

# Great Sand Dunes National Park and Preserve: A Social Science Needs Assessment

**Kaitlin Burroughs**

North Carolina State University

**Janae Davis**

University of South Carolina

**Tian Guo**

North Carolina State University

**Peter J. Mkumbo**

Clemson University

**Ojetunde Ojewola**

University of Missouri

**Aleksandra N. Pitt**

Colorado State University

**Robert Powell**

Clemson University

**Ryan Sharp**

Kansas State University

**Geoffrey Riungu**

Clemson University

**Rose I. Verbos**

University of Utah



P.O. Box 65  
Hancock, Michigan 49930-0065 USA  
[www.georgewright.org](http://www.georgewright.org)

© 2016 The George Wright Society, Inc. All rights reserved

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions and policies of the U.S. government, any of the other co-sponsoring or supporting organizations, or the George Wright Society. Any mention of trade names or commercial products does not constitute an endorsement by the U.S. government, any of the other co-sponsoring or supporting organizations, or the George Wright Society.

## Introduction

This report outlines social science research needs for Great Sand Dunes National Park and Preserve (GRSA) and is based on the notion that GRSA is a dynamic socio-ecological system. Based on this perspective, this report is organized around three central themes: (1) park visitors and experiences; (2) relevance, diversity, and inclusion; and (3) natural resources in the park and preserve. These three themes reflect a range of contemporary issues and informational needs within GRSA and the surrounding communities for which social science research can be used to understand and thus aid manager decision-making in a complex environment.

## Methods

In October 2015, the George Wright Society (GWS) Park Break held a weeklong on-site study at GRSA. Park Break brings together diverse groups of graduate students (i.e., masters and Ph.D. students) to collaborate with a park unit on a site-specific study. This report presents the results of the first Park Break to focus specifically on a social science needs assessment. The authors represent the eight graduate students selected to participate in the study as well as the two academic advisors and two National Park Service advisors.

We collected diverse information about Great Sand Dunes National Park and Preserve, its visitors, and its natural resources and then identified the three research themes using a combination of methods including interviews and on-site focus groups with park leadership, local community stakeholders, and National Park Service experts (e.g., representatives from the Denver Service Center and the Social Science Program).



In preparation for the development of foundational planning documents for GRSA, we sought to identify the informational needs of the park with a particular focus on needs that social science research may fill. In particular this social science needs assessment targeted information needs that would aid park management in effective decision-making (e.g., foundation statement planning). This type of assessment is essential for park managers to make informed decisions, and although these types of efforts

have been conducted in the past (Machlis, McKendry, and Correia 1996; University of Utah 2014), more of these efforts are needed.

Project researchers interviewed park leadership, including the chief of resources, chief of interpretation and outreach, park geologist, and park superintendent for approximately 60–90 minutes. On-site focus groups were conducted with local community stakeholders and those sharing park boundaries including the Rio Grande Water Conservation District, United States Forest Service, San Luis Valley Development Resources Group, and a community-based participatory researcher with on-going research at Great Sand Dunes. Project researchers then systematically analyzed and coded notes from the interviews in order to identify recurrent themes. Through this process, we identified research needs that are organized under three categories:

- (1) Park visitors and experiences;
- (2) Relevance, diversity, and inclusion; and
- (3) Natural resources in the park and preserve.

## Research theme 1: Park visitors and experiences

This theme focuses on developing social science research to document diverse GRSA visitor communities and how these visitors engage with and experience park resources. The key research topics would provide park managers data and tools to better understand, anticipate, and address the challenges and opportunities associated with park use, enjoyment, and satisfaction.

Significance: Adequate knowledge and understanding of GRSA visitors as well as accurate information on how programs and commercial services are reaching GRSA visitors is crucial to help park managers make resource allocation decisions and plan for conditions that help facilitate positive visitor experiences as well as continue to foster instrumental relationships with the surrounding community and associated stakeholders. With the recent addition of the adjacent Great Sand Dunes National Preserve, it is highly recommended that baseline visitor data be collected and analyzed to encourage and enhance transparency and promote informed decision-making by park staff for the future of GRSA.

