Assessing trends in nature-based recreation

At the State Parks Planning Division we are always interested in news about trends in nature-based (or “nature-related”) recreation. Two items recently caught our attention.

• An article in a scientific journal attesting that nature-based recreation is declining in developed countries (including the United States).

• A presentation by a U.S. government scientist, in response to the above article, claiming that nature-based recreation in the U.S. is increasing.

To explain how experts such as these can reach such different conclusions, we look at attendance trends at California State Parks and National Parks, and compare the article and the presentation mentioned above. Along the way, we share information about trends and statistics that may help you better interpret attendance statistics.

How park planners assess trends

Planners at park agencies regularly use a variety of methods to help ensure that park amenities meet attendees’ needs. Some of the most common are:

• Monitoring attendance. Attendance data is valuable, but sources of variances in attendance can be difficult to identify due to the wide variety of possible causes. For example, factors such as fuel prices, changes in admission fees, severe weather, a fluctuation in nearby population or the introduction of other recreation opportunities nearby can affect attendance.

(Improvements or changes to data collection methodology also can affect trends.)

• Regularly reviewing demographic data and related research. Demographic information documents changes in the population (such as average age, ethnic composition and population size).

• Using results of surveys, conducted by parks or third-party vendors, which provide valuable feedback directly from the public. The California State Parks Planning Division reports on recreation often use survey data to monitor recreation trends. Recent reports are available online at the Outdoor Recreation Planning page. California State Parks is currently conducting surveys of state residents and State Park users throughout California. Selected results will be published in a future California Park Planner newsletter.

• Paying attention to other relevant research conducted by park staff, at local universities and by experts worldwide. In the U.S., changes in recreation habits, such as the increasing popularity of indoor electronic pastimes and a related decrease in physical activity outdoors, can have great significance to park planners.
California State Parks total attendance compared to California population, 1978-2007

Assessing trends, continued

Why per capita attendance values matter

Simply looking at the total number of attendees does not reveal the whole story of park attendance. For example, if more people visit a park this year than last, this might be because the population increased in the surrounding area. If the per capita value decreases as population increases, this may mean a decrease in the number of visits per person, which might translate into less support for park initiatives.

Calculating per capita values

The term per capita comes from the Latin “by heads.” A per capita rate (or value) is calculated by dividing a figure such as total income, total number of crimes or total attendance, by a population figure such as a city, state or nation, and represents an average per person in a defined subgroup. Per capita values are often used to compare different groups of different sizes.

Example:

35,000 crimes were recorded in 2004 in a county with a population of 500,000. The crime rate per capita for the county for 2004 is obtained by dividing the number of crimes by the county population:

\[
35,000 / 500,000 = .07
\]
population against the 41% increase in attendance for 1978-2007, the data suggest that per capita attendance at parks in the California State Park System has declined slightly for the period. Figure 2 demonstrates this trend. The Per capita visits line represents the actual number of recorded visitor days to California State Parks. The black linear Trendline shows the trend. Per capita visitation was 2.46 in 1978, but only 2.10 in 2007, a decrease of 14.7%.

U.S. National Park Service total-attendance trend

Figure 3 compares attendance at National Park Service parks and the U.S. population; the total of park “recreation visits” attendance closely matches that of the population of the United States. Between 1980 and 2007, park attendance increased approximately 25% (from 220.5 million visits to 275.6 million), while the population increased approximately 33% (from 226.5 million people to 301.1 million) as of July 1, 2007.

Conclusions

While attendance at parks within the California State Parks and National Parks is significant and has increased over recent decades, per capita attendance appears to have decreased. As shown later, in this article, many factors can cause attendance variations.

Next we look at an article and a presentation that present opposing views on park attendance trends.

Continued on next page.
Two views of nature-based recreation trends

The following two studies reach different conclusions about nature-based recreation.

