

Supporting Statement A
for Paperwork Reduction Act Submission

National Park Service Visitor Perceptions of Climate Change Study
OMB Control Number 1024-New

Terms of Clearance: None

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

The National Park Service (NPS) and the Fish and Wildlife Service (FWS) protect places, resources, and experiences of importance to the American public. Both bureaus administer high-quality programs of interpretation and education, foster greater site appreciation, and promote shared stewardship. But high-profile, climate-related events now regularly impact public resources, recreational access, visitor experience, and public safety. With even more significant impacts projected for the future, protecting both resources and the public will require effective dialogue about climate change with our visitors.

The National Park Service is authorized to collect information that will “improve the ability of the Service to provide state-of-the-art management, protection, and interpretation of, and research on, the resources of the System” (54 U.S.C. 100701). Further, public communication on climate-related topics is a stated goal of both bureaus. Goals 14-15 of the 2010 *Climate Change Response Strategy* direct the NPS to promote greater understanding of climate change among visitors and the general public. Similarly, Element 4c of the 2021 *Climate Change Action Program* directs the FWS to develop and implement public outreach efforts that encourage collaborative, climate-smart action. As such, communication remains a major goal of agency strategies and response efforts. But effective public communications must be guided by robust audience analysis.

While broad, national audience climate change segmentation surveys exist, park/refuge-specific information does not. The NPS and the FWS are requesting approval to conduct a voluntary, on-site survey to understand park and refuge visitors’ concerns about climate-related topics, and perceptions of potential management options. This collection will fill a vital information gap for both the NPS and FWS relative to climate change communication and engagement efforts. Findings from this study will drive message development and framing of visitor communications, while informing investments in interpretive media related to climate change. Additionally, findings will inform messaging on climate-driven visitation patterns and possible management strategies. Finally, results from this collection will inform the development and delivery of NPS and FWS workforce training efforts.

Legal justifications for this collection include:

- **The National Park Service Act of 1916** ([54 USC 100101](#)) Requires that the National Park Service (NPS) preserve the national parks for the use and enjoyment of present and future generations. At the field level, this means resource preservation, public

education, facility maintenance and operation, and physical developments that are necessary for public use, health, and safety.

- **National Wildlife Refuge System Administration Act** ([16 USC 668dd](#) and [668ee](#); as amended) Requires that the FWS administer the National Wildlife Refuge System for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats for the benefit of present and future generations.
- **National Park Service Omnibus Management Act of 1998** ([54 USC 100703](#)) Assures that management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.
- **National Park Service Centennial Act of 2016** ([54 USC 100802](#)) Directs the National Park Service to provide a broad program of the highest quality interpretation and education that is learner-centered, inclusive, and informed by scientific research and audience analysis.
- **National Park Service Protection, Interpretation, and Research in System** ([54 USC 100701](#)) Directs the National Park Service to provide research on the resources of the System.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection. Be specific. If this collection is a form or a questionnaire, every question needs to be justified.

Public communication on climate-related topics is a stated goal of both the NPS and the FWS. Thus, the NPS and FWS seek to better understand visitor perceptions and concerns about climate change to guide on-site communication and engagement efforts of both bureaus. Specifically, this information will be used by managers and interpreters who are preparing interpretation and educational materials for the public at national parks and national wildlife refuges. Specific uses include:

1. NPS and FWS communication staff will use the results to gain a better understanding of how visitor experiences at parks and refuges, as well as visitor beliefs in climate change, relate to responses to commonly used and/or nationally promoted climate change messages.
2. NPS and FWS communication staff will use the results to gauge how to best tell climate change stories that have empowering impacts. The results will bolster baseline information on visitor attitudes and beliefs related to climate change as well as which messaging approaches are most effective for certain visitor audiences.
3. Managers and communication staff will use the results to inform decisions on message content (local, regional, national), particularly as to which resonates most with visitors and how much visitors perceive actual climate change threats to the park or refuge.

4. National and site-level communication and outreach programs will use the results to inform new local communication programs with a set of best climate change communication practices.

In summation, the results of this survey will provide necessary information that is currently lacking, including insight into topics, methods, and/or communications media of most interest to park and refuge visitors. Findings will drive message development and framing of visitor communications and help guide investments in interpretive media. Results from this work will also be used in the development and delivery of bureau and Departmental workforce training efforts.