Current interpretation programs at GRSA would also benefit from social science research and evaluation by highlighting areas for improvement, understanding visitor demand, as well as investigating desired conditions. Interpretation programming not only serves visitors but also helps foster partnerships with local school systems in the San Luis Valley. In addition, concessionaires, outfitters, and commercial groups provide interpretation for visitors to GRSA; however, little is known about the quality of these services.

### Key research topics

1. Perform a visitor use assessment and develop a visitor profile by collecting key demographic information and economic spending patterns to further understand unique visitor groups and underrepresented visitors.
2. Identify visitor motivations, experiences, and satisfaction through visitor surveys, in-depth interviews, and focus groups in areas of special concern. For example, understanding visitor motivations to experience the unique night sky and natural soundscapes resources in GRSA will allow managers to help facilitate positive park experiences while protecting unique resources. Additionally, visitor perceptions on bison viewing will aid in further discussion of possible bison reintroduction.
3. Assess visitor trends using visitor counts, visitor observation, visitor surveys, and/or comparative studies. This social science research topic would allow



GRSA park managers to anticipate new and emerging recreation use and enhance interpretation programs.

4. Assess and evaluate existing programs, exhibits, and signage. Develop indicators (identify desired outcomes) of success for existing programs, exhibits, and signage to gauge quality and performance. This could include the efficacy of current LNT efforts, live interpretation programming, parks as classrooms, or visitor center exhibits.
5. Identify demand and opportunities for additional programs including emerging wildlife viewing opportunities and topics for interpretation.
6. Develop on-going community-based stakeholder assessments to collect data about the potential for developing sustainable (e.g., social, economic, and environmental) tourist opportunities.
7. Inventory outfitters and commercial tourism services to identify user groups, associated services, and recreation opportunities currently offered and occurring at GRSA to better understand visitors and recreation needs. Use focus groups to determine differences and overlaps in outfitting/commercial guide services at GRSA to build partnerships and create efficiency in offering different types of visitor experiences.

### **Research theme 2: Relevance, diversity, and inclusion**

This theme aims to leverage social science to understand community values, preferences and interests crucial to GRSA's mission of "conveying the essence of the park qualities to be protected and understood, thereby forging an intellectual and emotional connection between people and the national heritage."



This theme focuses on using social science to maintain relevancy, increase diversity and inclusion (RDI) at GRSA. For the purpose of this needs assessment, relevancy refers to "recognizing and embracing the diversity of America's people and embracing the creation of a multicultural workforce." Notably, it is about meeting people where they are and providing opportunities that are meaningful and desired to that audience. Diversity relates to a visitor composition representative of the American public. Inclusion refers to "bringing people together to harness their diverse skills, perspectives and resources in a way that is beneficial to all."

Significance: GRSA offers visitors a wide range of opportunities and experiences. It is important for park managers to meet national directives and coordinate with national, regional, and local RDI initiatives. This can be achieved by evaluating barriers and constraints that may be preventing different user groups from visiting GRSA. Furthermore, an assessment of issues relating to subsistence practices in and around the neighboring communities including ungulates, horses, and endangered species appears useful. Consequently, a sound understanding of public community values, interests and preferences may help reduce future conflict and potentially ensure habitat conservation and restoration.

### **Key research topics**

1. Evaluate existing communication channels for reaching underrepresented visitor groups.
2. Understand non-visitors (local, statewide, and perhaps nationally) preferences and barriers to participation/visitation.
3. Collect culture stories from diverse groups to supplement interpretive planning and outreach efforts.
4. Update the inventory of cultural resources (including archeological sites, historic monuments as well as local culture) in and around GRSA to enhance

inclusiveness in its interpretive programs and protection of cultural resources.

5. Evaluate community awareness of park boundaries and appropriate uses (i.e., signage between neighboring properties) in order to reduce potential conflicts and resource degradation.
6. Evaluate accessibility issues related to GRSA, specifically focused on under-represented and disadvantaged groups. This could focus on identifying the potential barriers such as fees, infrastructure, and transportation or the things that may attract different audiences such as preferences for particular facilities and amenities.

