best describes the type of camping you are doing in [Elkmont/Smokemont] Campground (select one).
- Tent (backpacker)
 - Tent (vehicle)
 - Tent (bicycle)
 - RV/Motorhome/Pop-up
 - Campervan

Topic Area 5: NSKIES16 (Variation: Added a couple response items to gain more information about visitors’s experience/preferences regarding dark skies/lighting.)

6) Please indicate the degree to which you Agree or Disagree with the following statements. (Select one for each statement.)

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Do Not Know
Viewing the night sky (“stargazing”) is important to me.	1	2	3	4	5	6
Observing the night sky is an important part of my experience in Great Smokey Mountains National Park.	1	2	3	4	5	6
Protection of natural nighttime conditions is important in preserving this park for future generations.	1	2	3	4	5	6
Preserving a natural night environment is as important as protecting other resources in this park.	1	2	3	4	5	6
Great Smoky Mountains National Park should modify its lighting at campground comfort stations/Restrooms (e.g. use less lighting, direct lighting downward) to better protect the natural night environment.	1	2	3	4	5	6

TOPIC AREA 11: PERSAFE 12 (Variation: Modified wording to focus on lighting condition.)

7) Did you use a personal lighting device (e.g., flashlight, headlamp, lantern) to navigate to the comfort station/ restrooms?

No Yes

TOPIC AREA 11: PERSAFE 12 (Variation: Modified wording to focus on lighting condition.)

8) Did you use a personal lighting device (e.g., flashlight, headlamp, lantern) within the comfort station/ restrooms?

No Yes

TOPIC AREA 5: NSKIES (New Question: This question is necessary in order to understand the lighting conditions the visitor experienced at the comfort station.)

9) At [Elkmont/Smokemont] Campground, what light color did you experience at the comfort station/ restrooms? (Select one.)

- White Amber/yellow No Light Present Do Not Know

TOPIC AREA 5: NSKIES (New Question: This question is necessary in order to understand the lighting conditions the visitor would prefer.)

10) What light color would you prefer to experience in the comfort stations/restrooms of [Elkmont/Smokemont] Campground?

- White Amber/yellow Red No Light Present Do Not Know (skip to Question 11)

B. What are some reasons for the lighting preference you selected above:

TOPIC AREA 6: PROGEVAL6 (Variation: Modified wording to focus on lighting condition.)

11) When thinking about the amount/intensity of artificial light in the comfort station/restroom, how did you feel about the amount of light you experienced? (Select one)

The amount of light in the comfort station/restroom was:

- Much less than I needed
 Somewhat less than I needed
 Sufficient for what I needed
 Somewhat more than I needed
 Much more than I needed
 Do Not Know

TOPIC AREA 4: ACT11 and SERVICES2 (Variation: Modified wording to apply to experiences with lighting conditions.)

12) For the lighting you experienced in the comfort stations/restroom, please indicate the degree to which you Agree or Disagree with the following statements. (Select one for each statement.)

The lighting I experienced in the comfort station/restroom...	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Do Not Know
...made it easy for me to see and find the comfort station/restroom.	1	2	3	4	5	6
...made it easy for me to see as I exited the comfort station/restroom.	1	2	3	4	5	6
...made it difficult for me to see inside the comfort station/restroom.	1	2	3	4	5	6
...made it easy for my eyes to transition from light to dark places.	1	2	3	4	5	6
...made it feel less safe because there was not enough light.	1	2	3	4	5	6

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Do Not Know
<i>The lighting I experienced in the comfort station/restroom...</i>						
...made it feel less safe because the light impacted my night vision.	1	2	3	4	5	6
...made it easy to navigate while doing activities in the dark.	1	2	3	4	5	6
...negatively influences normal wildlife activities by influencing their behaviors.	1	2	3	4	5	6
...provides benefits for wildlife and insects.	1	2	3	4	5	6
...helped reduce human impacts on wildlife.	1	2	3	4	5	6
...made it seem inappropriately bright.	1	2	3	4	5	6
...made it seem inappropriately dark.	1	2	3	4	5	6
...made it difficult to find areas and points of interest (e.g. entrances to restaurants, restrooms, stores, etc.).	1	2	3	4	5	6
...made it easy for me to see in unlit areas (e.g. in the shadows).	1	2	3	4	5	6
...made it difficult for me to perform tasks.	1	2	3	4	5	6
...seemed to attract insects.	1	2	3	4	5	6
...seemed to help decrease the number of insects.	1	2	3	4	5	6
...seemed to increase the number of spiderwebs.	1	2	3	4	5	6
...seemed to help decrease the number of fly insects (i.e., flies and moths).	1	2	3	4	5	6
...made me feel comfortable walking alone to the comfort station/restroom.	1	2	3	4	5	6
...created an unpleasant feeling while inside the comfort station/restroom.	1	2	3	4	5	6
...made me feel uneasy entering the comfort station/restroom.	1	2	3	4	5	6
...made me feel safe in the the comfort station/restroom.	1	2	3	4	5	6
...made me feel anxious leaving the comfort station/restroom as I went back into the night.	1	2	3	4	5	6

TOPIC AREA 8: MGMTOPT3 (*Variation: Reworded some response options to more closely align with study objectives.*)

13) Please indicate the degree to which you oppose or support the following management actions designed to protect natural night environment at this park.

