



# Recreation Research Update



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## A Snapshot from the Socioeconomic Assessment for Southern California

In our July 2000 update we summarized a socioeconomic assessment being conducted by Pat Winter and Rachel Struglia that covers twenty-six counties in California, spanning from the U.S. – Mexico border up to the San Francisco Bay Area. In this update we provide a snapshot from the draft of the compilation of sociodemographic conditions and projections, historical trends, and quality of life write-up.

For the twenty-six county region falling within the assessment area the following are expected. 1) A dramatic growth in overall population (almost doubling the population between 1990 and 2040); 2) Increased racial/ethnic diversity; and 3) Increased median age among all ethnic groups except Hispanics. Each of the five regions within the assessment has a unique story unfolding.

The SANDAG region is a one county region. The region is expected to experience tremendous population growth, and housing construction is unlikely to keep pace with that growth. In addition, the region is already noted for its ethnic and racial diversity, with Hispanics representing a large portion of the communities of color. Most of the growth in the future is expected within the north inland, north coastal, and south bay areas. Since this region is heavily reliant on imported water, access to this resource will influence continuing growth patterns. An emerging economy in software, communications and biotechnology is on the horizon.

Moving north from SANDAG, the next region is SCAG (or the Southern California Association of Governments) region. Six counties fall within the SCAG region (Imperial, Riverside, Orange, San Bernardino, Los Angeles and Ventura). The region is expected to have 21 million people by 2020. With this dramatic growth come six major challenges: 1) Pressure on open space; 2) A need for improved transportation corridors; 3) Affordability of housing; 4) Traffic congestion; 5) Air quality issues; and 6) Availability of water. Hispanics are expected to be the largest ethnic/racial group in this region by 2020.

A bit north of SCAG is the Central Valley region, made up of eight counties selected for this assessment (the region encompasses as many as 18 counties depending upon the

source). The counties include Kern, Kings, Fresno, San Benito, San Joaquin, Merced, Stanislaus, and Sacramento. A pattern for this region has emerged showing the greatest amount of projected growth within the state. As of 1990, the area was more than one-third Hispanic, and Hispanics are expected to be the majority ethnic group by 2020. This region is large and diverse, and its patterns split it into two sub-regions divided by north and south. The conversion of agricultural land to urban uses is occurring at an increasing rate, and will be a major challenge into the future as this region grows.

Over toward the coast lies the Central Coast region, comprising of four counties (Santa Barbara, San Luis Obispo, Monterey, and Santa Cruz). This region is unique in that it holds a majority white population, and shows the least amount of demographic change across the five regions. The region is generally wealthy and housing is expensive. Tourism is heavily depended upon in this area's economic base. Water quality and availability will serve to constrain growth in this region.

The northern-most region falling in our assessment is the ABAG (or Association of Bay Area Governments) region. The region consists of nine counties, seven of which have been selected for this assessment. This region is unique because Asians will account for the majority of population growth here, rather than Hispanics. Residents commute to jobs in the region from the Central Valley and the Central Coast. Predicted job growth combined with a severe housing shortage will challenge this region in the future.

The final write-up on this portion of this assessment will be available at the end of May, 2001.

*For more information about this portion of the assessment contact Rachel Struglia at (909) 680-1540.*

## Use of Information Services at Big Bear Discovery Center

A recently completed study by Katherine James (Cal. State Univ. Long Beach) and James Absher (PSW) examined the needs and expectations of visitors to Big Bear Discovery Center (BBDC, San Bernardino NF). The study focused on demographics, recreation behavior, expectations and satisfaction with BBDC information services/ facilities, and time use allocation in BBDC.

A two-phase visitor intercept methodology was used. Visitors were observed using video security cameras to assess time use allocations. In addition, a written survey was administered on-site to visitors as they exited the visitor center. Data were collected on six summer weekends in 1998, yielding 941 surveys. Video footage shows the behavior of 569 visitors. Survey information and video footage were matched for 287 respondents.

