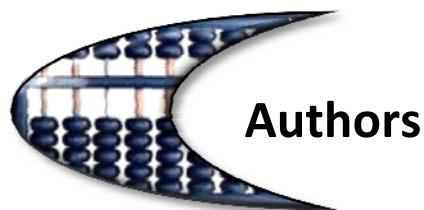

Final Report



NPS Socioeconomic Monitoring Needs Assessment



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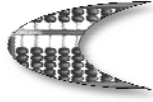
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Executive Summary

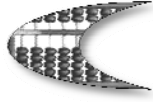
A strong mandate and need for socioeconomic monitoring exist in the National Park Service (NPS). These are expressed in the NPS strategic goals for science, in statements by the NPS leadership, and in the report of the Second Century Commission. The need for socioeconomic monitoring also was identified in an external review of the NPS Social Science Program and supported in the 2008 Interior Appropriations Bill Joint Explanatory Statement. In response, an NPS Socioeconomic Monitoring (SEM) working group developed a statement of mission, goals, and objectives that emphasizes collecting, organizing, and making available high-quality social science trend data to NPS managers.

The NPS Social Science Division conducted a systemwide needs assessment for socioeconomic monitoring in 2008 and 2009. More than 400 people from parks, regions, programs, and the Washington Office took part in focus groups, e-surveys, and scoping workshops. They identified 175 indicators that they rated as useful in performing their jobs. The SEM working group organized these indicators into a hierarchy of four “Level 1” categories, more specific “Level 2” categories, and “Level 3” indicators. The Level 1 categories included: 1) visitors and other people in parks; 2) people outside parks; 3) economy; and 4) perceptions, attitudes, and values.

The working group rated all 175 indicators on management, social science, and law and policy significance. These ratings were used to compute average significance scores for each indicator and to rank-order them within Level 1 categories. The result is a prioritized list of indicators based on the significance criteria.

Additional feedback on monitoring needs came during discussions in seven regional scoping workshops. Common themes included: 1) the value of SEM in achieving the NPS mission; 2) identification of a small set of core indicators important at local, regional, and national levels; 3) the usefulness of trend data describing non-visitors; and 4) concerns about definitions of “traditional” people or cultures. Equally important, each region identified monitoring needs specific to their situations. This report describes the common themes and these distinctive “voices from the field.”

The SEM working group drafted a logic model illustrating how indicators selected for monitoring support the NPS mission by measuring progress toward strategic goals. Building on existing programs, new and improved monitoring activities can be created, including a System of Indicator Parks (SIP) and “Small SIP,” a cost-effective prototype. Transforming existing secondary data into usable knowledge and partnering with other NPS divisions and programs provide efficient ways to implement socioeconomic monitoring in its early stages. Needs assessment participants offered valuable recommendations for communicating monitoring results to the field in timely and accessible ways. The report concludes with a brief description of important steps comprising the planning and operational phases of SEM development.



1

Why Socioeconomic Monitoring?

CHAPTER SUMMARY

A strong mandate and need for socioeconomic monitoring (SEM) exist in the National Park Service (NPS). This chapter documents the mandate and needs as they are expressed in the NPS strategic goals for science, by the NPS leadership, and by the Second Century Commission. Although the NPS currently conducts some socioeconomic monitoring, organizational issues and funding uncertainties hinder its effectiveness and utility. Monitoring requires institutional continuity, long-term planning horizons, and predictable commitments of resources. In response to the mandate and need, an NPS working group developed a statement of mission, goals, and objectives for socioeconomic monitoring in the National Park System. The basic principle underlying the statement is that an SEM program must respond to the priority social science information needs of park managers.

The purpose of this chapter is to answer the question, “*Why socioeconomic monitoring?*” The question is addressed further in Chapter 5, but for now we will state that understanding the dynamic relationship between people and parks is one of the most challenging tasks facing National Park Service (NPS) managers in the 21st century. This understanding is critical to protect natural and cultural resources, provide opportunities for public enjoyment, and maintain the relevancy of parks to a more diverse America—an America in which population growth is driven increasingly by groups who are not traditional park-goers. The *NPS Management Policies* (2006) state that, “Decision-makers and planners will use the best available scientific and technical information and scholarly analysis to identify appropriate management actions for protection and use of park resources.”¹ However, despite the policy, park managers often find themselves in situations where they must make important decisions affecting parks, visitors, and other populations with little information on who the affected publics are or what they do, think, and know. Even when this information exists, it is often woefully out of date or in forms not useful or accessible to parks.

The NPS Social Science Division conducts and promotes state-of-the-art social science related to the NPS mission and delivers usable knowledge to NPS managers and the public. As part of the effort to improve park management through greater use of scientific knowledge, the Socioeconomic Monitoring Program’s primary mission is to collect, organize, and make available high-quality social science data and to facilitate the transformation of these data into usable knowledge. For purposes of monitoring, socioeconomic trend data are organized into four “level 1” categories relevant to park management. These information categories describe trends in:

- Visitors and other people in parks, including their numbers, behaviors, and characteristics;
- People outside of parks, including their numbers, behaviors, and characteristics;
- Economy, including park assets and economic impacts on surrounding areas; and
- Perceptions, attitudes, and values of people inside and outside of parks.

¹ *Management Policies*, 2006. Section 2.1.2, “Scientific, Technical, and Scholarly Analysis,” p. 22.

Most of the trend information that falls in the first three categories in this list is available from existing NPS or external sources, but must be accessed, analyzed, interpreted, and communicated to park managers in a useful form. To monitor trends in the fourth category requires original data collection using surveys, interviews, focus groups, and other social science methods.

The Mandate

Socioeconomic monitoring (SEM) addresses the need of managers, planners, and policymakers for timely and accurate information on people in and around parks. SEM's purpose is to advance the mission of the NPS by generating and communicating scientifically sound information about trends in how people and parks connect. In this way, SEM helps to achieve several key NPS priorities and strategic goals for science, as articulated by Director Jonathan Jarvis and others. These include:

- *Advancing the role of science* within the agency and developing a state-of-the-art NPS science program;
- *Elevating and expanding the use of science* in decision-making by the NPS and its partners; and
- Providing the information NPS managers need to measure and promote *the continued relevancy and connection* of parks with the American people.

Socioeconomic monitoring also contributes to improved dialogues between the NPS and gateway communities. As noted by Director Jarvis, “. . . gateway communities and parks have an important relationship that needs to be grown through mutual respect and cooperation, particularly when tourism is an essential part of the economy.”² By providing up-to-date information on the economic contributions of visitor and park payroll spending to gateway regions, SEM documents a tangible value of park preservation to communities and demonstrates the vital role that parks play in achieving environmental, economic, and quality-of-life goals in parks and surrounding areas.

Several recommendations in the report of the National Parks Second Century Commission highlight the value of an SEM program. By tracking the public's knowledge of parks and the NPS, SEM measures progress in *heightening the awareness* of the National Park System in the U.S. population. SEM evaluates the success of programs aimed at *engaging diverse audiences* by monitoring the demographic characteristics of visitors and non-visitors and how this changes over time. By developing survey templates and protocols for regular use by parks, SEM can document how well the NPS helps people learn to *appreciate the nature and history* that have shaped their lives and are preserved and interpreted in parks.

The Need

Monitoring is “the collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting a management objective.”³ A small number of socioeconomic monitoring activities occur already in the NPS. Some of these, such as the NPS Comprehensive Survey of the American Public, are not base-funded and can be conducted only sporadically as funding becomes available. Others, including the annual Money Generation Model economic impact tool, rely on non-NPS experts operating on annual cooperative agreements that can

² Statement to the Senate Committee on Energy & Natural Resources, July 28, 2009.

³ Elzinga, C., Salzer, D., & Willoughby, J. 1998. Measuring and monitoring plant populations. Bureau of Land Management, Technical Reference 1730-1, Denver, CO (page 1).

end with little advance notice. And others, such as the Visitor Services Project survey program, are not designed to meet the Service's long-term monitoring needs. This is an impractical approach to monitoring socioeconomic trends. Monitoring requires institutional continuity, long-term planning horizons, stability in methods and samples, and predictable commitments of funds and personnel. This ensures that, over time, monitoring protocols will continue to meet defined standards of quality, adequately characterize uncertainty, and usefully measure change along socioeconomic gradients, even with turnover in staff.⁴ If the vision for socioeconomic monitoring in the NPS is realized, for the first time in its history managers in the NPS will be able to answer such important and widely asked questions as:

- How are the age, race, and ethnicity of park visitors changing over time?
- What trends are occurring in the economies, populations, and land use patterns of gateway regions around parks?
- Is the American public's evaluation of the NPS becoming more or less positive?
- How are visitors' preferences and uses of park facilities, services, and activities changing?
- What contributions are park visitors and NPS staff making to the economies of surrounding communities and regions?
- Where are international visitors coming from, and are their numbers increasing or decreasing?

The answers to these and other questions have immense practical utility for park planning and management, contribute to relationships with gateway regions, respond to frequently asked questions about parks from Congress, stakeholders, and the media,⁵ and inform strategic planning and policy at the national level. Moreover, in some cases monitoring may provide useful insights into how well internal and external programs of the NPS are working. In short, results from socioeconomic monitoring are useful in addressing numerous issues in parks, in areas around parks, and in the nation as a whole.⁶

In response to the mandate and need for socioeconomic monitoring, an SEM working group developed the following draft statement of mission, programmatic goals, and operational objectives.⁷ A basic principle driving this statement was that the SEM program must respond to the priority social science information needs of park managers.

Mission and Goals

The mission of the SEM Program is to collect, organize, and make available high-quality social science trend data and to facilitate the transformation of these data into knowledge of value to park managers and other NPS decision-makers. In carrying out this mission, the long-term programmatic goals of the SEM program are to:

⁴ Oakley, K., Thomas, L., & Fancy, S. 2003. Guidelines for long-term monitoring protocols. *Wildlife Society Bulletin*, 31(4): 1000-1003.

⁵ See, for example, "National Parks Reach Out to Blacks Who Aren't Visiting," *New York Times*, November 2, 2010.

⁶ Fancy, S., Gross, J., & Carter, S. 2008. Monitoring the condition of natural resources in U.S. national parks. *Environmental Monitoring and Assessment*, 151, 161-174.

⁷ "Socioeconomic Monitoring in the National Park Service." March 2009. Internal NPS briefing statement. Wash, D.C.

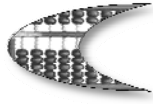
- Develop baseline information describing human populations in parks, regions around parks, and nationally.
- Conduct long-term monitoring of trends in the socioeconomic characteristics of human populations in parks, regions around parks, and nationally.
- Establish socioeconomic monitoring as a standard practice throughout the National Park System that transcends traditional program, activity, and funding boundaries.
- Facilitate the integration of socioeconomic monitoring into NPS planning, management, and decision-making.
- Share NPS information with other organizations, and form partnerships for attaining common goals and objectives.

Objectives

The operational objectives of the SEM Program are to:

- Determine trends in the size, characteristics, and behaviors of human populations in parks, regions around parks, and the nation.
- Monitor trends in key variables that may explain or predict changes in the number, characteristics, and behaviors of these populations.
- Monitor trends in factors that may be affected by changes in human populations in and around parks, including trends in visitor experiences.
- Monitor trends in the quantity and quality of visitor services in parks and gateway communities.
- Provide reference points on human populations in parks for comparison with regional, state, and national populations.
- Provide data to meet certain legal and Congressional mandates related to the protection of visitor enjoyment and park resources.
- Provide a means to measure progress towards achieving performance goals related to visitor enjoyment.

The next chapter describes the flow of events that led to the needs assessment and the grass roots assessment process that the NPS employed to document, organize, and prioritize SEM information needs.



2

Background and Process

CHAPTER SUMMARY

The need for a socioeconomic monitoring program in the NPS was identified in an external review of the NPS Social Science Program and in the 2008 Interior Appropriations Bill Joint Explanatory Statement. In response, the Social Science Division conducted a systemwide needs assessment participated in by 425 persons representing parks, regions, external programs, the Washington headquarters, and partners. These participants identified 175 socioeconomic indicators that would be important in helping them perform their jobs. A SEM working group of park, program, regional, and national staff guided the assessment and designed a process to prioritize the indicators based on their significance to management, social science, and law and policy.

Two events gave strong impetus to the SEM needs assessment. The first was a recommendation contained in an external review of the NPS Social Science Program conducted in 2007. The second resulted from congressional concern about the ability of the NPS to serve a new generation of park users. The needs assessment process that resulted is traced in the timeline in Figure 1.