Pergams and Zaradic study shows decrease in per capita attendance

Oliver Pergams, Ph.D., and Patricia Zaradic, Ph.D., two scholars at the University of Illinois, claim that participation in nature-based recreation has been declining in the U.S. and other developed nations. Their findings were published in February 2008 in the online Proceedings of the National Academy of Sciences.

The article obtained widespread publicity in newspapers, television and online, not only because of its conclusion but also for its suggestion that if children are not exposed to nature (and therefore do not learn to appreciate it), efforts to conserve natural resources may be negatively affected in the future.

The study included primarily attendance data, using four data types: public lands visitation, game licenses, camping and backpacking/hiking.

The authors report that nature-based recreation declined in developed nations between 18 and 25 percent since about 1980. The decline occurred after decades of “steady increase.” The trend is seen in the article’s main graph, Figure 4. (See the original article for more information on this figure.) The authors analyze per capita recreation visits at U.S. National Park Service parks (shown in Figure 4 as NPV), U.S. National Forests (NFV), U.S. State Parks (SPV, parks were not specified), U.S. BLM sites (BLMV), Japanese National Parks (JapanNPV) and Spanish National Parks (SpainNPV).

About the symbols:
The colors of the solid circles may be hard to distinguish. The long line of circles is JapanNPV, the short line is SpainNPV.

— The trend in per capita U.S. State Parks visits (SPV) is shown by red triangles.

— The trend in per capita U.S. National Park Service parks visits (NPV) is shown by blue diamonds.
pretty much assures observing a downward trend (cost of transportation has been rising, choices of places to recreate are getting slimmer,…).”

- The study uses a “very narrow set of indicators” (public lands visitation, game licenses, camping, and backpacking/hiking).

- The “more authoritative U.S. nationwide surveys” on attendance were excluded – the Fishing, Hunting and Wildlife-Associated Survey (FHWAR), and a federally and state-sponsored U.S. Forest Service survey, the National Survey on Recreation and the Environment (NSRE).

Increase in attendance in U.S. for specific types of recreation

Dr. Cordell uses NSRE figures to document an increase in nature-based recreation from 1960 to 2000-2001 for eight recreation activities (see Figure 5).

Citing national and state park attendance
for various recreation activities from 1994-2008 (not shown), he also argues that “demand for recreation” is up during that period, except for hunting and fishing.

**Increase in total attendance at National Park Service parks**

Dr. Cordell provides graphic documentation of the increase in attendance at National Park Services parks (see Figure 6). He does not include per capita attendance in his presentation.

**Summary**

Trends in total attendance and per capita attendance, as well as survey data and other information, deserve the close attention of park planners. A myriad of factors can affect attendance. Here are just a few:

- A continuing increase in **total attendance**, as suggested by National Park Service and California State Parks attendance data, could be due to an increase in population or to the addition of parks and facilities.

- A continuing decrease in **per capita visitation** values, as shown by Drs. Pergams and Zaradic, and by California State and National Parks data, might indicate adverse consequences for support of public parks, especially if continuing support depends on approval by the populace as a whole.

- **Changes in recreation preferences**, such as those suggested by Dr. Cordell’s presentation, by California State Park System demographic and survey data and by other research, may indicate the need for modifications to park facilities and/or amenities.
Sources

California State Parks database (for data on attendance at California State Parks).

Cordell, Kenneth H. “Pioneering Recreation Trends Research, RWU-4953,” PowerPoint slide show presented at the University of Georgia, Athens, Georgia (2008).


U.S. Census Bureau website, http://www.census.gov (for U.S. population data). Note: For 2007, a July 2007 estimated population of 301,139,947 was used.

National Park Service Public Use Statistics Office website, http://www.nature.nps.gov/stats/park.cfm (for data on National Park Service parks visitation). Note: “Recreation visits” data were used.