The information will be used primarily by administrators, program managers, interpretive specialists, and educators. Results from the collection will be shared broadly across the NPS and FWS for application in the development, design, and delivery of climate change communications products.

Justifications for individual questions/question sets are included below and in the survey instrument.

Table 2.1 Section/Question Justification

Question	To determine/understand
<p>Question 1: Park/Refuge Unit Visitation</p> <p>This question captures information about the number of times the respondent visited the unit of the National Park System or National Wildlife Refuge System in the past year.</p>	<p>This question captures information about the number of times the respondent visited the unit of the National Park System or National Wildlife Refuge System in the past year. This information is necessary to determine whether visitor perceptions of climate change, park information about climate change, and/or park actions to address climate change vary based on whether or not an individual is a repeat visitor to a particular unit. This information will be useful for developing communication products appropriate for different visitor audiences (i.e., first time visitors vs. repeat visitors).</p>
<p>Question 2: Concern about Possible Impacts</p> <p>This question indicates where visitor concern about climate change ranks in relation to other environmental threats to park and refuge resources, including different types of pollution, invasive species, and overuse.</p>	<p>This information will be used to indicate overall level of concern about climate change in relation to other issues and to identify linkages that interpreters can make between climate change and other issues of concern to visitors.</p>
<p>Questions 3-6: Information Sources and Stories about Climate Change</p> <p>This series of questions examines visitor interest in communication about climate change while at the park/refuge, whether/how visitors have received information about climate change while at the park/refuge, preferred communication modes, and interest levels in different types of</p>	<p>This series of questions is at the heart of understanding how to better communicate with visitors about climate change through interpretation and engagement. Combined with the audience segmentation section described below (questions 10-13), this section will be used to identify the most effective methods and messages for delivering the climate change information that visitors want.</p>

<p>climate change stories.</p>	
<p>Questions 7 and 8: Park/Refuge Actions to Address Climate Change</p> <p>These two questions assess visitor awareness and perceptions of the actions that parks/refuges are taking to mitigate and adapt to climate change impacts.</p>	<p>This information will help managers and interpreters understand what types of actions visitors are noticing and how supportive they are of different types of actions to lessen impacts. This information will also be used to inform the development of interpretive materials about climate change mitigation and adaptation actions at parks/refuges.</p>
<p>Questions 9a-9b: Climate-related Impacts to Visitation</p> <p>These two questions provide information about whether/how climate-related weather conditions and/or climate change impacts to parks have altered visitation patterns and/or visitor behavior.</p>	<p>Park/refuge staff have anecdotal information suggesting that climate change is already impacting visitation patterns and visitor behavior, but they currently lack empirical data to inform communication aimed at visitors who are changing when/where they visit due to climate change and extreme weather. This information will help inform communication and visitor use management decisions related to extreme weather and climate-threatened resources (e.g., glaciers, Joshua trees, etc.).</p>
<p>Questions 10-13: Audience Segmentation</p> <p>This series of questions comes from a long-running series of national surveys by Yale University and George Mason University collectively known as "Global Warming's Six Americas." This series of questions has been thoroughly tested and vetted for over fifteen years and is considered the leading audience segmentation protocol for the topic of climate change.</p>	<p>This audience segmentation will be used in this survey to assess changes in audience composition among visitors to parks/refuges over the past decade. It will also serve as the independent variable for testing different audience perceptions of park/refuge actions to address climate change (questions 7 and 9) and information sources (questions 3-6). Finally, these questions will allow for a check of non-response bias by testing whether respondents significantly differ in their segmentation from non-respondents, as laid out in Supporting Statement B, Question 3.</p>
<p>Questions 14-19: Demographics</p> <p>The questions in this section will be used to obtain basic demographic characteristics, including residency, gender, age, education level, ethnicity, and race.</p>	<p>Demographics will be compared with those from other NPS and general population surveys. This information will also be used to inform communication product development to target different audiences and may inform development of multi-lingual products where appropriate.</p>

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden and specifically how this collection meets GPEA requirements