External Review

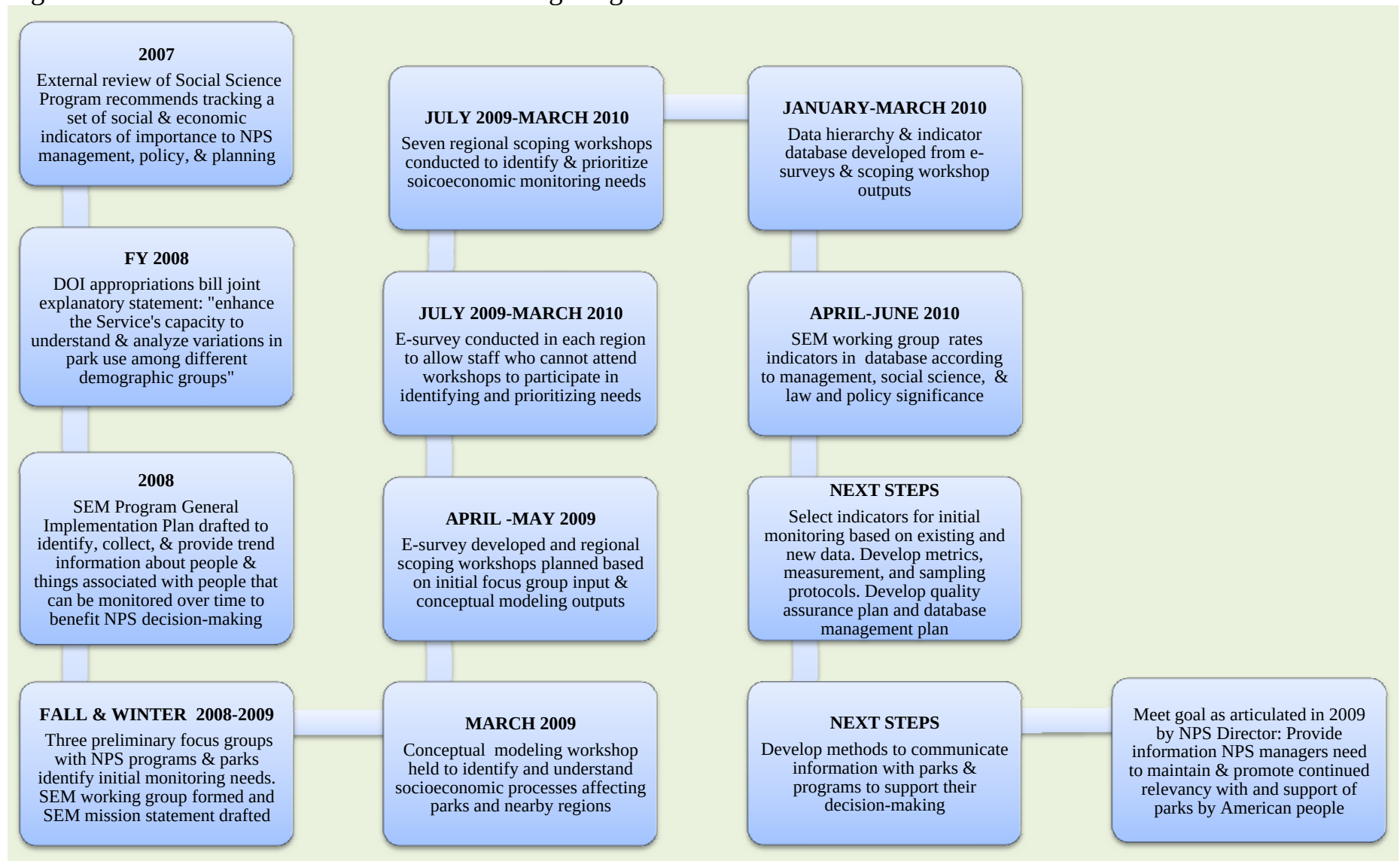
In 2007, in consultation with the Associate Director, Natural Resource Stewardship and Science (NRSS), the NPS Visiting Chief Social Scientist appointed three senior academic scholars, a recently retired NPS superintendent, and the NPS Deputy Chief Scientist to a team charged with conducting a review of the NPS Social Science Program. Prior to the review, the Social Science Program completed a self-study that highlighted strengths, weaknesses, opportunities, and threats to the program and NPS social science. The charge to the review team reflected these issues. In particular, the team was directed to suggest “future strategies that will mitigate or remedy important problems confronting the Social Science Program and take full advantage of opportunities likely to emerge by the NPS centennial year of 2016.”

The review team finalized its report in November 2007 and transmitted it to the NRSS Associate Director. The report presented several far-reaching recommendations to increase the efficiency, rigor, and practical utility of social science in the NPS. One of the most important stated that the NPS should develop a “Social Monitoring Program.” According to the review team, this program should track a set of social and economic indicators covering visitor characteristics and other socioeconomic dimensions of importance to NPS management, planning, and policy. This new monitoring program would be a counterpart to the NPS inventory and monitoring program for natural resources.

The report also discussed ways to build socioeconomic monitoring on existing activities, including:

- The Public Use Statistics Office that collects visitor use statistics for all NPS units reporting visitation;
- The Visitor Services Project surveys conducted in 15-20 parks annually;

Figure 1. Timeline of Socioeconomic Monitoring Program Assessment Process.



- The periodic NPS Comprehensive Survey of the American Public, a national survey of U.S. households, including visitors and non-visitors to the National Park System;
- The annual visitor satisfaction survey conducted in approximately 320 units;
- The annual Money Generation Model report that describes the economic contribution of spending by park visitors and NPS employees to surrounding communities; and
- The Socioeconomic Atlases describing trends in a broad set of social and economic indicators in regions adjacent to parks.

Some of these activities would require substantial changes in order to serve effectively as monitoring tools. For example, the Visitor Services Project (VSP) surveys are onsite visitor surveys with good control over the quality of their samples, but the surveyed parks do not constitute a representative sample of the National Park System. Rather, the surveys are conducted in parks with specific management or planning activities that require social science data. Also, priority for surveys is given to parks that have not had a previous visitor study. Therefore, the VSP rarely tracks trends in either the National Park System as a whole or in specific parks. The Visitor Survey Card customer satisfaction survey is a short survey that is widely deployed across the system and has potential as a monitoring tool. However, no direct control over the quality of its sample exists, and the sample sizes in some parks are so small that the resulting error margins in parameter estimates render the survey's use for monitoring problematic.

The review team's report noted that while measures of visitor characteristics, behaviors, and attitudes require original data collection, many other indicators could be tracked using existing (or secondary) data sources. Or they might be measured with observation or other unobtrusive data collection techniques.⁸ In addition, the team identified other information from public and commercial sources that could be adapted and employed as part of an SEM program. These included travel industry reports on recreation and tourism market trends; inventories of park facilities and visitor services; data on NPS budgets, employees, and payrolls; concession receipt data; and information of the tourism infrastructure of gateway communities.

Congressional Action

In 2008, Congress recognized the need for additional funding to better understand park visitors and non-visitors as a key to maintaining the relevancy of national parks to an increasingly diverse population. The 2008 Interior Appropriations Bill Joint Explanatory Statement directed that "... within the large increase approved by the Congress, the [NPS] Director should take steps to enhance the Service's capacity to understand and analyze variations in park use among different demographic groups. This effort will be critical as the parks prepare for a new generation of users."

The explanatory statement resulted from an FY 2008 NPS budget initiative in support of social science. The original initiative envisioned developing or improving programs in three key areas related to socioeconomic monitoring:

- Improve understanding of *park visitors* by creating a "system of indicator parks" to monitor vital social indicators among visitors (discussed further in Chapter 5);
- Improve understanding of *non-visitors* through regular and predictable funding for the NPS Comprehensive Survey of the American Public; and

⁸ The potential use of GPS systems in socioeconomic monitoring is discussed in Chapter 5.

- Improve measurement of *total visitation* by re-establishing cyclical reviews of public use counting at parks and evaluating and testing technological advances in pedestrian and vehicular counting methods.

The NPS submitted a request for \$1 million to support the three initiatives. A smaller base increase of approximately \$466,000 resulted from the congressional directive.

SEM Working Group

An 18-member working group representing all NPS regions and including key functions, technical expertise, and end users, guided the design and implementation of the SEM needs assessment. Appendix I lists the working group members. Members of the working group helped to organize regional scoping workshops and participated in them. They identified and recruited other participants and provided valuable feedback on the assessment process during periodic telephone conferences.

At the conclusion of the scoping workshops, working group members met in April 2010 to review the input received from each region and to rate the 175 indicators identified by scoping workshop participants on their management significance and their social science significance (i.e., understanding the social processes affecting parks). A subcommittee of the working group met in June 2010 to rate the same set of indicators on their law and policy significance. These ratings constitute an essential step towards prioritizing the importance of the many indicators elicited from the field. Along with other consideration, such as cost of collection, availability, and duplication, the working group prioritizations will provide important input into the eventual selection of indicators to be monitored.

The criteria used by the SEM working group to rate the indicators appear in Table 1. They were adapted from criteria developed initially by the NPS Inventory and Monitoring Division (Mojave Desert Network) and used to rate the significance of indicators of ecological vital signs. Chapter 3 describes the results of the working group meeting to prioritize socioeconomic indicators. Additional details of the process are contained in Appendix V.

General Implementation Plan

In response to the external review and congressional action, the NPS Social Science Program initiated planning for a socioeconomic monitoring program that would answer questions about who visitors are, what they think, know, and do, and how these characteristics change over time. Additionally, the SEM program would be a tool that managers could use to track trends in populations around parks. Finally, through a periodic national survey, it would monitor national public opinion towards the NPS and issues important to it and describe non-visitors and their reasons for not using parks.

A general implementation plan for the SEM Program was devised consisting of three phases: *assessment*, *planning*, and *operation*. The assessment phase included the following components: 1) inventory of existing data sources that could answer important monitoring questions without collecting new data; 2) initial workshop to draft conceptual models identifying key drivers and effects in social systems; and 3) nationwide needs assessment consisting of preliminary focus groups and facilitated scoping workshops, and e-surveys in the seven NPS administrative regions. Participants in the scoping workshops included park and program managers, regional staff, and (in some cases) partners from academia and NGOs. The general implementation plan was finalized in 2008, and the assessment phase was completed in 2010.

Table 1. Criteria Used by the Working Group to Rate the Significance of Indicators.

Management Significance
How many of these statements do you AGREE with? Assign rating as defined by criteria below. • There is a direct application of the data to key management or policy decisions, or for evaluating the effectiveness of past management or policy decisions. • The indicator will produce results that are understandable and useful to park managers, policy makers, and the general public. • The indicator usefully describes the status of populations or processes that are of significant interest to parks managers, stakeholders, or the NPS. • The indicator is sensitive enough to detect changes in populations or processes that are important to park managers and the NPS. • The indicator will produce results with potential to influence external decisions that will affect populations or processes important to park managers and the NPS. • Data are of high public interest. 5- VERY HIGH: agree with all 6 of the statements above. 4- HIGH: agree with 5 of the statements above. 3- MODERATE: agree with 3 or 4 of the statements above. 2- LOW: agree with 2 of the statements above. 1- VERY LOW: agree with 1 of the statements above or none of the statements above. NULL: No opinion, or did not score this indicator.
Social Science Significance
How many of these statements do you AGREE with? Assign rating as defined by criteria below. • There is a strong, defensible link between the indicator and the concept it is intended to represent. • The indicator represents attributes that have high socioeconomic importance based on a theoretical model or are otherwise well-supported by the social science literature. • The indicator can be quantified and tracked at regular time intervals using consistent methodology. • Monitoring the indicator is likely to contribute to early warning of possible adverse impacts to the status of populations or systems important to park managers and the NPS. • The indicator reflects the capacity of human populations and processes to adapt to or recover from short- or long-term disruptions. • Monitoring the indicator is likely to contribute to increased understanding of human populations and processes important to social scientists and the NPS. 5- VERY HIGH: agree with all 6 of the statements above. 4- HIGH: agree with 5 of the statements above. 3- MODERATE: agree with 3 or 4 of the statements above. 2- LOW: agree with 2 of the statements above. 1-VERY LOW: agree with 1 of the statements above or none of the statements above. NULL: No opinion, or did not score this indicator.
Law and Policy Significance
Assign rating as defined by criteria below. 5 - VERY HIGH: The NPS or park is required to monitor this indicator by a specific act or executive order. 4 - HIGH: The NPS is required to monitor this condition because it provides information that is relevant to management as directed by a specific act or executive order. 3 - MODERATE: The NPS may monitor this condition because it provides information that is relevant to management as described in NPS management policies. 2 - LOW: The NPS may monitor this condition because it provides information that is relevant to management as described in the enabling legislation by a park or a set of parks. 1 - NONE: There is no legal mandate for monitoring this condition.

