

## Visitor Perceptions with Lighting and Night Skies in Colter Bay

The focus of this study is to better understand visitor perceptions regarding the night skies and lighting in the [Colter Bay area of Grand Teton National Park OR Blackwoods Campground in Acadia National Park OR Jordan Pond in Acadia National Park]. 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 12 minutes to complete.

**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 the [Park Location and Park Name]. The data collected will be summarized to evaluate visitor's experiences of Colter Bay at night in Grand Teton 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 (1024-0224). We estimate that it will take about 12 minutes to complete and return this on-site interview. You may send comments concerning the burden estimates or any aspect of this information collection to: Jennifer N. Newton, Science and Resource Management, Grand Teton National Park, Jennifer\_Newton@nps.gov (email); or Bret Meldrum NPS Social Science Branch at Bret\_Meldrum@nps.gov (email)

1) Are you a first-time visitor to [Grand Teton/Acadia] National Park?

No  Yes

2) Have you visited [Colter Bay/Blackwoods Campground/Jordan Pond] within [Grand Teton/Acadia] National Park **at night** before today?

No  Yes

3) On this trip, did you and your personal group camp overnight in [Colter Bay/ Blackwoods Campground]?

No  Yes

4) Please check all the following things you've done in [Colter Bay/Blackwoods/Jordan Pond] **this evening**. (Check all that apply)

- Attended a ranger program
- Walked/hiked somewhere in the park other than a campground
- Stargazed/viewed the night sky
- Other: \_\_\_\_\_

5) Please indicate the degree to which you oppose or support the following actions that park management should employ.

	Strongly	Disagr	Neithe	Agree	Strongly
Lighting in parks should focus on human enjoyment, even if it means worse lighting conditions for natural nighttime environment	1	2	3	4	5
Lighting conditions should not disturb night sky viewing, even if human preferences are not met.	1	2	3	4	5
Lighting conditions should not disturb wildlife, even if human preferences are not met.	1	2	3	4	5
Lighting conditions should make it safer for humans, even if it means impacts to wildlife	1	2	3	4	5
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
The color of lighting best suited for easy eye adaptation for humans should be promoted in parks, even if it means impacts to wildlife	1	2	3	4	5
Lighting in parks should focus on wildlife needs, even if it makes some people feel less safe	1	2	3	4	5
Lighting in parks should focus on wildlife needs, even if it makes some people feel less comfortable.	1	2	3	4	5
I would support reducing lighting in parks to improve the natural environment, even if I had to pay a small fee to help improve	1	2	3	4	5

outdoor lighting.					
In parks the primary lighting concern should be the safety and security of visitors.	1	2	3	4	5
In parks the primary lighting concern should be the impacts to natural nighttime environment.	1	2	3	4	5

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

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Slightly disagree</b>	<b>Neither</b>	<b>Slightly agree</b>	<b>Agree</b>	<b>Strongly</b>
Viewing the night sky (“stargazing”) is important to me	1	2	3	4	5	6	7
I expected to see a “starry night” in this park.	1	2	3	4	5	6	7
Observing the night sky is an important part of my experience in [Grand Teton/Acadia] National Park	1	2	3	4	5	6	7
The night sky in this park is pristine (i.e., free of light pollution)	1	2	3	4	5	6	7
This park has a good reputation as a place to view the night sky	1	2	3	4	5	6	7
Protection of natural nighttime conditions (e.g., darkness) is important in preserving this park for future generations.	1	2	3	4	5	6	7
Preserving a natural night environment is as important as protecting other resources in this park	1	2	3	4	5	6	7
The park should modify its lighting at [Colter Bay/Blackwoods Campground/Jordan Pond] (e.g., use less lighting, direct lighting downward) to allow visitors to see the night sky.	1	2	3	4	5	6	7

7) For the light level you experienced, please indicate how true the following statements are of your experience (*Select one number for each item.*)

<b><i>This lighting condition...</i></b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither</b>	<b>Agree</b>	<b>Strongly Agree</b>
... can make nighttime recreation activities more pleasurable.	1	2	3	4	5
...makes it easy for my eyes to transition from light to dark places.	1	2	3	4	5
... makes it more difficult for me to do other nighttime activities in the park.	1	2	3	4	5
...makes it feel less safe.	1	2	3	4	5
...makes it easier to navigate while doing nighttime	1	2	3	4	5

activities.					
... provides benefits for wildlife.	1	2	3	4	5
...provides benefits for insects.	1	2	3	4	5
... reduces human impacts on wildlife.	1	2	3	4	5
...makes it seem inappropriately bright.	1	2	3	4	5
...makes it seem inappropriately dark.	1	2	3	4	5
... makes it difficult to find areas and points of interest (e.g., entrances to restaurants, restrooms, stores...)	1	2	3	4	5
...makes it easy for me to see in unlit areas (e.g., in the shadows).	1	2	3	4	5

8)

8) We would like to know your opinion about how the lighting in [Colter Bay/Blackwoods Campground/ Jordan Pond] effects your nighttime experience in the area. Please take a moment and select your preferred lighting hue and brightness and answer the following questions.

- a. What is your preferred light hue?
- b. What is your preferred lighting brightness?
- c. Why is this your preferred lighting hue and brightness? \_\_\_\_\_

9) What things do you like most about your lighting preference?

10) Under your selected lighting preference, can you see any of the following items? If so, describe your experience.

Bats - Describe experience \_\_\_\_\_

If you saw bats, approximately how many bats did you see?

- 1 - 3 bats                       4 to 6 bats                       7 to 10 bats                       more than 10 bats

Mule Deer - Describe experience \_\_\_\_\_

Pine Martens - Describe experience \_\_\_\_\_

Bears - Describe experience \_\_\_\_\_

White-tailed Deer - Describe experience \_\_\_\_\_

Elk - Describe experience \_\_\_\_\_

Fox - Describe experience \_\_\_\_\_

Rabbits - Describe experience \_\_\_\_\_

Owls - Describe experience \_\_\_\_\_

Ducks - Describe experience \_\_\_\_\_

Trees - Describe experience \_\_\_\_\_

Shrubs - Describe experience \_\_\_\_\_

Grasses - Describe experience \_\_\_\_\_

Wildflowers - Describe experience \_\_\_\_\_

11) Please indicate the degree to which you oppose or support the following actions that park management should employ to protect the quality of stargazing/viewing the night sky at this park.

	Strongly	Disagr	Neithe	Agree	Strongly
Setting lights to the minimum necessary brightness	1	2	3	4	5
Reducing the number of lights in the park	1	2	3	4	5
Restricting the types of lights visitors can use at night	1	2	3	4	5
Creating shield on lights that direct lights only to intended areas	1	2	3	4	5
Adjusting colors of lights to preserve human's night vision	1	2	3	4	5

11) Is there anything you would like to see changed in the way [Grand Teton/Acadia] manages its activities, visitor activities, stargazing/viewing the night sky, lighting, or park resources at night?

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12) In what year were you born? \_\_\_\_\_

13) 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 \_\_\_\_\_

14) How many people were in your personal group today, including you? (Please respond below)

\_\_\_\_ Number of people

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

English

Other (please specify) \_\_\_\_\_.

16) 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

17) What is your gender? Please select only one.

- Male
- Female
- Prefer not to answer
- Prefer to self-describe \_\_\_\_\_.

18) Is there anything else you would like to tell us about your visit to [Colter Bay/Blackwoods Campground/Jordan Pond]?

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