The demographic characteristics of survey respondents did not match the anticipated target for BBDC. Most of those surveyed were well educated (80% had at least some college education), tourists (70%), in their 30's or 40's (53%). Only 10% of the survey respondents were local residents throughout the year. Primarily, respondents were traveling in small groups with family members (61%). Most traveled without children (63%). A quarter of the respondents reported annual household income between \$50,000 and \$74,999, and another 35% reported incomes over \$75,000. The discrepancy between the anticipated target market and those surveyed may indicate the need for a more family oriented marketing approach.

Analysis of use of information resources in BBDC revealed that very few visitors (10%) used every resource in the center, although virtually all of them used more than one, and 72 percent talked with staff at the information counter. The lowest use was the interpretive display table (33%). Respondents gave the highest ratings of information quality to orientation information, e.g., directions to specific sites. This was followed by regulatory information, e.g., information about rules and regulations. The lowest ratings were given to commercial information, e.g., information about the local community.

Analysis of the video data determined the total time allocated to each type of information service. Based on total aggregate time, the store was used most (36 hours, 37 minutes, 19 seconds), followed by staff at the information counter (22:12:24), displays (15:19:32), interpretive table (12:12:09), and tourism alcove (4:06:00). Average time allocations (total time divided by number of visitors using resource) reveal that, on average, visitors spent the greatest amount of time in the store (6 minutes, 17 seconds), followed by the interpretive talk (3:56), talking to staff (3:16), reading the displays

(2:35) and using the tourism alcove (1:09). Time use allocations were further analyzed by demographic and use variables to ascertain differences across these variables. These are also detailed in the report.

The time use allocation data indicates that attention needs to be paid to the number of visitors using the service and the duration of use by the average visitor. The store provides an avenue for contact with a large number of visitors for relatively large amounts of time, suggesting a potential to reach financial independence for the BBDC. The interpretive table reaches fewer visitors but the duration of contact is relatively high, suggesting that there may only be a small market for drop-in interpretive services, but interest may be strong within that group. Displays within the visitor center are viewed by a moderate to high number of visitors, but only for short periods of time. They must be well designed to convey information quickly. Finally, staff reaches many visitors for moderate periods of time, suggesting that they may be meeting visitor needs without leaving extensive periods of "down time" between visitors.

*For more information about this study contact Jim Absher at (909) 680-1559.*

## International Signs: An Evaluation

For several years the Wildland Recreation and Urban Cultures unit has suggested that site managers can better serve culturally and racially diverse visitors by recognizing the need to communicate in multiple languages. One tool we have suggested is the use of international signing, that is, signs without words.

A preliminary study was recently conducted to examine international signs. The research was conducted by Debbie Chavez (PSW), Veda Ward, Merrilee Bloch, Maria Hodgson, and Rachel Keller (California State University at Northridge). The goal of the pilot study was to examine recreationists' understanding of international signs.






The data were collected from recreation visitors at various sites on the Angeles National Forest in southern California. Though the instruments were in English only, the data were collected by bilingual teams, who conducted interviews in English or Spanish. There were four instruments used, each was two pages in length. The first page of each version asked the same recreation pattern and socio-demographic questions. The second page of each instrument had selected international signs that are used by federal agencies nation-wide. The signs were grouped into five categories: water recreation, accommodations and services, facility symbols, general recreation, and land recreation. Four sets of international signs

were selected from each of these categories and one was randomly selected for each version. Thus, version one had one randomly selected sign from each of the categories, version two had another set of randomly selected signs, etc. Nine people viewed and described each set, for a total 36 respondents.

Selected signs by category were: Water recreation: wading area (pictured), fishing, rafting, and swimming; Accommodations and services: restrooms (pictured), handicapped access, telephone, and food service; Facility: group picnicking area (pictured), campfires, campground, and parking; General recreation: information (pictured), natural study area, pets on leash, and ranger station; and Land recreation: horse trail (pictured), hiking trail, bicycle trail, and amphitheater.