Preliminary Focus Groups

The needs assessment for SEM began with three focus groups convened in the fall and winter of 2008-2009 in Boston, San Francisco, and Washington, DC. The focus groups provided initial input from NPS staff to help develop the SEM program. The primary outcomes included a preliminary identification of the universe of information needs, an initial set of possible priorities, and a framework for a pre-workshop survey conducted in each NPS region prior to its scoping session. The focus groups also identified existing data sources that potentially could contribute to the SEM program. Appendix II describes the process and output from the three focus groups.

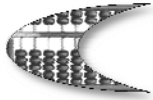
Conceptual Modeling Workshop

Conceptual models (sometimes called “thought drawings”) can be effective tools for scientific communication to diverse audiences. The SEM assessment phase included a facilitated conceptual modeling workshop convened in spring 2009 and participated in by academic social scientists and researchers, park, and program staff from the NPS. The aim of the workshop was to begin developing one or more models of socioeconomic processes affecting parks that could serve as a communication tool to the NPS leadership and stakeholders, including potential partners. A second objective was to clarify thinking and to identify gaps in knowledge and data that would help identify priorities for socioeconomic monitoring. Saguaro National Park served as a case study. The workshop participants concluded that, while conceptual models are not essential for socioeconomic monitoring, they can be useful in explaining the monitoring system, for tracing relationships among variables that help determine indicators to monitor, and for linking indicators to management decisions and research themes. Much discussion focused on the relative complexity of creating conceptual models of socioeconomic processes vs. biophysical processes. Attempts to employ a systems approach to building a conceptual model⁹ of visitation to Saguaro National Park were only partially successful. Nevertheless, participants proposed an initial set of variables and models to illustrate processes important to understanding the socioeconomic condition of parks similar to and different from Saguaro. These were augmented by a draft logic model developed by the SEM working group at its meeting in April 2010. The conceptual models are included in Appendix III, and the logic model is shown in Chapter 5.

E-Survey and Regional Scoping Workshops

The second major activity of the needs assessment consisted of electronic surveys and scoping workshops conducted in the seven NPS regions from July 2009 through March 2010. Their purpose was to gather additional input from NPS staff and partners to assist in developing the SEM program. People in each region who could not participate in the workshops were able to respond to the electronic survey. In total, 425 NPS staff and partners took part in the needs assessment, including 41 in the preliminary focus groups, 212 in the electronic surveys, and 172 in the regional scoping sessions. The primary outcome of this effort was a prioritized list from each region of its socioeconomic monitoring needs. This output was transmitted to the SEM working group who rated the 175 indicators identified on management significance, social science significance, and law and policy significance. These ratings are discussed in the next chapter. Appendix IV contains additional output from the e-surveys and the scoping workshops.

⁹ Grant, W., & Swannack, T. 2008. *Ecological Modeling: A Common-Sense Approach to Theory and Practice*. Malden, MA: Blackwell Publishing.



3

Prioritization Results

CHAPTER SUMMARY

A subcommittee of the SEM working group organized 175 indicators identified during the needs assessment into a hierarchy consisting of four “Level 1” categories, more specific “Level 2” categories, and “Level 3” indicators. The Level 1 categories included: 1) visitors and other people in parks; 2) people outside parks; 3) economy; and 4) perceptions, attitudes, and values. The full working group employed a database incorporating the hierarchy to rate the indicators in terms of their management and social science significance. A subcommittee of the working group subsequently assigned an additional law and policy rating to each indicator. The three scores were used to compute unweighted average ratings and to rank-order the indicators within each Level 1 category. This chapter presents results of the prioritization.

Drawing upon the experience of the NPS Inventory and Monitoring Division, a subcommittee of the SEM working group met by videoconference in January 2010 to organize the 175 socioeconomic indicators recorded during the needs assessment into a data hierarchy, ranging from general categories of socioeconomic information to specific indicators within these categories. Input from the regional scoping workshops and surveys were reviewed, as well as related classification systems, including those of the NPS Socioeconomic Atlas Program and the 2003 human dimensions framework utilized by the U.S. Forest Service to guide social assessments.¹⁰

The subcommittee meeting resulted in four general dimensions—called “Level 1” categories—at the top of the data hierarchy. These were divided into more specific “Level 2” categories that encompassed the 175 “Level 3” indicators recorded during the scoping workshops. The Level 1 categories included:

- Visitors and other people in parks, including their numbers, behaviors, and characteristics;
- People outside of parks, including their numbers, behaviors, and characteristics;
- Economy, including park assets and economic impacts on surrounding areas; and
- Perceptions, attitudes, and values of people inside and outside of parks.

Level 3 indicators are not operational measures. During its prioritization workshop, the SEM working group noted that measurable “Level 4” metrics are needed for the indicators that are eventually selected for monitoring. While some Level 3 indicators might be specific enough to function as metrics, others are more general, sometimes comprising sets of similar indicators that could be usefully separated. Revising the hierarchical structure and adding metrics for indicators selected for monitoring is an appropriate task for the indicator-selection stage of the SEM planning phase.

Besides developing the initial data hierarchy, the subcommittee also created the process to be used by the working group to prioritize the indicators. Several approaches to indicator selection were reviewed, including BOGSAT (Bunch of Guys/Gals Sitting Around a Table), Delphi panels, an analytic hierarchy process, and combinations of these. The selected approach was used successfully to prioritize natural resource indicators for the NPS Mojave Desert I&M Network. Finally, the

¹⁰ Bright, A.D., Cordell, J., Tarrant, M., & Hoover, A. (2003). A human dimensions framework for forest planning and assessments. USDA Forest Service Gen. Tech. Rep. SRS-65, Southern Forest Experiment Station, Athens, GA.

subcommittee developed a Microsoft Access[®] database for use by the working group to prioritize all indicators. The database contained the data hierarchy, rating scales, and justification statements for each Level 1 and Level 2 category.

The results of the prioritization by the full SEM working group follow.¹¹ Each of the four Level 1 categories is represented by a table. Level 1 justification statements precede each table. Within these tables, indicators are rank-ordered within their corresponding Level 2 categories. Additional details describing the prioritization process appear in Appendix V.

Visitors and Other People in Parks

Park managers must base management decisions on sound scientific information. Socioeconomic data about visitors and other people in parks not only furnishes insights into how best to provide for public enjoyment, but how to create productive partnerships, involve people in decision making, recruit and retain an outstanding workforce, and provide leadership in environmental stewardship.

An important Servicewide strategic goal of the NPS is to “provide for the public enjoyment and visitor experience of parks.” This goal reflects the NPS Organic Act, which directs the NPS to provide for the enjoyment of park resources in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. The two parts of the strategic goal state that: 1) “Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services and appropriate recreational opportunities;” and 2) “Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.”

To meet these goals, managers need information about people in parks. Important knowledge about ***park visitors*** identified in the needs assessment (and shown as Level 2 categories in Table 2) includes:

- Number of visitors;
- Visitors’ behavior;
- Visitors’ demographic characteristics; and
- Visitors’ trip characteristics.

In similar ways, managers also benefit from information on ***other people in parks***, including information in the following Level 2 categories in Table 2:

- Virtual visitors;
- Subsistence users;
- Employees;
- Researchers; and
- Inholders.

Ratings for Visitors and Other People in Parks. Employing the criteria shown in Table 1, the SEM working group rated all 44 Level 3 indicators in the general category of “visitors and other people in parks.” The unweighted average of the three ratings for each indicator appears in rank order within Level 2 categories.

¹¹ Due to scheduling conflicts, three working group members were unable to participate in the prioritization meeting. Two of these were replaced by other participants. The additional participants included Bruce Peacock, chief of the NPS Social Science Division, and Tom Fish, national coordinator, Cooperative Ecosystem Studies Units.

Table 2. Rank-Ordered Indicators of “Visitors and Other People in Parks”

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Visitor Behavior	Activities participated in	5	5	5	5
Visitor Behavior	Facilities and services used	5	5	5	5
Visitor Behavior	Information technologies used/brought to park	5	5	3	4.33
Visitor Behavior	Accidents in parks	4	4	5	4.33
Visitor Behavior	Illegal activity in parks	5	3	4	4
Visitor Behavior	Spending in gateway region	4	4	3	3.67
Visitor Behavior	Frequency and # of past visits	3	4	3	3.33
Visitor Behavior	Travel with pet	3	3	3	3
Visitor Behavior	Support of park (membership in friends group, contributions, volunteering, etc.)	4	4	1	3
Number of Visitors	# recreation visits, including backcountry, special events, school groups, etc.	5	4	5	4.67
Number of Visitors	# participants in park programs	5	4	4	4.33
Number of Visitors	# overnight stays in park	4	4	3	3.67
Number of Visitors	# non-recreation (commuter) visits	4	3	3	3.33
Group Composition	Disabilities	5	5	4	4.67
Group Composition	Group size and type (family, package tour, school, etc.)	5	5	3	4.33
Group Composition	# of vehicles in travel group	3	3	3	3
Subsistence Users	# of subsistence users	5	5	4	4.67
Subsistence Users	Subsistence user demographics	3	4	5	4
Subsistence Users	Resources harvested in park	5	3	4	4
Subsistence Users	Subsistence practices (technologies, locations, time of harvest, etc.)	4	4	4	4

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Visitor Demographics	Age and gender	5	5	3	4.33
Visitor Demographics	Ethnicity and race	5	5	3	4.33
Visitor Demographics	Permanent residence	4	4	3	3.67
Virtual Visitors	Website visits (nps.gov)	5	5	3	4.33
Virtual Visitors	Demographics (age, race, etc.)	5	5	3	4.33
Virtual Visitors	Socioeconomic status (income, education, etc.)	5	5	3	4.33
Virtual Visitors	Actual park visits	5	4	3	4
Virtual Visitors	Park social network visits	5	5	1	3.67
Virtual Visitors	Visit origin (how they "get" to park website; referring site)	4	2	3	3
Employees	# and diversity of NPS employees and volunteers	4	4	5	4.33
Employees	# and diversity of concession employees	4	3	5	4
Researchers	# and activities in park	4	4	5	4.33
Socioeconomic Status of Visitors	Income and education	4	5	3	4
Socioeconomic Status of Visitors	Preferred language(s)	4	3	3	3.33
Socioeconomic Status of Visitors	Employment status (working, retired, etc.)	3	3	3	3
Trip Characteristics	Length of stay in park/area	4	4	4	4
Trip Characteristics	Sites visited in and near park	5	3	4	4
Trip Characteristics	Itinerary (route/sequence)	4	4	4	4
Trip Characteristics	Mode(s) of travel to park	4	4	4	4
Trip Characteristics	Info sources to plan trip	5	4	3	4
Trip Characteristics	Type/location overnight stay	4	3	4	3.67
Trip Characteristics	Type of entry permit used	4	4	3	3.67
Inholders	# inholders and acreage	5	2	5	4
Inholders	Development on inholdings	5	2	3	3.33

People Outside Parks

The NPS Strategic Plan states that the NPS will: 1) collaborate with federal, state, tribal, and local governments, private organizations, and businesses to work toward common goals; 2) provide opportunities for citizens to participate in the decisions and actions of the National Park Service; and 3) educate the general public about their history and common heritage. In order to meet these goals and to base management decisions on sound information, the NPS must understand *people outside of parks*. This includes knowledge in the following Level 2 categories shown in Table 3:

- Gateway communities;
- Park-affiliated populations;
- The Nation; and
- Non-visitors (living in the U.S.).

Collaborating productively with these groups to protect park resources and values, provide meaningful opportunities for public involvement and engagement, and develop effective educational programs is improved when park managers understand trends in the numbers, characteristics, and behaviors of people outside of parks. This includes understanding changes in the demographic and economic structure of gateway regions, land use patterns in adjacent areas, trends in uses of leisure time, and public trust in the NPS. To work toward common goals with neighboring governments, organizations, and businesses, managers need to know how people outside of parks interact with, and are affected by park actions, park visitors, and other people in parks.

Ratings for People Outside Parks. Employing the criteria shown in Table 1, the SEM working group rated all 37 Level 3 indicators in the general category of “people outside parks.” The unweighted average of the three ratings for each indicator appears in rank order within Level 2 categories.