	Completely Oppose	Oppose	Neither Oppose or Support	Support	Completely Support	Do Not Know
Setting lights to the minimum necessary brightness.	1	2	3	4	5	6
Reducing the number of park lights.	1	2	3	4	5	6
Restricting the type of lights visitors can use at night.	1	2	3	4	5	6
Creating shields on lights that direct light only to intended areas.	1	2	3	4	5	6
Adjusting color of lights to be wildlife friendly.	1	2	3	4	5	6
Adjusting color of lights to preserve a dark night sky.	1	2	3	4	5	6
Installing sensors/timers that turn lights on only when needed	1	2	3	4	5	6

TOPIC AREA 7: ABV6 (Variation: Included lighting infrastructure specific items to improve understanding of attitudes toward potential management actions. Added "Do Not Know" option because park lighting and infrastructure may be new concepts for respondents.)

14) Please rate the level of your agreement with each of the following statements.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Do Not Know
Lighting in parks should focus on human enjoyment, even if it means worse lighting conditions for natural nighttime environment.	1	2	3	4	5	6
Lighting conditions should not disturb night sky viewing, even if human preferences are not met.	1	2	3	4	5	6
Lighting conditions should not disturb wildlife, even if human preferences are not met.	1	2	3	4	5	6
Lighting conditions should make it safer for humans, even if it means impacts to wildlife.	1	2	3	4	5	6
The color of lighting best suited for wildlife life should be promoted in parks, even if it means the color is not preferred by visitors.	1	2	3	4	5	6
The color of lighting best suited for easy eye adaptation for humans should be promoted in parks, even if it means negative impacts to wildlife.	1	2	3	4	5	6
Lighting in parks should focus on compatibility with wildlife, even if it makes some people feel less safe.	1	2	3	4	5	6
Lighting in parks should focus on compatibility with wildlife, even if it makes some people feel less comfortable.	1	2	3	4	5	6
In parks, the primary lighting concern should be the safety and security of visitors.	1	2	3	4	5	6

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Do Not Know
In parks, the primary lighting concern should be the impacts to natural nighttime environment.	1	2	3	4	5	6

TOPIC AREA 5: NSKIES17

15) Is there anything you would like to see changed in the way Great Smoky Mountains National Park manages facilities, visitor activities, stargazing/viewing the night sky, lighting, or park resources at night/while it is dark outside?

TOPIC AREA 5: NSKIES17 (Variation: Expanded on the above to understand visitors preferences regarding messaging/communication for the protection of dark skies.)

16) What kind of educational messages from the park or their partners would help visitors like yourself understand the importance of natural dark skies? (e.g., messages focused on how light can impact visitor experiences, human vision, or wildlife?)

TOPIC AREA 5: NSKIES (New Question: This question will allow understanding regarding how onsite visitor experiences with park lighting infrastructure potentially leads to environmentally friendly behaviors in everyday life, otherwise known as "spillover behaviors.")

17) Given your experiences at Great Smoky Mountains National Park, how likely are you to do the following activities at your home within the next 6-months? (Please select one number for each item or check the box if you are not sure).

	I was already doing these things at my home	Definitely Not (0% Chance)	Probably Not (25% Chance)	Possibly (50% Chance)	Probably (75% Chance)	Definitely (100%)	Do Not Know
Setting lights to the minimum necessary brightness.	0	1	2	3	4	5	6
Reducing the number of outdoor lights.	0	1	2	3	4	5	6
Spending money initially to change outdoor lighting with the goal of reducing future energy costs.	0	1	2	3	4	5	6
Creating shields on lights that direct	0	1	2	3	4	5	6

	I was already doing these things at my home	Definitely Not (0% Chance)	Probably Not (25% Chance)	Possibly (50% Chance)	Probably (75% Chance)	Definitely (100%)	Do Not Know
light only to intended areas.							
Adjusting colors of lights to be wildlife friendly.	0	1	2	3	4	5	6
Adjusting colors of lights to preserve a dark night sky.	0	1	2	3	4	5	6
Install sensors/timers that turn lights on only when needed	0	1	2	3	4	5	6

TOPIC AREA 1: AGE 1

18) In what year were you born? _____

TOPIC AREA 1: GEND 1

19) What is your gender? Please select one.

- Male
- Female
- Transgender, non-binary, or another gender
- Prefer not to answer

TOPIC AREA 1: RES1

20) Are you a permanent resident or citizen of the United States? (Please respond "yes" or "no")

NO - What is your country of origin? _____

YES - What is your primary zip code

Zip code _____

TOPIC AREA 1: GROUP5

21) How many people were in your personal group today, including you?

____ Number of people

TOPIC AREA 1: LANG4

22) Which one language do you and members of your personal group primarily use to communicate with each other? (Select one.)

- .. English
- .. Other (please specify) _____

TOPIC AREA 1: EDUC1

- 23) What is the highest level of formal education you have completed? (*Select one.*)
- .. Some high school
 - .. High school graduate or GED
 - .. Some college, business or trade school
 - .. College, business or trade school graduate
 - .. Some graduate school
 - .. Master's degree
 - .. Doctoral or professional degree

TOPIC AREA 8: MGMTOPT6

- 24) Is there anything else you would like to tell us about your visit to [Elkmont/Smokemont] Campground?
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