### **Research theme 3: Natural resources in the park and preserve**

This theme focuses on advancing the systematic assessment and monitoring of natural resources in GRSA and maintaining interagency partnerships to support science-based resource preservation decisions.

Significance: GRSA sits in the 146,000 acres of Colorado’s San Luis Valley. This vast region comprised of wetlands, aspen and conifer forests, alpine lakes, grasslands, sand dunes and desert is administered by a diverse group of stakeholders including the National Park Service, US Forest Service, US Fish and Wildlife Service, The Nature Conservancy, and local farmers. As a result, a variety of philosophies, interests and practices affect the functioning and health of the valley’s ecosystems. Management of these areas is further complicated by a host of issues including the possible reintroduction of bison, fire suppression, a spruce beetle epidemic and dwindling water supplies caused by unprecedented drought and overuse associated with local agricultural practices.

These issues, in addition to visitor impacts, present both challenges and opportunities for GRSA’s managers to preserve its lands for the enjoyment of the public. Accomplishing this goal involves understanding visitor use patterns and impacts. Social science research for natural resource management would examine how, when and where visitors use the park and their impacts on natural resources. It would also evaluate and determine strategies to promote beneficial relationships with multiple stakeholders. Such assessments would inform future planning efforts aimed to improve or maintain the health of park resources and enhance the visitor experience.



### **Key research topics**

1. Assess and evaluate visitor perceptions of resource conditions as well as visitor use impacts (recreation ecology) on natural resources, particularly in the backcountry.
  - a. Assess visitor perceptions regarding conditions of campsites and campgrounds; these perceptions may refer to crowding, desired conditions, and resource conditions. In addition assess current soil and vegetation conditions associated with campground uses. Additionally, developing an inventory of undesignated camping sites using rapid-assessment methods may provide useful information.
  - b. Assess visitor perceptions of trail conditions and trail use. Additionally monitor trails to determine and document vegetation and soil conditions and the number of social trails.
  - c. Assess visitor perceptions and attitudes towards depreciative behaviors. Monitor and document vegetation degradation related to depreciative recreation behaviors such as tree graffiti.

- d. Explore visitor attitudes and beliefs regarding environmental conditions and issues such as spruce beetle, climate change, and drought.
  - e. Examine attitudes of hunters and non-hunters toward the management of hunting in the preserve.
  - f. Track visitor use patterns and spatial movement using technologies such as GPS tracking to better understand demands and potential impacts on the resources.
2. Investigate attitudes toward the unique soundscape of GRSA. This may include investigating attitudes toward soundscape disturbances associated with unmanned aircraft (i.e., drones) and activities in neighboring communities.
  3. Investigate best-practices for interagency interactions and coordination. Transboundary issues pertaining to wildlife and domestic animal management, water, and other resources influence the health and preservation of GRSA. This research could determine ways to form partnerships and work collaboratively with multiple stakeholder groups on controversial issues, such as wild and domestic animal issues. The results of this study could identify best practices and aid in the development of training materials and mentorship opportunities for future leaders of GRSA and the broader NPS.
  4. Synthesize past research efforts related to natural and social science studies on GRSA or similar ecological and geospatial systems that could be used to inform science based natural resource management and the integration of social and natural sciences.

#### References

- Machlis, G.E., J.E. McKendry, and M.E. Correia. 1996. A social science plan for South Florida National Park Service units. Online at [www.nature.nps.gov/socialscience/docs/archive/SFlorida.pdf](http://www.nature.nps.gov/socialscience/docs/archive/SFlorida.pdf).
- University of Utah. 2014. Human dimensions of winter use in Yellowstone National Park: A research gap analysis (1972–2013). Online at [www.health.utah.edu/parks-recreation-tourism/research/Yellowstone\\_Gap-Analysis\\_UofU.pdf](http://www.health.utah.edu/parks-recreation-tourism/research/Yellowstone_Gap-Analysis_UofU.pdf).