Table 3. Rank-Ordered Indicators of “People Outside Parks”

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Gateway Communities	Total population	5	5	3	4.33
Gateway Communities	Population change and projections	5	5	3	4.33
Gateway Communities	Demographics (age, race, % U.S. born, etc.)	5	5	3	4.33
Gateway Communities	# seasonal residents	5	5	3	4.33
Gateway Communities	Land use around park (urbanization, farmland, etc.)	5	5	3	4.33
Gateway Communities	Education policies and delivery (curriculum requirements, home schooling, etc.)	5	5	3	4.33
Gateway Communities	Visits to park	5	5	3	4.33
Gateway Communities	Socioeconomic status (income, education, etc.)	4	5	3	4.00

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Gateway Communities	Income and education	4	5	3	4.00
Gateway Communities	Membership in friends groups, giving, volunteer activity	4	4	3	3.67
Gateway Communities	Population/housing density and projections	3	4	3	3.33
Gateway Communities	Tourism infrastructure (hotel rooms, restaurants, etc.)	4	3	3	3.33
Gateway Communities	Environment-friendly behavior at home	3	4	3	3.33
Gateway Communities	Years lived in community	2	3	3	2.67
Park-Affiliated Populations	Total population	5	5	3	4.33
Park-Affiliated Populations	Social well-being index	4	5	3	4.00
Park-Affiliated Populations	Resource-sharing networks	4	5	2	3.67
Park-Affiliated Populations	Persistence of traditional ecological knowledge	3	4	3	3.33
Park-Affiliated Populations	Social organization (role of elders, etc.)	2	4	3	3.00
Nation	Demographics (age, race, % U.S. born, etc.)	5	5	3	4.33
Nation	% U.S. households visiting parks	5	5	3	4.33
Nation	Education policies and delivery affecting parks (national standards, home schooling trends, etc.)	5	5	3	4.33
Nation	Uses of leisure time (vacation length, travel modes, activities)	5	5	3	4.33
Nation	Socioeconomic status (income, education, etc.)	4	5	3	4.00
Nation	Total population	4	4	3	3.67
Nation	Urbanization trends	4	4	3	3.67
Nation	Membership in friends groups, giving, volunteer activity	3	4	3	3.33
Nation	% international tourists in U.S. visiting national parks	2	3	4	3.00
Nation	Tourism industry activity	3	3	3	3.00

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Non-Visitors in the U.S.	Demographics (age, race, % U.S. born, etc.)	5	5	3	4.33
Non-Visitors in the U.S.	Reasons for not visiting	5	5	3	4.33
Non-Visitors in the U.S.	% who never visited or are former visitors	5	5	3	4.33
Non-Visitors in the U.S.	Preferred uses of leisure time	5	5	3	4.33
Non-Visitors in the U.S.	Socioeconomic status (income, education, etc.)	4	4	3	3.67
Non-Visitors in the U.S.	Awareness/interest in parks and NPS	4	4	3	3.67
Non-Visitors in the U.S.	% of U.S. households not visiting parks	3	4	3	3.33
Non-Visitors in the U.S.	Intention to visit in future	3	4	3	3.33

Economy

The NPS Strategic Plan states that the National Park Service will integrate social, economic, environmental, scientific, and ethical considerations into its decision-making process. In particular, the **economy** (including economic activity and structure) of visitors and of areas outside of parks affects the use and management of park resources. Nationally, park visitation is impacted by travel costs and disposable income. The resources allocated to the management of the NPS itself are directed by Congressional action, which also is influenced by economic conditions in the United States. Locally, a park's ability to provide and enhance visitor services and facilities may depend on fee revenue, while the economic vitality of gateway communities influences the availability and quality of travel and tourism services provided in areas around parks. In turn, many parks greatly affect the economies and well-being of surrounding regions. Spending by park visitors and employees produces income for residents and supports local jobs in tourism-related economic sectors and businesses that supply the tourism sector. Parks provide ecosystem services, such as wildlife habitat, carbon sequestration, flood control, and recreational opportunities, whose full worth is not always captured in the marketplace, but which provide significant value. Parks also affect the economies of surrounding regions when large numbers of visitors place heavy demands on community services and infrastructure. And significant drops in park visits, either seasonally or over longer periods, can dramatically affect the economic structure and well-being of gateway economies. For all of these reasons, park managers need sound economic trend data to inform their decision-making and their interactions with people inside and outside of parks. This includes knowledge of the following Level 2 categories shown in Table 4:

- Economic structure/assets of parks;
- Economic structure/assets of gateway region; and
- The national economy.

Ratings for Economy. Using the Table 1 criteria, the SEM working group rated the 33 Level 3 indicators in the “economy” category. The unweighted average of the three ratings for each indicator appears in Table 4 in rank order within Level 2 categories.

Table 4. Rank-Ordered Indicators of “Economy”¹²

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Economic Structure/ Assets of Parks	Entrance/user fee revenue	5	3	4	4
Economic Structure/ Assets of Parks	Park operating budget	5	2	4	3.67
Economic Structure/ Assets of Parks	Receipts from franchise fees/Cooperative use agreement (CUA) payments	4	3	4	3.67
Economic Structure/ Assets of Parks	Construction budget	5	2	4	3.67
Economic Structure/ Assets of Parks	# concessioners and CUAs	4	3	4	3.67
Economic Structure/ Assets of Parks	Concessioner/CUA receipts	4	3	4	3.67
Economic Structure/ Assets of Parks	# visitor facilities/programs	5	3	3	3.67
Economic Structure/ Assets of Parks	Cooperating association receipts	4	2	3	3
Economic Structure/ Assets of Parks	Employee housing	4	2	3	3
Economic Structure/ Assets of Parks	Federal payroll	3	2	3	2.67
Economic Structure/ Assets of Parks	Land acquisition budget	2	1	4	2.33
Economic Structure/ Assets of Gateway Region	Economic impacts of visitor spending	4	4	3	3.67
Economic Structure/ Assets of Gateway Region	Importance of subsistence activity in household economy	4	4	3	3.67
Economic Structure/ Assets of Gateway Region	Travel services (hotel rooms, restaurants, etc.)	4	3	3	3.33
Economic Structure/ Assets of Gateway Region	Occupancy rates	4	3	3	3.33
Economic Structure/ Assets of Gateway Region	Visitor spending in region	4	3	3	3.33
Economic Structure/ Assets of Gateway Region	Economic base of region	3	3	3	3

¹² The members of the SEM working subgroup who rated the economic indicators also drafted an alternative hierarchical structure for those variables. The structure shown in Table 4 is the original one incorporated into the database. The working group’s alternative structure is included in Appendix V.

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Economic Structure/ Assets of Gateway Region	Cost-of-living index	5	1	3	3
Economic Structure/ Assets of Gateway Region	Housing cost index	5	1	3	3
Economic Structure/ Assets of Gateway Region	Other commercial services	3	2	3	2.67
Economic Structure/ Assets of Gateway Region	Sales tax receipts	2	3	3	2.67
Economic Structure/ Assets of Gateway Region	Economic impacts of park payroll spending	3	2	3	2.67
Economic Structure/ Assets of Gateway Region	Economic well-being index	2	3	3	2.67
Economic Structure/ Assets of Gateway Region	Employment by industry	2	2	3	2.33
Economic Structure/ Assets of Gateway Region	Tourism ratios and multipliers	1	3	3	2.33
National Economy	Travel cost index	5	3	3	3.67
National Economy	Ground transport fuel prices	4	3	3	3.33
National Economy	# of international arrivals in U.S.	3	2	4	3
National Economy	Disposable income	3	3	3	3
National Economy	International visitor spending	2	2	4	2.67
National Economy	Unemployment	3	2	3	2.67
National Economy	Air fare prices	3	2	3	2.67
National Economy	Economic well-being index	2	2	3	2.33

Perceptions, Attitudes, and Values *(of people inside and outside of parks)*

The NPS mission is to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. Areas that are managed as wilderness are to retain their primeval character and provide opportunities for solitude. Although these mandates are fundamental to the management of national parks, definitions of conditions such as enjoyment, inspiration, and primitiveness vary greatly depending on people's **perceptions** of what is real, their **attitudes** about what is good or bad in specific situations, and their deeply held **values** about what is right or wrong in general. For these reasons, management decisions are improved by information describing the perceptions, attitudes, and values of the public, including people inside and outside of parks. Further, because national parks are held for the

enjoyment of present and future generations, understanding trends in these parameters over time is crucial for effective planning and evaluation. In particular, the perceived benefits of a park visit—be they social, psychological, or physical—are important for understanding why people come to parks. Knowing what conditions people perceive to be safe or dangerous in parks contributes to developing and evaluating risk management programs. Measuring visitors’ attitudes towards encounters with others in wilderness settings aids in defining indicators and standards for solitude. And knowing how different segments of the American public value natural or cultural resource preservation facilitates partnership building and civic engagement. Finally, effective outreach to underserved populations depends largely on knowing how different groups perceive park settings, and on understanding the fundamental values that shape people’s views of nature, heritage, and uses of leisure time. For these reasons, knowledge of trends in people’s perceptions, attitudes, and values is a necessary tool for accomplishing the NPS mission of providing unimpaired resources for public enjoyment, education, and inspiration. This includes knowledge of the following Level 2 categories in Table 5:

- Visitor preferences and expectations;
- Visitor knowledge;
- Visitor evaluations and satisfaction;
- Visitor importance;
- Stakeholders (inholders, gateway residents, etc.);
- Visitor attitudes, opinions, and values;
- General public opinions;
- Visitor motives;
- Visitor perceptions;
- Virtual visitors’ perception, attitudes, and values; and
- Employees.

Ratings for Perceptions, Attitudes, and Values. Using the significance criteria for management, social science, and law and policy, the SEM working group rated the 61 Level 3 indicators in the category of “perceptions, attitudes, and values of people inside and outside of parks.” As in the previous tables, Table 5 displays the unweighted average of the three ratings for each of the 61 indicators in rank order within Level 2 categories.

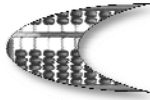
Table 5. Rank-Ordered Indicators of “Perceptions, Attitudes, and Values”

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Visitor Knowledge	Knowledge of park mandates, policies, and regulations	5	3	5	4.33
Visitor Knowledge	Knowledge gain from visit	5	4	3	4.00
Visitor Knowledge	Knowledge of resource and visitor management issues	4	4	3	3.67
Visitor Knowledge	Knowledge of who manages site	4	3	3	3.33
Visitor Knowledge	Knowledge of general environmental issues (climate change, etc.)	3	4	3	3.33

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Visitor Knowledge	Knowledge of park planning processes	3	2	3	2.67
Visitor Knowledge	Knowledge of available activities	3	2	3	2.67
Visitor Preferences and Expectations	Activity and experience preferences (social, spiritual, psychological, physical, etc.)	5	4	3	4.00
Visitor Preferences and Expectations	Service, facility, & information technology preferences	5	4	3	4.00
Visitor Preferences and Expectations	Visitor density preferences and tolerances for crowds (VERP)	4	3	4	3.67
Visitor Preferences and Expectations	Fee preferences (willingness-to-pay for improved services)	4	2	4	3.33
General Public Opinions	Perceived value of parks (for ecosystem services, recreation, quality of life, health, etc.)	5	4	3	4.00
General Public Opinions	General environmental values (preservation, development, stewardship, etc.)	4	4	3	3.67
General Public Opinions	Importance of protecting parks	4	3	3	3.33
General Public Opinions	Perceived threats to parks	4	3	3	3.33
General Public Opinions	Awareness/evaluation of parks and NPS	4	2	3	3.00
General Public Opinions	Science literacy of public	3	3	3	3.00
General Public Opinions	Opinions about resource and visitor management issues	2	2	3	2.33
General Public Opinions	How the public learns about parks	2	2	3	2.33
General Public Opinions	Intention to visit in the future	2	2	3	2.33
General Public Opinions	Opinions about park financing	2	1	3	2.00
Stakeholders (Inholders, gateway residents, etc.)	Attitude/position on resource and visitor management issues, including subsistence uses	5	3	4	4.00
Stakeholders (Inholders, gateway residents, etc.)	Perceived effectiveness of communication with park	5	3	4	4.00
Stakeholders (Inholders, gateway residents, etc.)	Perceived threats to parks	4	4	3	3.67
Stakeholders (Inholders, gateway residents, etc.)	Attitude toward park visitors	3	4	3	3.33

