

U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

Questions for the Record by Democratic Members

Questions from Representative Porter

1. Do you have any recommendations for Yosemite and other parks that are trying to develop long-term solutions for overcrowding?
2. In your testimony, you mentioned that overcrowding is subjective. Can you describe what you mean by that?
3. How can park units consistently determine whether they are delivering good visitor experiences?
4. From your experience, what are some of the changes Booz Allen Hamilton could make so access to reservations on Recreation.gov is more equitable?
5. Is there anything else you would like to add for the hearing record?

Questions from Representative Cohen

1. You testified that solutions to overcrowding are complex and context-dependent. Are there common elements of parks that have dealt well with overcrowding?
2. What are some of the common elements among Parks that haven't dealt well with overcrowding?
3. In your testimony, you mentioned a roadblock at the Office of Management and Budget that is affecting parks' efforts to manage overcrowding. Can you please explain that?
4. Raising entry fees to Parks is a way of rationing that favors those with means. What alternatives are there to raising fees?

Dr. William Rice's Responses to Questions for the Record by Democratic Members

Questions from Representative Porter

1. Do you have any recommendations for Yosemite and other parks that are trying to develop long-term solutions for overcrowding?

- *Be methodical – Collect descriptive and evaluative data on how current use levels impact the visitor experience and the ecological resources within the park*
- *Consider both direct and indirect solutions – Use indirect management strategies when confronted with unskilled or uninformed visitor behavior leading to crowding or negative impacts prior to applying direct management strategies*
- *Be creative – Design and test rationing mechanisms which challenge the status quo*
- *Be mindful of leisure constraints – Collect data and consider existing research on park visitors' varying constraints to accessing national parks*

2. In your testimony, you mentioned that overcrowding is subjective. Can you describe what you mean by that?

Yes, crowding is a normative evaluation of density—meaning that crowding is not an objective state, but is instead dependent on our expectations, motivations, attitudes, beliefs, values, etc. Thus, we can not state that a space is crowded based on simply the amount of people which inhabit it. We must evaluate the norms of the visitors in that space to see if they are crowded. As noted by Manning (2011):

The normative approach to crowding suggests that use level is not interpreted negatively as crowding until it is perceived to interfere with or disrupt one's objectives or values. This approach has proved fertile for theory building and testing in outdoor recreation. A variety of factors have been suggested as influencing normative interpretations of crowding. These factors can be grouped into three basic categories: personal characteristics of visitors, characteristics of others encountered, and situational variables. (p. 116)¹

Thus we must consider more than just the amount of people in the space when considering crowding, but also their characteristics, behaviors, and environment.

¹Manning, R. E. (2011). *Studies in Outdoor Recreation: Search and Research for Satisfaction* (3rd ed.). Oregon State University Press.

3. How can park units consistently determine whether they are delivering good visitor experiences?

It is important to conduct consistent monitoring of park visitor experiences through surveys, interviews, or other evaluative approaches to data collection. Visitor use management rests on defining management objectives, defining indicators that help us measure performance of those objectives, defining standards that meet our desired conditions of those indicators, and then monitoring those indicators. Often, due to limited resources, this last step—monitoring—comes up short. Yet, it is vital to sound, long-term management. Further, we must consider experiential indicators that go beyond people-at-one-time (PAOT) or encounters to enable monitoring of the broader visitor experience.

4. From your experience, what are some of the changes Booz Allen Hamilton could make so access to reservations on Recreation.gov is more equitable?

Booz Allen Hamilton and Recreation One Stop are tasked with an incredibly difficult job of rationing increasingly demanded recreation opportunities in federal public lands. This is a complex duty, and there is no perfect solution for managing trade-offs between various rationing mechanisms. Additionally, these teams have little science to help guide them at this point. Recreation One Stop has, however, had open conversations with the scientific community to improve management. I applaud them for taking these strides to improve equity in addition to their many other tasks and priorities.

There are, however, a few suggestions that the data or existing theory tells us could improve equity on Recreation.gov. First, allowing managers to have multiple (three or more) rationing mechanisms for a single resource (campground, park entrance, etc.). This would allow visitors with varying preferences and/or needs to have varying opportunities to gain access to recreation resources. For instance, theory suggests that a campground which releases some sites 6-months in advance, some sites 2-months in advance, some sites 1-week in advance, and some sites on a first-come first-served basis would be able to better negotiate visitors' varying constraints.

Second, probabilities (based on previous data) for winning a lottery to get a campsite or river permit would allow visitors with limited resources to make more informed decisions when deciding whether or not to enter a lottery. These probabilities could be prominently displayed on the lottery-entry page on Recreation.gov. For non-lottery reservations, administrators could display the number of visitors attempting to book a reservation as soon as reservations become available (based on weekly or monthly averages) vs. the number of reservations available.

Third, BAH and Recreation One Stop might work together to stand-up an interdisciplinary working group to study pricing of recreation opportunities on Recreation.gov over time and work toward solutions to keeping opportunities affordable for the American public.

Fourth, Recreation One Stop should invest in independent research to examine the relative equity trade-offs related to varying rationing mechanisms (i.e., lotteries, reservations, pricing, first-come first-served, weighted lotteries, etc.).

It is also recognized that these suggestions may be currently underway, or that some of these features may be currently available to some degree.

