ultimately decided not to implement, a ticked entry system in 2020. The park may consider implementing such a system in the upcoming winter, but the discussions that would lead to that have yet to happen. The park is now carefully evaluating the expectations of both local and non-local visitors when considering management decisions. The park realizes that accurately portraying expectations to future park visitors will be essential to them having a high-quality experience; this often means helping them develop not only a Plan A, but also a Plan B and Plan C for their time in the park. It also means conveying the message of how visitors can recreate responsibly within the park.

MICHIKO MARTIN
Director of Recreation, Heritage, & Volunteer Resources, USDA Forest Service

The Forest Service has seen some extraordinary visitation numbers in July, August, and September of 2020, with day-use visitation twice that of 2015 levels and visitation to General Forest Areas up 150%. Similarly, overnight visitation and visitation to Wilderness areas has nearly tripled. Notably, the number of forest visits from first-time visitors increased by 150%. Consequently, national forests have had to deal with exceptional issues of waste-disposal, parking areas exceeding capacity, graffiti and vandalism, and resource damage. One of the primary ways that the Forest Service is managing...
increased visitation rates is partnerships. Partnerships with other federal agencies, with non-profit organizations, and with outdoor recreation industry. The #recreateresponsibly campaign, led by REI, Inc. is a primary example. Another solution that the Forest Service has employed is leveraging Recreation.gov, the system for reserving access to a wide array of recreation settings across the country, to help visitors better understand ways they can have desirable experiences even if they are unable to visit their destination of choice (either because it is already booked at the time they want or because of local or state health department restrictions). The increase in use the Forest Service has seen will require increased investments in outdoor recreation infrastructure. The Great American Outdoors Act provides a significant investment to meet these needs. The final solution that the Forest Service is leveraging is Shared Stewardship Agreements, which provide the strong legal precedence for partnerships between states and the Forest Service. Oregon has an exemplary shared stewardship agreement that can serve as a model for other regions and states across the country.

LEWIS LEDFORD
Director, National Association of State Park Directors

America's State Parks are the most visited of all public land management agencies, with 813 million visits in 2019. With the closures of many national parks in late March of 2020, visitation to state parks increased dramatically. Many state park systems also had to close their gates to visitors; 12 state park systems had to close completely, and many others had to implement restrictions to normal visitation. As of late October, six state park systems were completely open, and the vast majority of other state park systems were open with limited restrictions on visitation. For many state park systems, visitation in the fall months has rebounded to levels above 2019. The parks that have accommodated the increased visitation the best have had online systems in place for allowing visitors to reserve day-use and overnight use. Successful adaptation has also involved strong coordination with local and external (federal) partners to communicate ways visitors can recreate responsibly.

CHRIS MONZ, PH.D.
Professor, Utah State University

Recreation ecology is the study of how recreation activities disturb ecological systems; the discipline also examines how disturbed recreation settings affect visitor experiences. Foundational literature within the field have shown similar responses between the amount of recreation use a setting experiences and the amount of impact that use has on the setting1. These responses show that once a setting is disturbed (e.g., vegetative cover is lost) through recreation use, that level of disturbance stays relatively stable over time, so long as future use is concentrated in the same area. Initial use commonly results in rapid environmental change and additional use results in little additional disturbance. We can apply this theory to the management of individual and groups of recreation settings. Recreation use should be concentrated to areas that have already been disturbed in an effort to minimize new disturbances in un- or less-used areas. Many park and protected area managers are actively dispersing use because popular destinations are crowded/congested. These efforts are proving to be ineffective, as visitors who are diverted away from popular destinations ultimately return to those destinations at a later time, when those destinations are less busy.

Figure 2. Use-impact relationship (Source: Cole, 2004).

Dispersing use to lesser-used locations of parks and protected areas does not reduce the demand for popular destinations, it only seems to shift that demand to different times.