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Stakeholders (Inholders, gateway residents, etc.)	Perceived effects of park on livelihood and quality of life	4	3	3	3.33
Stakeholders (Inholders, gateway residents, etc.)	Perceived value of parks (ecosystem services, recreation, quality of life, health, etc.)	4	3	3	3.33
Stakeholders (Inholders, gateway residents, etc.)	Trust in park and NPS	4	2	3	3.00
Stakeholders (Inholders, gateway residents, etc.)	Perceived environmental change in area over time	2	3	3	2.67
Stakeholders (Inholders, gateway residents, etc.)	Interest in park-related careers	2	2	3	2.33
Stakeholders (Inholders, gateway residents, etc.)	Satisfaction with community	2	2	3	2.33
Visitor Perceptions	Perceived value of parks (ecosystem services, recreation, quality of life, health, etc.)	4	4	3	3.67
Visitor Perceptions	Perceived crowding/congestion	3	2	4	3.00
Visitor Perceptions	Perceived conflict (with other visitors, subsistence users, etc.)	4	2	3	3.00
Visitor Perceptions	Perceived threats to parks	3	3	3	3.00
Visitor Perceptions	Perceived safety in park	3	2	3	2.67
Visitor Perceptions	Perceived wildness or authenticity of park (of natural or cultural sites)	1	1	4	2.00
Visitor Motives	Reasons for visiting, including park as primary destination	4	4	3	3.67
Visitor Motives	Reasons for not participating in activities (interpretation, etc.)	2	2	3	2.33
Visitor Motives	Reasons for not visiting some sites inside or near park	2	2	3	2.33
Visitor Evaluations and Satisfaction	Evaluation of park experiences (satisfaction, enjoyment, etc.)	4	2	5	3.67
Visitor Evaluations and Satisfaction	Evaluation of park services, facilities, fees	4	2	5	3.67
Visitor Evaluations and Satisfaction	Evaluation of park staff	4	2	5	3.67
Visitor Evaluations and Satisfaction	Evaluation of gateway services and facilities	4	2	3	3.00
Visitor Evaluations and Satisfaction	Evaluation of park natural and cultural resource conditions	4	2	3	3.00

Level 2 Category	Level 3 Indicator	Mgmt. Sig	Soc. Sci. Sig	Law/Policy Sig	Average
Visitor Attitudes, Opinions, and Values	Attitudes toward resource and visitor management alternatives, including subsistence harvesting	5	3	3	3.67
Visitor Attitudes, Opinions, and Values	Attitudes toward environmental issues (climate change, etc.)	3	4	3	3.33
Visitor Attitudes, Opinions, and Values	General environmental values (preservation, development, stewardship, etc.)	2	3	3	2.67
Visitor Attitudes, Opinions, and Values	Attitudes toward traditional cultures in and near parks	2	2	3	2.33
Visitor Importance	Importance of experience opportunities (solitude, nature, etc.)	3	4	3	3.33
Visitor Importance	Importance of services and facilities	4	3	3	3.33
Visitor Importance	Importance of activity opportunities	3	3	3	3.00
Employees	Satisfaction with job and NPS	2	3	5	3.33
Employees	Satisfaction with community	2	2	3	2.33
Employees	Knowledge of NPS mission	1	2	3	2.00
Employees	Perceptions of position (importance, workload, etc.)	1	2	3	2.00
Virtual visitors	Evaluation of NPS and related websites	3	3	3	3.00
Virtual visitors	Uses of other media to learn about parks	3	3	3	3.00
Virtual visitors	Intention to visit because of virtual visit	3	3	3	3.00
Virtual visitors	Previous visits to park(s)	2	2	3	2.33
Virtual visitors	Perceived value of parks (ecosystem services, recreation, quality of life, health, etc.)	2	2	3	2.33



4

Voices from the Field

CHAPTER SUMMARY

Important input received during the SEM needs assessment consisted of comments obtained during the seven regional scoping workshops. Taken together, this input describes both common theme and regional differences that emerged from the needs assessment. Common topics included: 1) a recognition of the value of SEM in achieving the mission of the NPS; 2) a small set of core information needs important at three geographic analysis levels (park, areas around parks, and nationally); 3) the value of trend data describing non-visitors; and 4) concerns about definitions of “traditional” people or cultures. In addition, each region identified monitoring and related social science needs that were specific to their situations. Both the common and distinctive “voices from the field” are described in this chapter.

Chapter 3 summarized the priority ratings assigned to 175 socioeconomic indicators by the SEM working group, utilizing the set of indicators identified by people working in parks, programs, and regional offices.¹³ In this chapter, we report these “voices from the field.” The purpose is to present a richer understanding of the needs expressed for socioeconomic monitoring by NPS managers. The source material for this chapter consists of written records made during each scoping workshop. (Appendix III contains a detailed record of the scoping workshop proceedings.)

Workshop participants across the National Park System shared many information needs and management concerns in common. Despite this, distinctive flavors marked the meetings in different regions. Information needs highlighted in one session either were not raised in other regions or were discussed to a much lesser extent. In this chapter, we report both the common themes and the differences articulated by voices from the field. This serves two purposes. First, it puts a richer “face” on the sometimes anonymous labels of Level 3 indicators used in database. This is especially useful for developing Level 4 metrics. Second, the voices from the field demonstrate the trade-offs inherent in a “one-size-fits-most” approach to monitoring. Core monitoring needs exist in the NPS that transcend regional boundaries and that can be addressed by standardized methods. But regions and parks also have issues specific to their situations. Given the imperative to be cost-effective when developing an SEM program, a somewhat standardized approach to monitoring is unavoidable. But responding where possible to the distinctive needs voiced by parks and programs is essential to meeting the needs of the field.

Monitoring and Other Social Science Research

The scoping workshops and e-surveys solicited input on monitoring needs. At each session, monitoring was described as information that *described* the characteristics of people (and things associated with people), together with how these characteristics *changed* over time. Other types of social science questions were contrasted with monitoring questions, including evaluation questions (is a program working the way it’s supposed to work?) and questions about cause-effect relationships (why does something happen or not happen?). The discussion acknowledged that, in some circumstances,

¹³ In some workshops, partners from higher education and NGOs lent their voices to the needs identification.

monitoring could provide useful insight into evaluation and cause-effect issues, but different research methods (e.g., experimental designs) were better-suited to this task.

Nonetheless, workshop participants were encouraged to raise needs and issues besides those related solely to monitoring. Some of this input was collected separately from monitoring needs, but much was intertwined with monitoring questions by those in the workshop. Participants felt that all information they mentioned was useful in their work and many times did not distinguish between monitoring, evaluation, and cause-effect research. Because the SEM assessment was the only major NPS activity devoted exclusively to identifying the social science needs of the field, we include all types of feedback in this chapter, regardless of whether it represents a monitoring question, some other need, or even a definitional issue. Collectively, this feedback presents a fascinating and informative mosaic of social science concerns confronting managers of the National Park System.

Common Themes

A number of monitoring questions and related issues appeared in all or most of the scoping workshops. These common themes included:

- The value of socioeconomic monitoring in improving the ability of the NPS to carry out its mission;
- Core information needs important at all geographic levels of analysis;
- Trend data on non-visitors; and
- Definitions of “traditional” people or cultures.

Socioeconomic Monitoring to Improve the Ability of the NPS to Carry Out Its Mission. Participants in all seven workshops commented on the value to the NPS of systematic trend data on socioeconomic conditions. Major points included the following:

- The need for socioeconomic data is great in a wide range of areas relevant to the NPS.
- This need is urgent in some parks and program areas, particularly where parks are facing “burning issues.” Responding to urgent needs requires timely reporting and a rapid-appraisal capability.
- The need for socioeconomic trend data exists at all organizational levels in the NPS: park, regional offices, and headquarters office.
- The NPS should make rigorous use of social science data and methods a routine practice.
- Getting started quickly with socioeconomic monitoring is critical, recognizing that it will not be complete or meet all needs at once.
- A “one-size-fits most” approach to monitoring may be needed initially, but it also is important to keep in mind the needs of all types of parks (i.e., land managing and partnership), as well as both internal and external programs. Addressing the diversity of needs over time will be critical in gaining support for SEM from the field.

Not all comments on the potential of SEM were optimistic. In each workshop, some participants voiced skepticism that the program would ever be implemented, or that it would be implemented quickly enough to help them in their jobs. When explaining their views, these persons cited previous efforts in which the NPS invested significantly in planning, but then did not implement a program for a variety of reasons.

Core Information Needs at Park, Regional, and National Levels. Participants recognized several needs for trend information as important at all three geographic levels of analysis—park, regional, and

national. This core of information falls into three general categories, including: 1) demographics trends; 2) trends in public values, perceptions and attitudes; and 3) changes in the amount and type of park use. Trends in the demographic characteristics of people received a “highly useful” rating in all seven scoping workshops to describe people in parks (visitors, non-visitors, and virtual visitors) and people in neighboring communities and areas around parks. Five of the seven workshops rated information on the demographics of the U.S. population as highly useful, especially for comparing national demographics with visitor demographics.

Trends in public values, perceptions, and attitudes received highly useful ratings at the park level in six of seven workshops, at the community level in four of seven, and at the national level in six of seven.

Participants in all seven workshops rated trends in the amount and type of park use (e.g., activities) as highly useful at the park level. Five of seven workshops gave a highly useful rating to understanding how residents of nearby communities and areas used parks. Finally, participants in four of the seven workshops thought it was highly useful to track these trends for the National Park System as a whole.

Trend Data on Non-visitors. Although the specifics of the discussion differed across NPS regions, all seven workshops rated information describing trends in non-visitors, including their reasons for not visiting, as either useful or highly useful.

Definition of “Traditional” People or Cultures. All seven scoping workshops evaluated information on traditional people living in and around parks as highly useful. However, the definition of “traditional” provoked at least some discussion in all of the meetings and is important in defining SEM indicators and metrics. Examples of observations from workshop participants include:

- The definition of traditional people should include “not just recognized tribes, but traditional uses.” (Intermountain Region)
- The definition “should include people with a long history in an area and strong cultural ties.” (Southeast Region)
- The definition of traditional cultures may be different in urban areas. “It may include historic garden users, etc. or people who live in areas that are now parks, but who lived there before they were parks.” (National Capital Region)
- The definition should recognize that “all communities within 100 miles of a park have subsistence rights, and these rights are based on residency in the communities, not on race or ethnicity.” (Alaska Region)

Distinctive Themes

The sections below describe monitoring needs and related social science issues that scoping workshop participants cited as especially important in their regions. In each meeting, at least one issue distinctive to a particular region emerged as an important need.

Alaska Region

Due to the long travel distances in the Alaska Region, the SEM scoping workshop was conducted via videoconference from Anchorage and was spread over two half-day periods. As a result, a large number of park staff were able to participate in this workshop. This generated a significant amount of discussion, some of which mirrored that heard elsewhere, but much of which was distinctive to the Alaska circumstance. Topics emphasized in the Alaska Region included:

- Definitions of “people in parks” vs. “neighboring communities and regions around parks;”
- Climate change and its relationship to subsistence use; and
- Competition between user groups for access to park resources.

Definitional Issues. In the Alaska Region scoping workshop, participants distinguished between monitoring needs related to people living in communities in or adjacent to parks (who often have subsistence rights¹⁴) and residents in cities such as Fairbanks or Anchorage. For this reason, distinctions between people in parks and people in neighboring communities and regions around parks—a useful scheme for organizing the discussion of monitoring needs in other regions—was complex in Alaska. One participant stated it this way: “What are we asking about [in the e-survey] when we ask about ‘neighboring communities and regions around parks?’ Do we mean to exclude the communities with subsistence rights and only talk about Anchorage and Fairbanks?” Another added, “All communities within 100 miles of a park have subsistence rights. We have interest in knowing what’s going on in communities right around parks and in more distant communities, like Anchorage and Fairbanks. But there are different things we need to know from each.” In a similar vein, a third person observed that, “The questions about ‘neighboring communities and regions around parks’ explicitly excluded ‘park-affiliated’ communities. More specific, local information [on these communities] *and* information targeted at current and potential park users [in urban communities] would be very helpful.”

Climate Change and Subsistence Use. Socioeconomic monitoring related to climate change received much attention in the Alaska Region workshop. Participants agreed that socioeconomic monitoring could improve the NPS’s understanding of the cultural and economic ties that communities have to parklands and how these ties are changing because of rapid climate change. This discussion was intertwined with a wide-ranging dialogue on rural Alaskans’ use of parks for subsistence. One person described the significance of the issue this way: “Do people in resident zone communities have enough to eat? Do they have enough funds to heat their homes? Climate change is part of that. We in the NPS have a responsibility to address the socioeconomic health of people within our boundaries.” Another person noted, “As the environment changes, the tribal elders can’t predict and provide the same information and leadership, which impacts their status and the organization of the community.” Yet another participant described how climate change is affecting subsistence patterns in some places: “Many of our parks are moving from tundra to boreal forests. This leads to a change in the ecosystem, which leads to changes in communities. We’re already seeing that caribou consumption has decreased by half in three communities we monitor.”