5. Is there anything else you would like to add for the hearing record?

Related to my response to the previous question, I recommend that BAH and Recreation One Stop move to be more transparent to Recreation.gov visitors regarding where their fees/payments are going. When a purchase is made on Recreation.gov, visitors should be able to see which fees are going to BAH for the administration of Recreation.gov and which fees are going to support federal agencies. At present this is not fully transparent, leaving visitors, and the fee-paying public, with limited information to inform their purchasing behavior. This can also lead to confusion. For instance, in my state—Montana—residents are more inclined to enter various hunt lotteries administered by Montana Fish, Wildlife, and Parks—even if the chances of winning a lottery are very low—because it is broadly communicated that fees associated with such lotteries support conservation efforts. Knowing where fees for lotteries or permits

associated with Recreation.gov are allocated—i.e., to contractors or the federal government—would help guide behavior and improve transparency for the recreating public.

It is also recognized that this suggestion may be currently underway.

Questions from Representative Cohen

1. You testified that solutions to overcrowding are complex and context-dependent. Are there common elements of parks that have dealt well with overcrowding?

Yes, from my external perspective, parks which are able to hire social scientists (e.g., Yellowstone, Grand Teton, Denali, Glacier) have been well-positioned to engage in effective visitor use management. For those parks without social scientists, parks that have taken a thoughtful, methodical approach to visitor use management by conducting research on 1) desired conditions, 2) salient indicators, and 3) thresholds for salient indicators are also well-positioned to effectively manage visitor use. Grand Canyon National Park is a prime example of a park that has elected to take this approach. These parks are less likely to develop indicators for managing the visitor experience simply based on visitor encounters, and are able to better support monitoring efforts.

2. What are some of the common elements among Parks that haven't dealt well with overcrowding?

Again, from an external perspective, these parks tend to be under-resourced with the staff, expertise, and infrastructure to manage visitor use effectively.

3. In your testimony, you mentioned a roadblock at the Office of Management and Budget that is affecting parks' efforts to manage overcrowding. Can you please explain that?

At present, from an external perspective, the programmatic review of visitor use surveys in national parks has stalled or significantly slowed. It is important to note that 1) this was occurring prior to the NPS engaging their programmatic renewal with OMB and 2) the NPS has been incredibly accommodating and transparent with researchers throughout this stalled period. The stall appears to be resting with desk officer(s) at the OMB; importantly, we currently have no transparency concerning the status of the studies currently undergoing programmatic review by OMB. This has led to a backlog of collaborative visitor use management research projects (administered by either agency scientists/staff or external researchers) which are vital to informing management of crowding.

4. Raising entry fees to Parks is a way of rationing that favors those with means. What alternatives are there to raising fees?

Generally, other rationing mechanisms include reservations, lotteries, first-come first-served systems, or a combination of two or more mechanisms. Additional research is needed to examine the equity trade-offs between these mechanisms. Shelby et al. (1989) discuss these systems at length:

Outdoor recreation resources are often provided at public expense because of widespread benefits and the difficulty of dividing costs among the population. As a result, user fees or free market mechanisms rarely ration these resources when they become scarce, and managers need to find nonmarket allocation alternatives which are acceptable to users.

Reservation is commonly used when price alone does not effectively allocate a commodity. For example, simply paying a price may not be sufficient to obtain space at a hotel or on an airline flight; it is often necessary to also reserve the space ahead of others willing to pay the price. The most significant attribute of a reservation system is that it puts a premium on planning ahead and thus discourages spontaneity (Magill 1976). However, reservation systems tend to be well accepted by users, especially in recreation settings (Shelby, Danley, Gibbs and Peterson 1982). Theoretically, reservations work to maximize equality since everyone has an equal chance to plan ahead. In a study of floaters on 26 rivers, Schomaker and Leatherberry (1983) found that reservation systems do not put any identifiable groups at a disadvantage. It is also possible to set aside blocks of reservations for certain groups to serve need and equity goals. However, reservations tend to work against efficiency when "no shows" cause underutilization of the resource.

Lottery mechanisms are the classic method for allocating scarce resources when equality is the goal and the commodity cannot be subdivided. In a pure lottery each individual receives an equal chance to obtain something. In modified lotteries, selection probabilities are altered for certain groups to serve equity, efficiency, or need goals. Lotteries can impose costs, however, because they usually are held some time before the commodity is used, and individuals must decide at that time whether they want to enter. In such cases, lotteries are similar to reservations in requiring users to plan ahead.

Queuing, or first-come/first-served, is similar to pricing except time, rather than money, is traded for the commodity. For example, queues (often in conjunction with pricing) commonly ration tickets for sporting events or concerts by forcing those without the time or inclination to stand in line to drop out. Queues may serve equality goals because theoretically everyone has an equal amount of time to spend in a line. However, time may be more valued by those leading structured lives, and queuing may discriminate against them (Schomaker and Leatherberry 1983). In addition, the remoteness of many recreation resources means those living far away may not be willing to spend the time and expense to get to the queue with failure still a possibility; locals may therefore have an advantage. (p. 63)²

²Shelby, B., Whittaker, D., & Danley, M. (1989). Idealism versus pragmatism in user evaluations of allocation systems. *Leisure Sciences*, 11(1), 61–70. <https://doi.org/10.1080/01490408909512205>