There were 19 respondents who categorized themselves as Hispanic; 17 were white. Seventeen respondents were under age 25, 12 were between 26 and 40, and seven were 41 or over. The vast majority of the respondents were male (n = 29; female = 7). Many had no college experience (n = 20), though many did (n = 16). Most were return site visitors (n = 24). While at forest sites, visitors usually engaged in 1 to 8 activities, with an average of 4.2 activities. Activities included camping, driving for pleasure, fishing, hiking, horseback riding, picnicking, riding off-road vehicle, relaxing, and sightseeing.

Sign evaluation results are summarized below:

	<b>WATER RECREATION</b> Respondents correctly identified 28 of 40 signs for 71% correct.
	<b>ACCOMMODATIONS &amp; SERVICES</b> Respondents correctly identified 34 of 40 signs for 85% correct.
	<b>FACILITY SYMBOLS</b> Respondents correctly identified 24 of 40 signs for 60% correct.
	<b>GENERAL RECREATION</b> Respondents correctly identified 17 of 40 signs for 42% correct.
	<b>LAND RECREATION</b> Respondents correctly identified 27 of 40 signs for 67% correct.

It appears that respondents had a better understanding of accommodations and services, water recreation and land recreation signs than they did facility symbols and general recreation international signs. There were differences based on visitation pattern (return visitors averaged 3.7 correct responses, while new visitors averaged 3.4), activity pattern (more than 4 activities on site averaged 3.8 correct responses, while those engaging in four or fewer activities averaged 3.4), and by level of education (respondents with some college averaged 3.7 correct responses, while those with no college experience averaged 3.5). However, there were no differences based on race/ethnicity

(white respondents and Hispanic respondents averaged 3.6 correct responses). These preliminary findings suggest that messages intended are not always the ones received by visitors.

*For more information about this study contact Debbie Chavez at (909) 680-1558.*

## Unit Request for Evaluation of Research Areas

We request your review and comment on the Unit's four research areas. The comments received will provide critical input to the Wildland Recreation and Urban Cultures Research Work Unit. We will consider your comments as we plan the unit's future direction. For a full description of the four research areas please go to our web page at:

[http://www.rfl.psw.fs.fed.us/recreation/research\\_comments.html](http://www.rfl.psw.fs.fed.us/recreation/research_comments.html)

## Recent Publications

Anderson, J.A.; Blahna, D.J.; Chavez, D.J. 2000. **Fern gathering on the San Bernardino National Forest: Cultural versus commercial values among Korean and Japanese participants.** *Society and Natural Resources* 13:747-762.

Finn, K.L. 2000. **Public attitudes toward wildlife: An annotated bibliography of research concerning wildlife management, conservation, and preservation.**

Unpublished report. Riverside, CA: USDA Forest Service, Pacific Southwest Research Station. 40 pp.

Guillen, B.F.; Marcus-Newhall, A.; Winter, P.L.; Meyer, A. 2000. **Recreational preferences, environmental concern, intergroup conflict, and ethnic identity measures: An annotated bibliography.**

Unpublished report. Riverside, CA: USDA Forest Service, Pacific Southwest Research Station. 50 pp

James, K. & Absher, J. 2000. **Use of Information Services at Big Bear Discovery Center.** RWU 4902 Technical Report. Riverside, CA: USDA Forest Service, Pacific Southwest Research Station. 67 pp.

Winter, P.L. 2000. **Recreation at the Redding Resource Area in California.** Res. Paper PSW-RP-244. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

Winter, P.L.; Sagarin, B.J.; Rhoads, K.; Barrett, D.W.; Cialdini, R.B. 2000. **Choosing to encourage or discourage: Perceived effectiveness of prescriptive versus proscriptive messages.** *Environmental Management* 26 (6): 589-594.