

A Superior Research Reader

Volume 9, October 2015



Photo Credit: US Forest Service (left), Star Tribune (middle and right)

Greetings and welcome to *A Superior Research Reader*, a monthly reader on what we believe is current and relevant research to science and resource management on the Superior.

This Month's Edition: Recreation

Whether it is hiking, fishing, hunting, skiing or just soaking in a beautiful view, there is some recreational aspect of our Forest for everyone! In this issue, we've rounded up articles that pertain to a wide breadth of recreational issues in forest management. On a local note, Superior National Forest begins its fourth round of surveys for the [National Visitor Use Monitoring](#) this month! This provides National Forest managers with an estimate of how many people recreate on federal lands and what activities they engage in while there. And if you want to dig in to more local research, check out [this gallery of links](#) to research reports and posters generated at UMN that range in topics from ATV use to Hmong-Minnesotan barriers to and preferences for recreation.

Happy reading and recreating,

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IN THIS ISSUE:

1. In light of the USDA's initiation for 'culturally transforming' management practices, [research from the Forest Service](#) aims to better understand what visitor diversity means for National Forest recreation managers.
2. New research from the [New York College of Environmental Science and Forestry](#) explores landowner perceptions of three types of boating in the Saranac Lakes area of New York State's Adirondack Park.
3. Detailed information of five Great Lakes recreational activities has now been [mapped by researchers](#) in order to help prioritize restoration projects in our region.
4. [Local researchers](#) use social-media to draw conclusions about recreation preferences in Minnesota and Iowa lakes.



[Visitor diversity through the recreation manager lens: comparing Forest Service Regions 8 \(U S South\) and 5 \(California\)](#)

Johnson Gaither et al. 2015. General Technical Report.

ABSTRACT: In response to changing demographics and cultural shifts in the U.S. population, the Forest Service, U.S. Department of Agriculture has initiated a range of “culturally transforming” management practices and priorities aimed at better reflecting both the current and future U.S. population (USDA 2011). This makeover also calls attention to the various publics served by the Forest Service and questions whether the Agency’s services and programming are reasonably accessible by racial and ethnic minority populations within the U.S. populace. Although a priority for upper level management, the actual implementation of recreation visitor services may be difficult to achieve given competing management demands. The present study is an effort to generate greater understanding of the priority given to visitor diversity by forest managers in two of the Forest Service’s most racially and ethnically diverse regions: the 13 Southern States (not including Puerto Rico) that compose Region 8, and Region 5 (California only). Importantly, we want to understand better what this emphasis on visitor diversity means from the perspective of National Forest recreation managers. We identify management priorities and challenges facing recreation managers in their attempts to connect with (i.e., outreach and/or engage) and understand culturally and ethnically diverse recreationists. Results indicate that managers in both regions consider visitor diversity important, but fiscal constraints and understaffing inhibit more targeted programming. As expected, results indicate more programming aimed at diverse recreation visitors in Region 5 compared to Region 8, although racial, ethnic, and, increasingly, cultural diversity are prevalent in a number of key areas adjacent to National Forest lands in the South.

[Landowner perceptions of three types of boating in the Saranac Lakes area of New York State's Adirondack Park](#)

Kuehn et al. 2015. Journal of Outdoor Recreation and Tourism

ABSTRACT: In order for natural resource managers to better understand conflicting landowner perspectives related to non-motorized, motorized, and personal watercraft use, this study examines the demographic and experiential characteristics, values, attitudes, and beliefs of landowners in the Saranac Lakes area of the Adirondack Park in New York State. A mixed-methods approach, composed of 20 in-depth interviews with land managers and a mail survey of 1000 landowners, was used. Three path analyses were completed, one for each type of boat use. Results indicate that resource-related values influence beliefs and attitudes related to boat use, supporting the cognitive hierarchy model of human behavior (Fulton, D. C., Manfredo, M. J., & Lipscomb, J. (1996). Wildlife value orientations: a conceptual and measurement approach. *Human Dimensions of Wildlife*, 1, 24–47). In addition, length of residence in the area, past participation in non-motorized and motorized boating, age, and education were found to influence attitudes towards certain types of boating. The results of this study can be used by natural resource managers to identify management strategies that better address the values and recreational interests of landowners.

[Using cultural ecosystem services to inform restoration priorities in the Laurentian Great Lakes](#)

Allan et al. 2015. *Frontiers in Ecology and the Environment*

ABSTRACT: Ecological restoration programs often attempt to maintain or enhance ecosystem services (ES), but fine-scale maps of multiple ES are rarely available to support prioritization among potential projects. Here we use agency reports, citizen science, and social media as data sources to quantify the spatial distribution of five recreational elements of cultural ES (CES) – sport fishing, recreational boating, birding, beach use, and park visitation – across North America's Laurentian Great Lakes, where current restoration investments exceed US\$1.5 billion. These recreational CES are widely yet unevenly distributed, and spatial correlations among all except park visitation indicate that many locations support multiple CES benefits. Collectively, these five service metrics correlate with tourism gross domestic product, indicating that local economies benefit from ecosystem conditions that support CES. However, locations of high recreational CES delivery are often severely affected by environmental stressors, suggesting that either ecosystem condition or human enjoyment of these recreational CES is resilient even to substantial levels of stress. Our analyses show that spatial assessments of recreational CES are an informative complement to ecosystem stress assessments for guiding large-scale restoration efforts.

[Recreational demand for clean water: evidence from geotagged photographs by visitors to lakes](#)

Keeler et al. 2015. *Frontiers in Ecology and the Environment*

ABSTRACT: More than 41 000 water bodies are listed as impaired by the US Environmental Protection Agency under the Clean Water Act. Implementation and enforcement of regulations designed to address these impairments can be costly, raising questions about the value of the public benefits derived from improved surface water quality. Here, we assess the recreational value of changes in water quality using freely available geotagged photographs, taken by members of the public, as a proxy for recreational visits to lakes. We found that improved water clarity is associated with increased numbers of visits to lakes and that lake users were willing to incur greater costs to visit clearer lakes. Lake users were willing to travel 56 minutes farther (equivalent to US\$22 in travel costs) for every one-meter increase in water clarity in Minnesota and Iowa lakes, when controlling for other lake attributes. Our approach demonstrates the potential for social-media data to inform social-ecological research, including assessment of the recreational benefits of improvements in water quality.