The survey will be 100% electronic and administered on-site using a tablet computer (iPad or similar). The survey software platform Qualtrics will be used to save responses automatically. to collect information. The decision to collect responses via tablets was driven by corresponding benefits, including ease of use for respondents, the ability to randomize response options, and the immediate availability of data for real-time evaluation and quality control.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

There is no known duplication of effort. The most recent study related to visitor perception of climate change in National Park is more than a decade old. The available studies do not sample park and refuge visitors that have results from a broad spectrum of parks that reveal visitor perceptions in a way useful to interpreters, planners, and managers.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

This information collection will not impact small businesses or other small entities. Surveys will only be administered to individual, on-site visitors to parks and refuges.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The National Park Service Centennial Act (2016, Sec. 301) requires the NPS to provide interpretation and education that is learner-centered, place-based, inclusive, and reflects current scientific and academic research, content, methods, and audience analysis. NPS policy similarly mandates social science research be used to provide an understanding of park visitors. Without this study, the NPS will be unable to meet these mandates because we will not have social science research and audience analysis upon which to provide learner-centered, place-based education and interpretation around climate change. The last survey of Park and Refuge visitor perceptions of climate change occurred over ten years ago. Public understanding and perceptions of climate change are evolving rapidly. Without this collection, Park and Refuge staff will continue to rely on dated social science research and audience analysis, and consequentially, be unable to develop and provide effective communication efforts about climate change science, impacts, and agency responses.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- *requiring respondents to report information to the agency more often than quarterly;*
- *requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;*
- *requiring respondents to submit more than an original and two copies of any document; requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;*
- *in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;*
- *requiring the use of a statistical data classification that has not been reviewed and approved by OMB;*
- *that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or*
- *requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.*

No special circumstances apply to this information collection.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and in response to the PRA statement associated with the collection over the past three years, and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every three years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

A Federal Register Notice published on October 14, 2022 (87 FR 62442) solicited public comment. No comments were received.

In addition to the Federal Register Notice, we solicited feedback from three professionals (Table 8.1) with expertise in climate change communication, message testing, survey design, and

methodology. We incorporated their collective feedback on the sampling design, clarity of the survey and instructions, and burden estimates.

Table 8.1. Reviewers

Name	Affiliation
1: Assistant Professor	Slippery Rock University, Slippery Rock, PA
2: Professor	Northern Michigan University, Marquette, MI
3: Research Social Scientist	United States Geological Survey, Fort Collins, CO

Whether or not the collection of information is necessary, including whether or not the information will have practical utility; whether there are any questions they felt were unnecessary.

Overall comments: Reviewers were positive about the practical utility of this study and agreed that the survey and methods were appropriate and reasonable to achieve the study's goals. Reviewers thought the survey provided timely and relevant information about visitor behaviors and their perceptions about climate change in national parks.

Comment #1: Suggested alternative wording in Q9a to make the prompts less park-specific and more applicable to a broader suite of parks.

NPS Response: Q9a was rewritten to be less park-specific. It now includes different features such as glaciers, Joshua Trees, and puffins as examples.

Comment #2: Expressed concern with how Q9b was too narrowly targeted and only focused on hurricanes, reducing its applicability.

NPS Response: Q9b was rewritten to include examples beyond just hurricanes for extreme weather conditions. It now includes the following examples: wildfire/smoke, extreme heat, flooding, and hurricanes.

What is your estimate of the amount of time it takes to complete each form in order to verify the accuracy of our estimate of the burden for this collection of information?

Based upon pre-testing of the instrument with university students (outlined in Supporting Statement B #4), we arrived at a burden estimate of 7 minutes to complete the survey. Reviewers agreed that this was an accurate estimate.

Do you have any suggestions for us on ways to enhance the quality, utility, and clarity of the information to be collected?

Comment #1: Provided minor alternative wording choices for Q7 specific to prompts 6-9.

NPS Response: The alternative wording for Q7 prompts were accepted and are reflected in the attached survey instrument.

Comment #2: Identified the “Scientific Research” prompt in Q6 as confusing.

NPS Response: The “Scientific Research” research prompt was reworded to include its own introduction that reads, “Please indicate your level of interest in information about...”. Followed by, “... Scientific Research on climate change in this park/refuge.”

Comment #3: Expressed difficulty interpreting the response scale chosen for Q9ab.

