



Recreation Research Update



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Caring for the Land and Serving People

Communicating With The Public: The Use of International Symbols

Managers of public lands rely on a limited number of tools to facilitate communication with their publics. Most of these tools are one-way communications or indirect public contacts that are accomplished through signs, posters, brochures, and maps. The goal of this research was to evaluate one form of indirect communication—international symbols (pictures depicting things rather than using words) — on public lands.

Respondents were recreation visitors on the San Bernardino National Forest (n=197). Just over half the respondents were male, about 6 in 10 were white, the median age was 30, and average education level was 15 years. Most were repeat visitors, who were visiting with family and friends, and were at the sites to picnic, relax, and sightsee.

Five types of symbols were studied: facility symbols, general recreation, land recreation, water recreation, and winter recreation. Results depicted below are representative of responses overall.

Facility Symbols



Tent

- 88% correct**
- Correct:**
 - Campground
 - Camp here
- Incorrect:**
 - Hazard
 - Teepee

Water Recreation



Wading

- 16% correct**
- Correct:**
 - Hiking in creekbed
 - River wading
- Incorrect:**
 - Bridge
 - Jesus on the water

Land Recreation



Amphitheater

- 20% correct**
- Correct:**
 - Amphitheater
- Incorrect:**
 - Alarm
 - Baseball field
 - Siren

General Recreation



Pets on Leash

- 39% correct**
- Correct:**
 - Animals on leash
 - Walk with leash
- Incorrect:**
 - No dogs
 - Pets okay

This data suggests there is a gap between the message being sent and the one being received. Of the 20 symbols, there were only 8 that were correctly identified by 75% or more of the respondents. To better communicate and provide service delivery, public land

managers will need to alter these international symbols. *For more information about this study contact Debbie Chavez at 909-680-1558.*

Californians' Opinions on Wildland and Wilderness Fire Management

A statewide survey of California residents was recently completed, in cooperation with San Diego State University. Fire management is of great interest in the west, in part due to the high cost of fire suppression; and social values play an important role in fire management.

The sample was stratified by geographic region in the state and by gender. The final cooperation rate was 83.9%. Data were weighted to match the population in each region, based on a total of 606 usable surveys.

Most respondents were concerned about wildland and wilderness fires in the state (mean of 6.27 on a scale from 1=not at all concerned, 8=very concerned), though they saw others as less so (mean of 5.28). It may be quite true that respondents were more concerned about fires, since they took the time to participate in our survey. However, it is also the case that individuals tend to view themselves more positively than how they see others (the self-serving bias).

The greatest percentage agreed that “we probably have to let some fires burn, but must protect residences” (60.1%), although about one-third agreed with the statement “all fires must be extinguished regardless of cost” (31.5%). Very few (5.4%) thought “fires must be allowed to take their natural course...even if structures are involved.”

A series of statements about fire were rated as true or false, for example the vast majority (90.5%) felt that “controlled burns reduce the risk of larger, uncontrolled fires”.

Possible management techniques for wildland and wilderness fires were rated for expected effectiveness and approval. In order of greatest to least expected effectiveness were closures of areas, prescribed burns, signs in recreation settings, restrictions on types of use (e.g., fires only in fire rings), mechanical techniques such as chipping, and bans on mechanically based recreation. Approval ratings from highest to lowest were signs, closures, restrictions, burns, mechanical techniques such as chipping, and bans.

Trust in the Forest Service's efforts to manage forest fires was fairly high (6.8 on scale from 1=do not trust the FS at all, to 8=trust the FS completely).

These opinions are helpful in understanding public perceptions of, and reactions to fire management.

For more information contact Pat Winter at pwinter@fs.fed.us or (909)680-1557.

Northern California Recreation Market Analysis

Pat Tierney, Eric Rosegard (SFSU) and Jim Absher (PSW) have completed a market assessment of outdoor recreation on federal recreation lands from residents of central and northern California. The focus is on residents' participation, satisfaction and desired experiential characteristics. Three telephone surveys are included. The Central and Northern California (CN) sample provides a perspective on the region as a whole. Two regional oversamples represent the BLM NorCal East district (NE) and Sierra Nevada rural or forest-proximate communities (FP). Altogether a total of 1,203 interviews were completed: 617 CN, 476 NE and 110 FP.

The results suggest a strong pattern of outdoor recreation interest and extensive use of federal lands in this market region. In addition the data set is compatible with earlier work from WA, OR, AZ and southern CA to complete a "west coast" market dataset. Selected highlights of the findings of this study are:

- Over 80% of all residents had some interest in outdoor recreation, and 70% participated in outdoor recreation in the last year. Most CN respondents (59%) participated in outdoor recreation on federal lands. Additionally, 50% of this group visited federal lands in their home region, and over 14% visited federal lands at least 10 times in past year.
- The most popular outdoor recreation activities on federal land in the study area were day hiking, camping, fishing, site seeing and picnicking. In addition the CN group was more likely to motor boat/sail, do beach activities and river raft. All reported high levels of satisfaction.
- Trip lengths suggest a preponderance of overnight trips with average days away from home at 5.1, with only 23% traveling for one day. The CN group average spending was \$503.19 per trip, with an average expenditure per group per day of \$98.67.
- Almost all CN respondents (94%) who participated in outdoor recreation in the last year planned to visit federal lands in the CN region within the next year.
- Highly desired characteristics of federal outdoor recreation lands were: Employees who are courteous,

very well maintained facilities, wide variety of scenic views, visitors who are courteous and non-crowded areas.

For more information contact Jim Absher at jabsher@fs.fed.us or (909) 680-1559.

Unit Publications

Absher, J. D.; Thapa, B.; Graefe, A. R. 2002. **Assessing information needs and communication behaviors of national forest summer visitors.** In Todd, S. (comp/ed). Proceedings of the 2001 Northeastern Recreation Research Symposium; 2001 April 1-3; Bolton Landing, NY. *General Technical Report NE-289*. Newtown Square, PA: Northeastern Research Station, Forest Service, U.S. Department of Agriculture: p. 43-48.

Chavez, D. J. 2001. **Changes in demographics: Changes in recreation patterns.** In Luft, K. and MacDonald, S. (comps). Trends 2000: Shaping the Future—The 5th Outdoor Recreation & Tourism Trends Symposium; 2000 September 17-20; Lansing, MI. East Lansing, MI: Department of Park, Recreation and Tourism Resources at Michigan State University: p.363-368.

Chavez, D.J. 2002. **Communicating with the public: The use of international symbols.** [Proceedings paper]. Hawaii International Conference on Social Sciences; 2002 June 11-15; Honolulu, HI. [on CD ROM only] 9 p.

Chavez, D.J. 2002. **Managing trails on public lands: The emergence of extreme recreation.** [Proceedings paper]. Hawaii International Conference on Social Sciences; 2002 June 11-15; Honolulu, HI. [on CD ROM only] 8 p.

Chavez, D. J. 2001. **Xtreme uses of trails on public lands: Management issues and strategies.** In Luft, K. and MacDonald, S. (comps). Trends 2000: Shaping the Future—The 5th Outdoor Recreation & Tourism Trends Symposium; 2000 September 17-20; Lansing, MI. East Lansing, MI: Department of Park, Recreation and Tourism Resources at Michigan State University: p.3-7.

Kyle, G.T.; Graefe, A.R.; Absher, J.D. 2002. **Determining appropriate prices for recreation on public lands.** *Journal of Park and Recreation Administration*, 20, 2, 69-89.

Struglia, R.; Winter, P.L. 2002. **The role of population projections in environmental management.** *Environmental Management*, 30, 1, 13-23.