

University of Vermont Program of Social Science Research at Muir Woods National Monument

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The Park Studies Laboratory at the University of Vermont has conducted a program of social science research at Muir Woods National Monument from 2003 to the present. This program of research includes twelve components. This report summarizes the first seven components that were conducted from 2003 through 2005. The remaining components were conducted in collaboration with Dr. Peter Newman at Colorado State University and are summarized in his report.

The first two components were entrance and exit visitor surveys conducted in the summer of 2003. These studies collected baseline data on visitor use and users (including detailed travel patterns throughout the park), potential indicators of quality of the visitor experience, potential standards of quality for crowding on trails (using simulated photos), and visitor attitudes toward alternative management practices. Potential indicators of quality that emerged from the study included crowding on trails, large groups of visitors, difficulty finding parking, and visitor-caused noise. Data on visitor-based normative judgments on the range of use densities along trails represented in the study photos help provide an empirical basis to set crowding-related standards of quality. For example, study findings suggest that visitors find about 16 persons-per-view-scape (PPV) to be the maximum acceptable use density along the parks' main trails.

The third component of research was replication of the 2003 exit survey in April, 2004 to explore potential differences between peak and off-peak seasons. Few substantive differences were found in visitor use and user characteristics, indicators and standards of quality, and attitudes toward management. For example, study findings again suggest that visitors find about 16 PPV to be the maximum acceptable use density.

The fourth component of research was detailed counts of visitor use conducted in the summer of 2004. These counts were used to help develop a computer simulation model of visitor use in the park. Development of the simulation model was the fifth component of research. The model uses data collected in previous components of research to estimate visitor use levels along park trails and estimate the maximum number of visitors that can be accommodated in the park each day without violating alternative crowding-related standards of quality.

The sixth component of research re-measured crowding-related standards of quality using simulated photos based on national guidelines for pedestrian use. Findings were similar to the surveys conducted in 2003 and 2004. For example, findings suggest that visitors find about 18 PPV to be the maximum acceptable use density on trails.

The seventh component of research was an exit visitor survey conducted in the summer of 2005. This survey collected data on potential standards of quality for the indicators of parking, size of visitor groups, and visitor-caused noise. Standards for visitor-caused noise were measured using a series of audio clips simulating a range of visitor-caused noise in the park. Data on visitor-based normative judgments help provide an empirical basis to set standards of quality. For example, maximum acceptable waiting time to find a parking place is about nine minutes, maximum acceptable walking time from the parking area to the park is about 11 minutes, maximum acceptable group size of visitors is about 20, and maximum acceptable level of visitor-caused noise is represented by the approximate mid-point between audio clips two and three.