Although much of the climate change discussion did not deal specifically with socioeconomic monitoring, the following needs for trend information emerged:

- Trends in how and when subsistence users hunt specific animals (to guide policies on means, methods, seasons, and limits of hunting);
- Trends in the effects of park policies on subsistence activities and practices (to inform decisions on things like new subsistence cabins and to avoid regulating subsistence out of existence);
- Trends in how social networks in communities function (i.e., how subsistence-related labor is divided and how wildlife resources are shared).

¹⁴The 1980 Alaska National Interest Land Conservation Act (ANILCA) established many of the Alaskan NPS units and added land to existing units. ANILCA recognizes that national parklands in Alaska differ from NPS units elsewhere, and that Alaska’s rural subsistence economy and culture are to be protected. Nowhere else in the U.S. do so many rural people have such a dependence on wildlife and other natural resources in parks for direct consumption.

- Trends in factors associated with customary and traditional use,¹⁵ including per capita harvest, harvest locations, who harvests, number of resources used, distribution systems, utilization of the whole resource, and historical use patterns.

According to one participant, the last two types of information could contribute to better community-based harvest policies. First, it could be used to set caribou harvest limits for communities, rather than for individual hunters. This is desirable because a few people often do the hunting for the entire community and consequently exceed individual limits on take. Second, subsistence harvest regulations based on calendars need changing due to climate change, and monitoring subsistence practices could assist in making these changes.

Competition Between User Groups. Extensive discussion in the Alaska Region addressed the different types of legal consumers of park resources and the competition between them. Many park visitors arrive as sport fishing or hunting clients (rather than as subsistence users or recreational visitors). Allocating resources between competing sports and subsistence uses is a significant issue in many Alaska parks. Regarding sports users, one workshop participant observed, “We barely know they’re in the park and don’t know how many there are or what their experiences are. They are a park visitor not often included in our traditional visitor surveys.” Another person summed up the monitoring needs for sports users in this way: “Where do they come from, where do they go, what are their modes of access, how often do they use park resources, what animals do they hunt?”

In addition to competition between sports and subsistence users, it was noted that both of these groups can come into conflict with recreational visitors. Related information needs included:

- Trends in public perceptions of appropriate uses for various types of public lands; and
- Trends in recreational visitors’ perceptions of, and reaction to, sport hunters and subsistence users, including whether they change their activities or organize their plans based on seasons.

Intermountain Region

Distinctive topics emphasized in the Intermountain Region scoping workshop included:

- Need for information on trends in, and effectiveness of, NPS websites and use of various electronic media;
- Importance of information on virtual visitors; and
- Links between resource protection and information about people.

NPS Websites and Use of Electronic Media. A more extensive discussion of the importance of information about trends in the use of NPS websites and electronic media occurred in the Intermountain Region than in most other workshops. Some of the needs identified included: 1) trends in use of NPS and park websites (e.g., do they convey accurate and immediate information to visitors and virtual visitors?); 2) whether web pages make a “real” connection with park values, or are just informational; and 3) the effectiveness of social networks in augmenting intrinsic values and enjoyment of parks by engaging those who are disconnected from parks.

In large-group discussions, two broader points were made about the importance of information on use of electronic media. In the words of one participant, “We want to know how people access and prefer

¹⁵Harvesting wild foods is not the only subsistence activity in rural Alaska. Other practices include using wild resources for fuel, transportation (e.g., fish fed to dog teams), construction, home goods, ceremonial uses, arts and craft production, and to sell for cash.

to receive information about the parks. This is the real [and broader] question.” Another person reinforced this by framing the key issue as: “How do you measure whether you’re using social networks as effective tools to protect resources vs. just using them because everyone else is?”

Virtual Visitors. A particular interest in virtual visitors—and comparisons with actual visitors and non-visitors—emerged in the Intermountain Region. Specific information needs included: 1) trends in the demographics of virtual visitors; 2) information on the cross-over between virtual visits and physical visits; 3) the use of virtual visitation to shape expectations about what will be experienced in parks; and 4) differences between onsite visitor experiences and the experiences resulting from virtual visits. In discussing these issues, one person asked, “Is there a pathway between non-visitors being converted to virtual visitors then to park visitors?”

Link between Resource Protection and Information About People. Much the Intermountain Region workshop focused on how social science information could benefit resource protection. This concern appeared in needs for information on trends in: 1) how visitors and non-visitors value nature and natural resource protection; 2) how visitors perceive resource conditions; and 3) public expectations for the NPS in terms of resource protection, regulation, and use. Regarding these points, one participant commented that the NPS needs “to make sure that information is used to facilitate resource preservation as well as for benefit of the visitor.” Another person extended this to include people outside of parks, including residents of nearby communities: “The key to protecting resources is knowing about the people, so we can engage the community effectively.”

Midwest Region

Distinctive input and comments received in the Midwest Region included those about:

- Development of the socioeconomic monitoring program;
- Definitions of visitors, non-visitors, and inholders; and
- Information on visitors’ motives.

Development of the SEM Program. Those in the Midwest Region scoping workshop made several suggestions for developing the NPS socioeconomic monitoring program. Recommendations included: 1) the need to focus and build, and not try to do everything at once; 2) stressing early results and how to make information usable; 3) raising awareness of the program in the NPS; and 4) emphasizing how SEM complements, but does not necessarily replace, other tools and resources for social and economic analysis. This last concern may reflect participation by academic and NGO partners in the Midwest Region scoping workshop.

Defining Visitors, Non-visitors, and Inholders. Considerable discussion of definitions of “visitor” and “non-visitor” occurred in the Midwest Region workshop. Related to this was the issue of defining “inholders” in parks where NPS jurisdiction is not contiguous, but private property is largely surrounded by park lands, even if the private property is not an inholding according to the typical use of the term. Specific points raised included: 1) categorizing and understanding people who parks reach out to—such as school students— even if they never visit; 2) monitoring the expectations of inholders and community residents—do they understand why the park they live in (or are surrounded by) is there? and 3) understanding the experiences of people who see a park or drive through it, but don’t realize they are in it. Concerning this last point, one person observed, “Maybe what’s really important is experiencing the entire watershed or viewshed that’s protected by the park instead of actually being on park land.”

Visitors' Motives, Expectations, and Preferences. Workshop participants in the Midwest Region wanted to know not only why visitors came to parks, but how they decided *where* to visit. This knowledge would serve three purposes: 1) inform the adjustment of programs and facilities to enhance experiences; 2) enable the development of long-term strategies to address changing motivations; and 3) develop marketing plans to increase the number of returning visitors. One participant noted, "The current information misses 'why' and where the visitor is coming from mentally prior to arrival."

National Capital Region

Topics emphasized in the National Capital Region included information that would:

- Assist with increasing donations;
- Help manage the range of park uses typical of the Washington, D.C. metropolitan area; and
- Inform the management of designed landscapes, including impacts from adjacent land uses.

Increasing Donations. A distinctive focus of the National Capital Region was socioeconomic information to assist with increasing financial donations and other forms of support for parks from the public. Comments on donations sometimes were coupled with discussions of volunteerism, a topic raised in several workshops. Specific needs cited in the National Capital Region included information on: 1) whether a park visit causes people to support parks through donations, writing to a member of Congress, or other means; 2) the number of park visitors who become volunteers or members of friends groups as a result of their visits; 3) virtual visitors, including the media outlets they use and whether virtual visits influence contributions to parks; 4) the rate of residential turnover in the DC metropolitan area (useful in helping with donation campaigns); and 5) attitudes of the U.S. population toward voluntary support for parks, including the percent giving to parks, and how donors view NPS giving in the general scheme of donations.

Metropolitan Washington, D.C. Park Uses. National Capital Region participants described needs for information on park uses common to the Washington, D.C. locale. These included: 1) information tracking and describing incidental use for dog-walking, eating lunch, commuting, parking, and passive and active recreation; 2) data describing people's motives for participating in First Amendment demonstrations on the National Mall and how demonstrators otherwise use parks and memorials; 3) tracking permits for special events and the types of use involved (needed for resource protection); and 4) monitoring tour bus activity, including the numbers of vehicles, parking patterns, and languages spoken by passengers.

Designed Landscapes and Adjacent Land Uses. Discussion of this issue concerned urban influences in a region where many small parks are surrounded by residential and commercial landscapes. Workshop participants noted that information on nearby residents' values and opinions about parks would be highly useful for many reasons, including: 1) helping the NPS reconcile different local user groups and evolve or expand park uses and management; 2) fostering or strengthening people's sense of place or attachment to a location; and 3) identifying neighborhoods in which community relations and support could be increased (and monitoring progress in doing this). Citing Prince William Forest Park as an example, one person observed, "We have some people who live in areas that are now parks, but who lived there before they were parks, and have issues with use for things like hunting."

Regarding designed landscapes, one participant wondered how many park visitors perceived managed landscapes in the District of Columbia as "wild" and whether such perceptions affected use. Another mentioned the need for more information on the relationship between the demographic characteristics

of users and residents and how these affected the desired condition of resources. A third noted that many NPS-managed green spaces in the urban landscape give identity to neighborhoods and provide communities with open space, cultural amenities, and recreational opportunities (e.g., Dupont Circle and Logan Circle). Not only do these pocket parks affect residents' and visitors' behavior, but adjacent land uses affect the designed landscapes of parks and how people use them. Understanding these relationships and tracking the ways changing vistas, adjacent development, evolving infrastructure, and public preferences affect uses and resources was a distinctive need of the National Capital Region.

Northeast Region

Among topics generating special interest in the Northeast Region scoping workshop were:

- Needs of external programs and non-traditional NPS units, including partnership parks; and
- Definitions of visitors, virtual visitors, and users.

External Programs and Partnership Parks. While concern about external NPS programs and non-traditional units appeared in other scoping workshops, this topic generated animated discussion in the Northeast Region. The concern voiced by several participants was that a purely “western park” perspective to socioeconomic monitoring would preclude gathering information on the needs of NPS units and programs that did not fit the traditional park model. Examples cited included “partnership parks,” (e.g., Lowell NHP, Hopewell Furnace NHS, Boston Harbor Islands NRA, and Pinelands National Reserve); National Historic Trails; National Landmarks (natural and historic); National Heritage Areas; and Rivers, Trails, and Conservation Assistance (RTCA). One participant reinforced the point by noting that, “Half of the landmarks and heritage areas in the U.S. are in the Northeast Region. In the Northeast, at least half of the superintendents connect with Heritage Areas and National Landmarks near them.” While noting that a difference exists between NPS land management and the NPS role in these areas, another commented that the report of the Second Century Commission states that the future of the NPS will be tied strongly to partnership parks and external programs.

Related points in the discussion concerned:

- The need to monitor the public's behavior in relation to the universe of state parks, sites operated by non-profits, etc. (particularly important for National Historic Trails).
- Monitoring in National Heritage Areas, byways, and trails and including three different populations: people who visit these areas, people who live in them, and managing partners and cooperators (i.e., monitoring these linkages as well as monitoring visitors).
- Including monitoring activities meaningful to external programs such as RTCA.

Referring to external programs, one participant explained, “Things like RTCA penetrate widely, so it's not relevant to ask about communities near parks. Once you're not involved in land management, it's about grants. It's a different reality with different measures of success and different metrics.”

Specific monitoring needs related to external program and partnership parks included:

- Besides monitoring nearby residents' opinions about park policies and management practices, monitor trends in residents' opinions about natural and cultural resource preservation;
- Monitor trends in how communities value open space, ecosystems, and recreational opportunities (whether or not these are in NPS units);
- Track how communities value public and protected lands in general; and
- Monitor trends in the long-term socioeconomic impacts of NPS programs and facilities on local, regional, and/or national communities and resources.

Definitions of Visitor, Virtual Visitor, and User. Extensive discussion took place in the Northeast Region about the difference between visitors, non-visitors, and virtual visitors. One person commented on potential overlap in these three categories, i.e., virtual visitors could, at different times, be visitors, or even non-visitors. However, the essence of the discussion dealt with who is defined as a virtual visitor for purposes of monitoring. The definition appeared broader than that used in Intermountain Region discussions of website use and social networking. As one participant explained, “Fort McHenry staff are at every Baltimore Orioles game with the flag from the park. Are the people at those games virtual visitors?” A similar point was raised about people who watched the Ken Burns PBS documentary on national parks. Another person posed a question about the difference between “users” and “visitors,” stating that a distinction is often made between the two in the NPS without real data to support it.¹⁶

Pacific West Region

Participants in the Pacific West Region scoping workshop shared many monitoring and information needs with other regions. However, a topic emphasized in the Pacific West Region that received less attention elsewhere concerned the importance of information that could be used to motivate and track behavior and learning related to climate. This discussion encompassed not only park visitors, but people in neighboring communities and in the U.S. as a whole. Although climate change was discussed extensively in the Alaska Region, a different emphasis marked the Pacific West Region. Specific needs included data describing:

- Trends in visitors’ and communities’ climate-friendly behavior; and
- Trends in visitors’ learning about climate change.

