



Recreation Research Update



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Day Use Recreation on the Angeles National Forest

The following reports results from a day use visitor contact study conducted on two planning places on the Angeles National Forest in summer 2004: the Angeles High Country and San Gabriel Canyon. Data were collected from 137 recreationists.

Most day use visitors at these planning places were white or Latino, and most were U.S.-born. Average age of respondents was 37 years, and they reported an average 13 years of education. Most of these day use visitors were recreating with family and friends, were on a visit of more than six hours, were repeat visitors, and planned return visits to the forest. Usual recreation activities were picnicking/barbecuing, driving for pleasure, day hiking, camping, stream play, watching wildlife, sightseeing, and off-highway vehicle riding. On the day contacted, most respondents were on a picnic/barbecue trip, day hiking, or were off-highway vehicle riding.

Day use visitors had interest in informational talks given by Angeles National Forest employees (especially about “animals and their habitats” and “local mountain history”). Most respondents heard about the Angeles National Forest from word-of-mouth sources (typically friends and family). Preferred sources of on-site information included brochures, signs along the road, and bulletin boards. Day use visitors wanted more information about the best times to visit the area to avoid crowds, camping in the area, picnic/barbecue areas, safety in the area, rare types of plants and animals, things to see and do, and hiking in the area.

Preferred day use site attributes included trash cans, parking areas, water faucets, and picnicking areas. Respondents also preferred easy to walk and also somewhat challenging trails that take 15 minutes to about an hour to hike. Day use visitors were bothered by problems such as litter on roads and picnic sites, drawing and graffiti on natural and man-made structures, and carving of names, initials or messages on trees.

Managers of these planning places can use the results of this report in several ways. First the demographics suggest a mixed white and Latino clientele, suggesting a need to serve both groups. Communication plans should be developed with a mixed clientele in mind. There are many opportunities

to communicate with forest visitors on-site ranging from ranger-led activities to brochures, signs along the road, and notes on bulletin boards with information on best times to visit the area to avoid crowds, camping in the area, picnic/barbecue areas, safety in the area, rare types of plants and animals, things to see and do, and hiking in the area. Development preferences suggest there are particular facilities and amenities (such as trash cans, parking areas, water faucets, and picnic sites) that visitors desired and a focus on these will be beneficial to the forest and the visitors. Visitors were especially concerned about litter and graffiti so attention to these issues will further enhance their visits to the Angeles National Forest. *For more information about this study contact Deborah Chavez at 951-680-1558 or dchavez@fs.fed.us.*

Using Normative Messages to Reduce Off-Trail Hiking

Pat Winter (PSW) recently completed a study that examined the effectiveness of normative messages in reducing off-trail use. The study was based on the focus theory of normative conduct, which states that norms influence behavior when they are salient to an individual. It was a follow-up to a series of studies conducted in collaboration with Bob Cialdini and colleagues at Arizona State University. In this study the impact of the framing of normative messages was examined through signs posted along trails in Sequoia and Kings Canyon National Parks. Messages were aimed at encouraging visitors to stay on the established trails.

The first two conditions regarded the actions of others and were either positively (descriptive-prescriptive, i.e., “The vast majority of past visitors have stayed on the established paths and trails, helping to preserve the natural state of the Sequoias and vegetation in this park.”) or negatively worded (descriptive-proscriptive, i.e., “Many past visitors have gone off the established paths and trails, changing the natural state of the Sequoias and vegetation in this park.”) The third and fourth conditions stipulated the desired or undesired behavior in the following forms: “Please stay on the established paths and trails, in order to protect the Sequoias and natural vegetation in this park.” (injunctive-prescriptive) and “Please don’t go off the established paths and trails, in order to protect the

Sequoias and natural vegetation in this park.” (injunctive-proscriptive). In the fifth condition (control) no experimenter-introduced sign was used. Park signs normally in the settings were present across all conditions.

Digital video recordings of trail use were obtained for two-hour time blocks, randomly assigned to either morning or afternoon sessions along four trails. A total of 2,838 observations of hikers were gathered.

The majority of hikers stayed on the trail (83%). Younger hikers (those appearing to be under 16 years of age) were more likely to go off trail than were adults. Significant differences by experimental condition were found. The injunctive-proscriptive message (“Please don’t go off...”) was associated with the lowest percentage of off-trail hiking (5.1% of hikers went off-trail) when compared with all other experimental conditions (16.1%). In comparison, the descriptive-proscriptive message (“Many past visitors have gone off...”) was associated with the highest levels of off-trail use (18.7% of hikers went off-trail), when compared to all other experimental conditions combined (11% of hikers went off-trail).

Findings suggest managers would not want to use messages that refer to an undesirable behavior as something that occurs frequently. To be most effective in reducing undesirable acts, managers would politely state what visitors are not to do in a setting and would include a brief justification. For more information about this study contact Pat Winter at 951-680-1557 or pwinter@fs.fed.us.

Unit Publications

Absher, J.D.; Vaske, J.J. 2005. **An ipsative approach to norm crystallization.** In Bricker, K. and Millington, S.J. (comps/eds). Proceedings of the 2004 Northeastern Recreation Research Symposium; 2004 March 28-30; Bolton Landing, NY. General Technical Report NE-326. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 310-314.

Cavin, D.A.; Cavin, J.K.; Kyle, G.; Absher, J. 2005. **Campers across the recreation opportunity spectrum: A comparative examination.** In Bricker, K. and Millington, S.J. (comps/eds). Proceedings of the 2004 Northeastern Recreation Research Symposium; 2004 March 28-30; Bolton Landing, NY. General Technical Report NE-326. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 39-45.

Cavin, J.K.; Cavin, D.A.; Kyle, G.; Absher, J. 2005. **Examining the structure of the leisure involvement/ place bonding relationship in three Sumter National Forest camping areas.** In Bricker, K. and Millington, S.J. (comps/eds). Proceedings of the 2004 Northeastern Recreation Research Symposium; 2004 March 28-30; Bolton Landing, NY. General Technical Report NE-326. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 281-288.

Chavez, D.J. 2005. **Latinos and public lands in California.** *California Parks & Recreation* 61, 2, 32-35.

Chavez, D.J.; Olson, D.D. 2005. **Day use of National Forest series: The Angeles National Forest Southern California Planning Places, 2004.** Unpublished report. Riverside, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. 58 p.

Deau, G.; Vogt, C.A. 2004. **The impact of wildland fire reduction techniques on attitudes toward fuels mitigation: A comparison of special use cabin permittees and other homeowners living near a national forest.** In Murdy, J.J. (comp/ed). Proceedings of the 2003 Northeastern Recreation Research Symposium; 2003 April 6-8; Bolton Landing, NY. General Technical Report NE-317. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 128-133.

Vogt, C.A. 2004. **Consideration of property risk reduction at the time of home purchase by wildland-urban interface (WUI) homeowners.** In Murdy, J.J. (comp/ed). Proceedings of the 2003 Northeastern Recreation Research Symposium; 2003 April 6-8; Bolton Landing, NY. General Technical Report NE-317. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 11-17.

Winter, P.L. 2005. **Recreation preferences of Asian-Americans.** *California Parks & Recreation* 61, 2, 36.

Winter, P.L. 2005. **The impact of normative message types on depreciative activities.** *Investigator’s Annual Report.* Available: science.nature.nps.gov/research. 2 p.