ASHLEY D’ANTONIO, PH.D.
Assistant Professor, Oregon State University

Spatial and temporal zoning strategies can provide an effective solution to managing conflict and mitigating the ecological impacts of outdoor recreation within parks and protected areas. Zoning is distributing or separating recreational activities or uses across time or space; it can also include a restriction of particular types of use (e.g., motorized use). Zoning is a common management strategy for many types of both terrestrial and aquatic systems. The most common zoning strategy employed by park and protected areas in the U.S. is the Recreation Opportunity System, used by the USDA Forest Service and the Bureau of Land Management. The ROS delineates unique zones for particular types of activities and experiences that visitors can have within parks and protected areas. The common zones range from primitive, wilderness-like, areas to very developed urban areas; each area is managed to provide a distinct type of experience (e.g., solitude in primitive areas and highly social experiences in urban areas). Zoning can be implemented to not only preserve distinct types of visitor experiences, it can also be used to preserve wildlife habitat (e.g., it is being used in the Oregon Dunes National Recreation Area to preserve western snowy plover habitat). In most outdoor recreation settings, particularly high-use settings where social norms can be easily understood, visitors tend to comply with zoning regulations. Because it is a passive management strategy, zoning tends to be supported by visitors. Zoning is also a cost-effective strategy, as it doesn’t require active enforcement.

ABBY SISNEROS-KIDD, PH.D.
Assistant Professor, University of Wyoming

To provide visitors with a clear and consistent understanding of existing rules and regulations as well as responsible outdoor
recreation behavior, coordinated communication strategies are needed within, and across, park and protected areas management agencies. Communication related to outdoor recreation occurs before visitors arrive on site (e.g., websites, social media, etc.) as well as the time they spend on site (e.g., interactions with staff, brochures/maps, etc.). Communication strategies need to consider not only what information is meant to convey, but also how that information is communicated. Research shows that effective communication: 1) activates social norms (e.g., reinforcing visitors’ belief about what they should do); 2) uses pre- versus pro-scriptive language (e.g., clearly explaining what visitors should do and not what they shouldn’t do); 3) uses attributional language (e.g., using language such as “you” and “your”); 4) is personal whenever possible (e.g., discussions with rangers, etc.); and 5) is visually appealing and understandable (e.g., using symbology that works across a variety of spoken languages). Communication needs to be timed to when visitors can act upon the information that is presented. For example, rules and regulations should be provided via information sources that visitors access prior to visiting and most certainly at highly visible locations on-site (e.g., trailheads, visitors’ centers, etc.).

More and more visitors are using social media to plan out their visits and determine where to go within parks and protected areas. As such, park and protected area managers should develop social media communication strategies that inform visitors of appropriate on-site recreation behavior. These efforts should start with assessments of the types of audiences park and protected area managers are currently reaching through their social media channels and the types of information those audiences want to receive through that channel.

**POLICY INSIGHTS**

- **Support the establishment of shared stewardship agreements.** Shared stewardship agreements provide a strong legal precedent that allows federal and state land management agencies to collaboratively identify, support, and fund the maintenance and development of outdoor recreation resources.

- **Support coordinated communication strategies across park and protected areas management agencies.** These communication strategies should be focused on managing the expectations of visitors to parks and protected areas. This includes helping them develop not only a Plan A, but also a Plan B and Plan C for their time in the park. These communication strategies also need to convey messages of how visitors can recreate responsibly within park and protected areas.

- **Support investments in outdoor recreation infrastructure.** The increase in use to parks and protected areas will require increased investments in outdoor recreation infrastructure. The Great American Outdoors Act provides a significant investment to meet these needs, however continued investments are needed to meet future demand. Investments should be focused in popular destinations in an effort to concentrate use and minimize the environmental impacts of dispersed use.

- **Support the refinement of resource management frameworks that provide guidance on allowable uses of park and protected areas.** Established frameworks, such as the Recreation Opportunity Spectrum, lack the prescriptive guidance (e.g., enabling managers to allow or prohibit recreational uses in specific areas of parks and protected areas) that provide an effective solution to managing conflict and mitigating the ecological impacts of outdoor recreation within parks and protected areas. Any refined frameworks should be collaboratively developed through the Interagency Visitor Use Management Council.

**REFERENCES**