Climate-Friendly Behavior. Discussion of this need focused on information that monitored the effects of park interpretation and other programs on the behaviors of visitors and nearby communities. Participants were particularly interested in knowing if educational messages resulted in visitors’ taking actions to reduce their carbon footprint inside parks and at home. One person asked, “Do visitors consider their carbon footprint when deciding to visit parks? How many visitors purchase carbon offsets?” Another wondered if interpreting the sustainable practices adopted by parks to mitigate their own impacts on climate caused visitors to change their behavior. According to participants, this type of information would be especially useful for planning interpretive programs and in facility management. Another need expressed in the workshop was for information on responses of nearby residents and communities to climate change and associated issues. Examples included monitoring whether or not communities allowed helicopters or fixed-wing aircraft to take off for park tours and whether residents took actions to limit the spread of invasive plants.

Learning about Climate Change. In the Pacific West Region, needs related to learning about climate change included tracking what visitors and the general population know about the causes of climate change, about invasive species, and about ocean stewardship. One question raised by the group dealt with how much of the U.S. public believes that accelerated climate change is a human-caused problem, and how does this belief change over time? A related issue concerned the need to monitor the U.S. public’s knowledge of the scientific method, public attitudes toward science, and trust in scientific research.

¹⁶One approach to distinguishing between categories of people who connect with parks is to answer the question: “What types of monitoring information do we need to manage different kinds of connections?”

Southeast Region

Topics that received special emphasis from participants in the Southeast Region scoping workshop included:

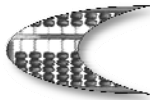
- Relevancy, communicating the NPS mission, and increasing visitation;
- Differences in the usefulness of socioeconomic information to park and regional staff; and
- Information useful to external programs, such as National Historical Landmarks, National Natural Landmarks, the Land and Water Conservation Program, National Heritage Areas, and National Historic and Scenic Trails (also emphasized in the Northeast Region).

Relevancy, Communicating the NPS Mission, Increasing Visitation. Although discussions about the relevance of the NPS and parks to the public occurred in all seven scoping workshops, it received its greatest emphasis in the Southeast Region. Concerns about relevancy were linked to access to socioeconomic information that would be useful in communicating the messages of parks to the public, in fostering public understanding of the purpose of parks, and in increasing visitation. Issues included improving knowledge of: 1) how many people visit for the identified purpose of the park vs. how many come for other uses; 2) how many visitors are local vs. how many come from a distance; 3) trends in the types of groups visiting; and 4) trends in the visiting and non-visiting public's awareness and understanding of park purposes. In addition, participants wanted to know how best to make parks relevant to youth and traditionally underserved populations.

During discussions of communication issues, one person asked, "Is it necessary to have the visitor in the park to be successful in our mission?" Others wondered why there appeared to be so much concern in the Southeast Region with communicating messages to the "outside" world. Participants offered several responses, including the large number and diversity of small parks in the Southeast (including many lesser-known parks); the presence of "island parks" that are geographically separated from one another; the fact that in Atlanta many people are technologically savvy and can be reached through electronic messaging and networking; and the fact that many Southeast Region parks are near major cities and must compete with other sites for people's attention and interest.

Differences in Usefulness of Socioeconomic Information to Park and Regional Staff. In the Southeast, clear differences existed between how useful different types of socioeconomic monitoring information would be to park staff vs. regional office staff. Most categories of information were rated as highly useful by the majority of park-based personnel, with fewer regional staff giving these high usefulness ratings. In discussing this difference, some participants speculated that this might be because the work of the regional office staff is driven more directly by park needs, relying on the parks to monitor what's occurring and translating this into the kind of support or action needed from the regional office. Others suggested that the difference in priority ratings might indicate a need to better communicate the importance of socioeconomic data to specific audiences.

Information for External Programs. Discussion of this topic centered on the perception that SEM focused on serving parks, with less attention given to external programs that reach out beyond parks. As an example of an information need for external programs, one participant offered, "We could survey National Historical Landmark owners and get demographic information, as well as an assessment of their cultural resource management skills, their knowledge of NPS and Secretary's Standards, and their knowledge of the financial resources available to them."



Next Steps: Start Small and Start Well

CHAPTER SUMMARY

A fully operational socioeconomic monitoring program must support the NPS mission, build effectively on existing monitoring activities, forge mutually beneficial partnerships, and communicate results in timely and accessible ways. This chapter addresses these imperatives. The SEM working group produced a draft logic model illustrating how indicators selected for monitoring support the NPS mission by measuring progress in achieving strategic goals. By building on existing programs, new and improved monitoring activities can be created, including a System of Indicator Parks (SIP) and Small SIP, a cost-effective prototype. Existing secondary data can be transformed into usable monitoring information, while partnerships with other NPS divisions and programs provide additional cost-effective ways to conduct socioeconomic monitoring. Needs assessment participants offered useful recommendations for communicating monitoring results to the field. The chapter concludes with a brief description of subsequent planning and operational phases in SEM development.

During the assessment phase for socioeconomic monitoring, NPS park and program staff identified an extensive list of indicators that, if monitored, would be useful in their job performance. As a whole, the indicators described the status of people and things associated with people, both inside and outside of parks. The message voiced repeatedly by workshop participants was that a system that tracked these “social vital signs” and communicated changes in them would improve decision-making by providing actionable knowledge about trends in the status of people in parks, in areas around parks, and in the nation as a whole. In reviewing feedback received, four points become especially clear. To maximize efficiency and practical utility, a fully operational SEM program should:

- Support the NPS mission;
- Build on existing socioeconomic monitoring activities;
- Forge mutually beneficial partnerships between SEM, the Inventory & Monitoring Program, and other NPS programs; and
- Communicate monitoring products in timely and accessible ways.

The final chapter of this report describes key steps needed to create and maintain a socioeconomic monitoring program that responds to these five imperatives. Limited budgets require creative approaches to implementation that build on existing programs, maximize uses of secondary data, and take advantage of mutually beneficial partnerships while maintaining high standards of quality. As one working group member counseled, SEM needs to “start small and start well.”

Support the NPS Mission

Supporting the mission of the NPS is a keystone of the SEM program. Although a statement of mission, goals, and objectives was drafted by the SEM working group early in the needs assessment process, in its prioritization workshop the working group expressed concern that this statement did not clearly link SEM to the NPS mission or its priorities. A crosswalk between SEM indicators and strategic NPS outcomes was needed that not only justified investing in a strong SEM program, but would assist in the challenging task of choosing a small set of indicators for initial monitoring from the

175 candidates available. This would be a valuable communication tool to use with the NPS leadership.

In response to this concern, one working group member¹⁷ developed a draft logic model for consideration by the full group. Figure 2 displays a refined version of this model. The model begins with important policy foundations, including the NPS Organic Act, other statutes and executive orders, the 2006 Management Policies, and Director's Orders. This foundation yields organizational outputs (i.e., well-designed regional and national programs, etc.), which, when operating properly, result in achieving a set of strategic outcomes. The six outcomes in the SEM logic model include: 1) high-quality visitor experiences; 2) relevancy/engaged citizenry; 3) resource stewardship; 4) education; 5) workforce enhancement; and 6) pertinent effects in gateway regions beyond park boundaries, including sustainable development, resource stewardship, and community well-being. By explicitly stating key outcomes produced by the National Park System and showing the relationship of SEM indicators to these, the model further answers the question posed in Chapter 1, "*Why socioeconomic monitoring?*" It demonstrates graphically how tracking selected metrics will help the NPS monitor progress in achieving its important strategic goals. Operationally, the model also provides input into choosing indicators for monitoring by specifying an additional significance criterion (i.e., relationship to strategic NPS outcomes) that are not fully captured by management significance, social science significance, and law and policy significance.

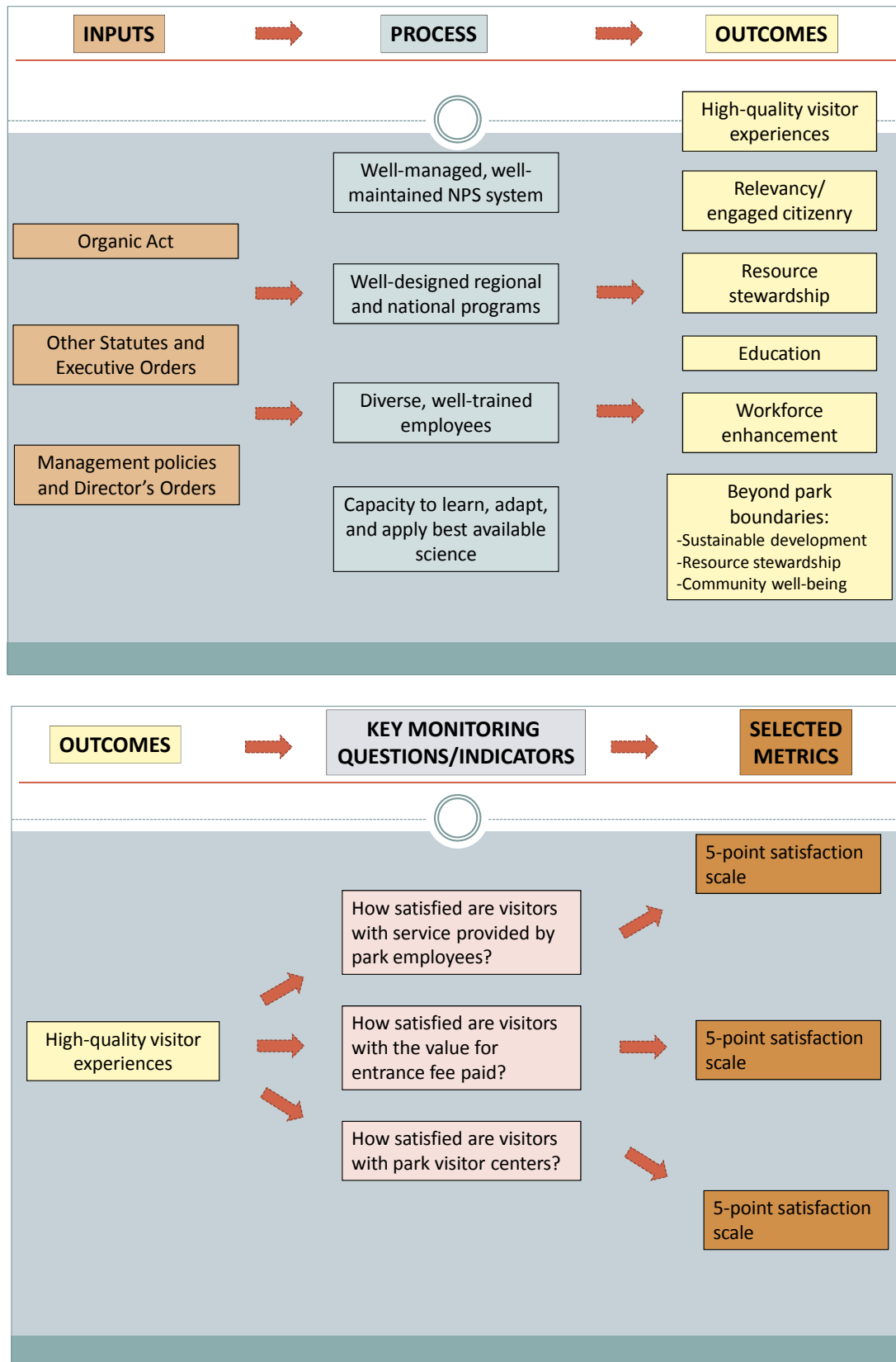
The draft logic model sparked a good deal of discussion in the full working group. Among the many comments were that budget formulation should be added as an input (or process), both inputs and outputs could be monitored, and public benefit could be added as a strategic outcome. Additionally, monitoring questions, monitoring technologies, data sets, and access to these may change dramatically over time. Therefore, a periodic review of the program and its logic model needs to be built into SEM operations.