NPS Response: Response options in Q9 were changed to a dichotomous Yes/No to eliminate possible respondent confusion.

Ways to minimize the burden of the collection of information on respondents.

Overall comments: Beyond the question edits outlined above and incorporated into the survey, reviewers did not have specific suggestions on ways to minimize burden. Reviewers agreed that standardized surveyor training and the implementation of the on-site survey with no subsequent mail-back instrument would sufficiently minimize public burden.

NPS Response: NPS reiterated its commitment to provide comprehensive surveyor training.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

There are no payments or gifts associated with this collection.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

We will conduct this work under the guidance of the National Park Service, in accordance with the Paperwork Reduction Act, and in accordance with the Internal Review Board (IRB) processes at Northern Michigan University and Slippery Rock University. We will not provide any assurance of confidentiality to any respondents as mandated by the Freedom of Information Act. Responses will remain anonymous and no personally identifiable information will be collected from visitors.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

No questions of a sensitive nature will be asked as part of this collection.

12. Provide estimates of the hour burden of the collection of information.

- *Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to*

base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance.

Generally, estimates should not include burden hours for customary and usual business practices.

- *If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.*
- *Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under item 13.*

We plan to collect information at 32 parks and refuges (See SSB Question 2). We estimate a total of 15,634 initial contacts with 12,376 responses (including 12,013 on-site survey respondents and 363 non-response survey respondents). The total burden for this collection is 1,669 hours. This burden estimate includes:

- **Initial Contacts** – We anticipate contacting 15,634 total contacts with 9,938 contacts at NPS sites and 5,696 contacts at FWS sites. We anticipate the initial contact to last no more than one minute, resulting in a burden of 261 hours (NPS=166 hours; FWS=95 hours).
- **On-site Survey** - Assuming a 70% response rate, we anticipate having 12,013 total responses from NPS visitors (n=7,636) and FWS visitors (n=4,377). The survey takes approximately 7 minutes to complete, resulting in a total burden of 1,402 hours (NPS=891 hours; FWS=511 hours).
- **Nonrespondent Surveys**. Of the 3,621 contacts who decline to participate in the survey, we expect 10% (n=363) to agree to answer 3 non-response questions (NPS=231; FWS=132). The non-response survey will take 1 minute to complete. Thus, the total burden for the non-response survey is 6 hours (NPS= 4 hours; FWS=2 hours).

We estimate the annual dollar value of the burden to be \$70,900 (Table 12.1). The estimated dollar value of the burden hours for this collection takes into account the nature of our respondents which include individuals or households. This estimated dollar value is based on the National Compensation Survey: Occupational Wages in the United States published by the Bureau of Labor Statistics Occupation and Wages, (BLS news release [USDL-20-0451](#), December 2022 for Employer Costs for Employee Compensation—released March 17, 2023). The particular value utilized was \$42.48 for individuals or households.

Table 12.1. Estimated annual respondent burden and annualized costs

Activity	Estimated Annual Number of Respondents	Completion Time per Respondent (minutes)	Total Annual Estimated Burden* (hours)	Hourly Rate Including Benefits	\$ Value of Annual Burden Hours
<i>Initial Contact</i>					
NPS Park Units	9,938	1	166	\$42.48	\$7,052
FWS Refuges	5,696	1	95	\$42.48	\$4,036
Subtotal	15,634	1	261		\$11,088
<i>On-site Survey</i>					
NPS Park Units	7,636	7	891	\$42.48	\$37,850
FWS Refuges	4,377	7	511	\$42.48	\$21,707
Subtotal	12,013	7	1,402		\$59,557
<i>Non-response Survey</i>					
NPS Park Units	231	1	4	\$42.48	\$170
FWS Refuges	132	1	2	\$42.48	\$85
Subtotal	363	1	6		\$255
TOTAL	28,010		1,669		\$70,900

*Figures rounded to match ROCIS

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information.

There is no non-hour cost burden to either respondents or record keepers, nor are there any fees associated with collection of this information.

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

We estimate that the total annual cost to the Federal Government to administer this information collection is \$363,041 (rounded). This includes all federal salaries (\$15,884) and operational expenses (\$347,157) listed in tables 14.1 and 14.2 below.