Given its potential as a communication tool, the draft logic model should be finalized and its second half completed by mapping strategic outcomes to Level 3 indicators and the monitoring questions they imply. An example is presented in Figure 2 for the outcome "high-quality visitor experiences." The Level 3 indicator "evaluation of services, facilities, fees" (from Table 5) implies a set of monitoring questions shown in the blue boxes that are relevant to visitor experiences and are answered by tracking specific metrics of visitors' satisfaction.

The design of metrics, sampling protocols, and statistical sampling plans is a significant undertaking beyond the scope of this needs assessment report. It will be a major task defining the next phase of SEM planning and is critical in creating a socioeconomic monitoring program that supports the NPS mission.

¹⁷ Daniel Laven, Marsh-Billings-Rockefeller National Historical Park and the Conservation Study Institute.

Figure 2. Draft Logic Model for Socioeconomic Monitoring.



Build on Existing Monitoring Activities

In Chapter 2 several existing socioeconomic monitoring activities in the NPS were described. These include:

- The Public Use Statistics Office that collects visitor use statistics for all NPS units reporting visitation;
- The Visitor Services Project surveys conducted in 15-20 parks annually;
- The periodic NPS Comprehensive Survey of the American Public, a national survey of U.S. households, including visitors and non-visitors to the National Park System;
- The annual visitor satisfaction survey conducted in approximately 320 units;
- The annual Money Generation Model report that describes the economic contribution of spending by park visitors and NPS employees to surrounding communities; and
- The Socioeconomic Atlases describing trends in a broad set of social and economic indicators in regions adjacent to parks.

System of Indicator Parks (SIP). One vision for building on existing monitoring programs in the NPS—including the VSP visitor surveys and the annual customer satisfaction survey—is to establish a “System of Indicator Parks” (SIP) that monitors important characteristics of national park visitation. As pointed out previously, one reason a socioeconomic monitoring program is needed in the NPS is that the agency lacks a reliable, recurring method for monitoring local, regional, and national trends in the characteristics, behaviors, and opinions of park visitors. This means that the NPS cannot answer such commonly asked questions from Congress, stakeholders, the media, and its own leadership as: 1) is the percentage of children in parks going up or down; 2) are more or fewer international visitors coming to parks; and 3) how are visitors’ preferences or expectations for services and facilities in parks changing over time? SIP would create this needed monitoring capacity by surveying visitors in a rotating sample of indicator parks selected to be statistically representative of the National Park System. SIP surveys would employ field methods developed, tested, and refined by the highly successful VSP visitor surveys to maximize response rates and allow evaluation of non-response bias. The SIP questionnaire could contain a standardized question module employed in all indicator parks, plus a customized module with items requested by individual indicator parks.

Small SIP. Although SIP envisions collecting primary monitoring data by employing a standard visitor survey module in a representative sample of parks, this is not the only approach that could be taken. The advantage of using a representative sample of parks is that it permits park data to be rolled up into national data, producing the kind of systemwide indicators demanded by the Office of Management and Budget, Congress, and other entities. Still, in its early operational stage, SIP could be deployed in a non-representative set of pilot parks or a regional network of parks. Over time, this “Small SIP” would generate trend data specific to the parks where surveys are conducted, but with no national roll-up. At the same time, Small SIP could function as a laboratory for continuous improvement of sampling protocols, metrics, and reporting tools.

Secondary Data Sources. Several other data sources exist, both internally and external to the NPS, that could be incorporated into an SEM program. These data sets represent information already collected that only requires interpretation and communication in ways that are useful to NPS managers. A sample of information to be gained from secondary data sources includes:

- Population and economic trends in gateway regions (Census Bureau’s American Community Survey¹⁸ and the national economic census);
- Recreation and travel market trends from external sources, including industry sources such as Dean Runyon, D.K. Shifflet, and Longwoods;
- Inventory of park facilities and visitor services (NPS Facility Management and Interpretation and Education programs);
- NPS budgets, employees, and payroll (NPS Accounting Operations Center);
- Concession receipts (NPS Commercial Services Program); and
- Lodging capacities in gateway communities (various commercial sources).

Forge Partnerships

In addition to monitoring activities already occurring in the NPS Social Science Division and in other organizations such as the Census Bureau, the opportunity to partner some SEM operations with other programs should be investigated. Two potentially valuable partners are the Inventory and Monitoring (I&M) Division and the NPS Fee Program.

Inventory and Monitoring Division. A partnership between socioeconomic monitoring and the natural resources inventory and monitoring program could benefit both. An example is the Socioeconomic Atlas Project, which overlaps with I&M’s NPScape mapping program. Socioeconomic atlases map past, recent, and, in some cases, projected trends for a set of indicators in regions around specific parks. The atlases focus on demographic, economic, and social indicators, including population size and density, commerce activity, social and cultural population characteristics, recreation and tourism activity, and land use.¹⁹ NPScape is a landscape dynamics monitoring project of the I&M Division that delivers a suite of landscape-scale data sets, maps, reports, and other products to specific parks.²⁰ Its focus is on natural systems and selected anthropogenic “footprints” on these systems, including population density, roads, rails, power lines, impoundments, and impervious surface. (In accordance with the I&M mission, NPScape limits its mission to the 270+ parks with significant natural resources.) Because both mapping activities are monitoring programs, a partnership between them could add value to each, as well as inject vital capacity into socioeconomic monitoring. Although there are important structural differences between I&M and SEM (I&M operates through networks of ecologically similar parks and SEM, in all likelihood, would not), partnering on certain products seems like a cost-effective way to do business. SEM also would benefit from a partnership with I&M in developing sampling protocols, statistical sampling plans, and creating an integrated information system and plan for data management and access.

Fee Program. A partnership with the NPS Fee Program is another opportunity to grow SEM and extend its benefits to fee-collecting parks in the System. The Fee Program is installing a new point-of-sale system in many parks that includes cash registers that can be programmed to sample vehicles entering parks at pre-determined intervals and to store Zip codes. Zip code information provided by a sample of visitors to fee collectors would provide continuous trend data on the residence of arriving

¹⁸ The American Community Survey is an on-going survey of the Bureau of the Census that produces estimates of population characteristics each year for areas with populations of 65,000 or more and three-year estimates for areas with populations of 20,000 or more. Estimated characteristics include population by age and sex, income, education, language, housing characteristics, fertility, and mobility. See <http://www.census.gov/acs/www/>.

¹⁹ For examples of socioeconomic atlases, see <http://www.nature.nps.gov/socialscience/archive.cfm>.

²⁰ Monitoring Landscape Dynamics. May 2010. Resource Monitoring Brief, Natural Resource Program Center Inventory and Monitoring Division, Fort Collins, CO.

groups. This information defines a park's "visitorshed" and shows how it changes over seasons and years. In addition, the Census Bureau tabulates some population data by Zip Code Tabulation Areas (ZCTAs) that, in most cases, are identical to U.S. Postal Service Zip code polygons. The ZCTAs cover all 50 states, the District of Columbia, and Puerto Rico and take advantage of a fact long known to demographers and market researchers: people tend to live near people like themselves. ZCTA data allow a visitor groups' point of origin to be profiled in terms age, race, ethnicity, education, income, and other social and economic characteristics. Point-of-sale survey systems are commonly used by other organizations and agencies, but not by the NPS. Thus, in most cases the social and economic profile of a ZCTA provides a useful picture of visitor groups without invading their privacy, since the information is not linked to specific individuals.

Communicate Useful Products in Timely and Accessible Ways

Information that is not communicated and not understood is not usable. In the preliminary focus groups and in the regional scoping workshops this message was reinforced repeatedly. Thus, planning the "how to" of socioeconomic monitoring must include a communication strategy. This strategy should incorporate not only a reporting plan, but plans for analyzing, documenting, and archiving SEM information and for making databases accessible to managers and researchers.

Park and program managers—the largest group of likely consumers of SEM information—provided valuable input on communication needs during the focus groups and scoping sessions. Key recommendations included:

- Use multiple ways to update NPS staff on what is happening, on new data or information available, and on research conducted. This could include list serves, newsletters or bulletins, postings on InsideNPS, webinars, and conference call chats.
- Make SEM information easily accessible by providing an electronic bibliography and searchable database of major research in social science applicable to parks. Use a data system already familiar to park people and easily shared across agencies.
- Provide information that can be accessed easily by managers and that has clear and helpful application, i.e., "boiled down" information or talking points that are immediately useful to park managers in their communications with staff, media, partners, and the public.
- Deliver timely information and regular updates. Reports should be available within one year of the completion of data collection.
- Provide staff assistance to parks and programs to aid in finding and using socioeconomic information. This should include technical assistance on interpreting and applying findings.
- Communicate the availability and usefulness of new or innovative monitoring techniques, survey tools, and rapid appraisal tools so that parks and programs can use these for their own research, evaluation, and monitoring activities.

Future Phases

The SEM needs assessment constituted the essential first step in developing a socioeconomic monitoring program that would be responsive to the needs of park and program managers. Although a lengthy discussion of additional phases is beyond the scope of this report, the SEM working group developed a broad vision of what these phases would entail, adapted from the successful experience of the NPS Inventory and Monitoring Division. This vision includes: 1) formation of an SEM advisory committee; 2) planning the SEM program based on input from the field and other considerations; and 3) an operational and review phase.

SEM Advisory Committee. According to the draft charter developed by the SEM working group, an SEM Advisory Committee should be formed to include representatives from the seven NPS regions and the Washington headquarters. While there was some discussion of including external stakeholders and partners in the membership, this would have to be weighed against legal considerations (e.g., the Federal Advisory Committee Act) and in consideration of alternative ways to gain external input. The primary roles of the SEM advisory committee would be to provide expertise and feedback on key issues related to funding, planning, and operating the SEM program and to serve as advocates with parks, regional offices, and the NPS Washington Office.

Planning Phase. Planning for SEM addresses the “how to” of socioeconomic monitoring. Key tasks include:

- Selecting initial indicators for monitoring based on input during the needs assessment and other considerations;
- Developing corresponding metrics and monitoring objectives for the indicators;
- Drafting quality-assurance standards;
- Devising, reviewing, and pilot-testing sampling strategies and measurement protocols; and
- Designing decision-support systems for communicating usable knowledge to managers.

Given budget outlooks, planning the SEM program should concentrate on building a quality program over time. The earlier advice of a working group member to “start small and start well” bears repeating. The Small SIP program is one example of such a strategy. But it also means collecting and analyzing data compiled from secondary sources, then interpreting and communicating this in forms useful to managers. One example is a composite “barometer” that would periodically convey a social or economic “weather report” of conditions in parks, areas around parks, or for the nation as a whole. Both the Inventory and Monitoring Division’s NPScape program and the Social Science Division’s socioeconomic atlas program use versions of this approach. But even with barometers, where new information is created from existing data, the quality of the metrics that comprise the composites must be ensured, as this determines the quality of the barometers themselves.

Finally, the planning phase should incorporate design of decision-support systems. This includes an information management plan for analyzing, communicating, archiving, and documenting socioeconomic monitoring data.

Operational Phase. During the operational phase, selected monitoring activities would be initiated. The information management plan designed during the preceding phase also would be activated. As resources permit, additional monitoring activities could be phased in over time. Although the SEM program might very well focus initially on analyzing and interpreting data from existing sources, opportunities for cost-effective primary data collection should be explored as well. One possible approach would be to select a segment of visitors for monitoring, such as backcountry permit holders (for whom contact information exists), and develop a short mail or online survey distributed periodically to a representative sample of this population. The questionnaire could monitor backcountry visitors’ demographic characteristics (age, gender, race, ethnicity), trip characteristics (trip length, group size, encounters with wildlife, etc.) and evaluations of their backcountry experiences (perceptions of crowding, solitude, and resource conditions).

As already mentioned, routinely collecting Zip codes at fee stations and other points of sale (e.g., cooperating association bookstores) presents another cost-effective opportunity for primary data

collection. Such information is useful in tracking changes in a park's visitorshed, as well as trends in international visitation.

A concluding point is that monitoring questions, measurement technologies, data sets, and access to these are likely to change dramatically over time. For example, GPS technology employed in vehicles or carried by pedestrians has great potential to provide anonymous opt-in data describing trends in traffic congestion, hiking routes, and other travel-related indicators of potential value to park and program managers.²¹ Because the questions that need answers, and the technology for collecting information will change, a periodic review of the SEM program is an important final component of its operational phase.

²¹ "TomTom Drivers Can Smoothly Navigate National Parks This Summer." May 26, 2010 article retrieved from http://www.teleatlas.com/WhyTeleAtlas/Pressroom/PressReleases/TA_CT043484.

APPENDIX I

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