We used the Office of Personnel Management Salary Table [2023-DEN](#) to determine the hourly wages for the Federal employees associated with this collection. We multiplied the hourly wage by 1.6 to account for benefits in accordance with the Bureau of Labor Statistics News Release [USDL-22-1892](#), December 2022 for Employer Costs for Employee Compensation – released March 17, 2023.

Table 14.1. Federal Employee Salary and Benefit Costs

Position	Grade/Step	Hourly Rate	Hourly Rate incl. benefits (1.6 x hourly pay rate)	Estimated time per task (hours)	Total Cost
NPS Project Manager	11/5	\$41.57	\$66.51	60	\$3,991
NPS Project Advisor	13/5	\$59.25	\$94.80	30	\$2,844
NPS Project Advisor	13/5	\$59.25	\$94.80	30	\$2,844
FWS Project Manager	13/5	\$59.25	\$94.80	30	\$2,844
FWS Project Advisor	14/5	\$70.01	\$112.02	30	\$3,361
Totals				120	\$15,884

Table 14.2. Operational Expenses

Salaries & Stipends		Estimated Costs
2 Principal Investigators		\$38,000
2 Graduate Research Assistants (tuition & stipends)		\$91,900
8 Undergraduate Research Intern Stipends		\$59,000
	Subtotal	\$188,900
Travel Expenses		
Airfare		\$30,000
Lodging		\$30,000
Ground Transportation		\$15,000
Per diem		\$25,000
Parking & Fees		\$1,000
	Subtotal	\$101,000
Miscellaneous		
Qualtrics Software		\$1,000
Research tablets		\$3,753
Supplies		\$800
CESU Overhead (17.5%)		\$51,704
	Subtotal	57,257
	TOTAL	\$347,157

15. Explain the reasons for any program changes or adjustments.

This is a new collection.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Following is a summary of plans for publications and tabulation from this study. Dates listed are approximate. The chosen dates assume OMB approval is received in Spring 2024.

- A technical report for each surveyed park will be written, as well as an overall technical report for this project. These reports will be generated approximately six months after the end of data collection, provisionally targeting February 2025. They will be publicly available through the NPS.gov Climate Change subject site and will be made available to each surveyed park to share publicly with their audiences as well. Results from this study will become a part of the curriculum for the Interpreting Climate Change virtual course.
- Three separate peer-reviewed articles are targeted for various journals. These articles will be published approximately one year after the end of data collection, provisionally targeting August 2025. Any of the articles below that include an NPS author will be featured on the Climate Change Response Program organization site on NPS.gov.
 - First article: an overall synopsis of the work, concentrating on the Six Americas segmentation and how those segmented populations perceive and desire different climate change-based education within the parks. Target journal: *Environmental Communication*.
 - Second article: An exploration of the changes (or lack thereof) in the segmentation of visitors over the 13-year timeframe between our initial visitor research and this collection. Target journal: *Visitor Studies*.
 - Third manuscript: Investigating the prevalence of last chance/climate tourism within the parks. Target journal: *Journal of Outdoor Recreation and Tourism*.
- A public-facing article that summarizes the project as a whole and is essentially a trimmed-down version of the first journal article mentioned above. This article will be published approximately one year after the end of data collection, provisionally targeting August 2025. Target format: a periodical such as *National Parks magazine*.

Following is a summary of complex analytical techniques planned to be used in this study.

- Summated Scales and Reliability Analysis: Our survey contains multiple questions designed to define a single construct. For example, our questions regarding changing plans due to extreme weather all reflect a larger concept of climatic interruption. Reliability analysis of these scales will be measured using Chronbach's alpha.
- Segmentation Analysis: Our survey contains four questions that relate to the Six Americas Super Short Survey (SASSY). These variables allow for the segmentation of our respondents into six unique categories based on their perceptions of climate change.

This segmentation will be conducted using the SASSY Group Tool produced by the Yale Program on Climate Change Communication (Chryst et al., 2018).

- Bivariate Analysis: Various bivariate analyses (such as n-way ANOVA and Chi-square) will be utilized to compare demographics, segmentation groups, and answers to scale item questions.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

We will display the OMB control number and expiration date on the information collection instruments.

18. Explain each exception to the topics of the certification statement identified in “Certification for Paperwork Reduction Act Submissions.”

There are no exceptions to the certification statement.