California’s population growth over the last century

In 1901, the first 2,500 acres of what would later become Big Basin State Park were acquired (at a cost of $100 per acre). At around that time, only about 1.5 million people called California home. Today, almost 38 million people do. This graph shows the state’s population decade by decade. (Source: California Department of Finance.)
California State Parks programs respond to statewide trends

Four important trends affect California State Parks (CSP) planning and operations:

- **Demographic trends**, especially the continued increase in the state’s population and the projected dramatic rise in the population of Latino and Asian ethnic groups (see demographic research).

- **Health trends**, especially the increasingly sedentary lifestyle of Californians of all ages, and the increase in the percentage of overweight and obese children.

- **Recreation trends**, such as the decrease in how much time children spend outdoors and the decrease in overnight camping (also see the California Outdoor Recreation Plan).

- **State Budget trends**, such as the ongoing State deficit.

Here are a few examples of how CSP and other park agencies are responding to these trends. (For related Planning Division reports, see the division home page.)

**Serving the needs of urban Californians**

CSP is investing heavily in parks in and near urban areas, where most Californians live. For example:

- At **Rio de Los Angeles State Park**, creation of wetlands bordering the river allows visitors an opportunity to enjoy hiking trails surrounded by native plants and returning wildlife.

- Because of its 32 acres of open space directly adjacent to Chinatown, visitors to **Los Angeles State Historic Park** will be able to wander pathways, enjoy a view of downtown and discover and celebrate the natural and cultural heritage of Los Angeles.

**Improving amenities and meeting the needs of non-traditional users and underserved groups**

Californians belonging to Latino and Asian ethnic groups typically visit parks in large extended family groups for day-long gatherings, prepare food on-site and need large picnic areas with cooking facilities. For overnight stays, group campgrounds are a growing and desirable amenity. The CSP Planning Division is researching new ideas and concepts to help improve design of group picnic areas and campgrounds to meet and better address the evolving use.

The Office of Community Involvement offers a variety of programs for nontraditional park users and underserved communities, including:

- **FamCamp®** (in cooperation with the California State Parks Foundation) and the associated Outdoor Recreation Leadership program. Trips include all camping equipment, group activities, outdoor leadership and skills training.

- **Outdoor Youth Connection™** and Youth Leadership Institute. For youth ages 14 through 17, this program enables youth to experience outdoor activities, camping, teambuilding, and leadership. They develop life skills so that they can organize and lead their own outdoor trips and projects for peers and the community.

- **State Parks Police Activities League (SPPAL)**. This organization works with cities and counties to create partnerships that enhance individual PAL programs with special event opportunities like Beach Play Day, Camporees and kayaking programs.

- **Health and Wellness Initiatives**. These include Take A Hike! and City Walks.
Encouraging outdoor activities for children

Here are just a few ways to reconnect kids with nature.

Children in Nature campaign. CSP’s Children in Nature Campaign and the related California Children’s Outdoor Bill of Rights help parents and teachers identify enriching experiences at State Parks. The efforts are a response to research showing that today’s children spend far more time indoors and are involved in sedentary activities more than ever before. The program’s mission is to “energize, educate and engage public, private and nonprofit entities to increase the number and variety of opportunities for California children to experience and benefit from interacting with the natural world.”

More activities for children. Junior Rangers, PORTS and the Junior Lifeguard Program are just a few other programs initiated at CSP headquarters and by districts.

Play areas. Kids gravitate towards opportunities to climb, play and use their imaginations. To help create positive experiences for kids, some parks operated by other outdoor recreation agencies include play structures with a nature component. These structures help young children learn about nature. Young children enjoy “being” the animal by climbing in their burrows (tunnels), or inside an animal sculpture.

Park and recreation providers may consider adding, where appropriate, “nature oriented” recreational play areas to some of their parks:

- Creative or unstructured play areas, which employ natural resources at the park, such as sand, driftwood and boulders. Children use their imaginations to construct and create.

- Resource-based play areas, which use the park’s natural and cultural resources as subject matter and themes. Children play on or in an animal sculpture or climb on a boat. A resource-based play area is planned at Carpinteria SB.

Adding alternative camping facilities

Recent surveys indicate that nearly half of park visitors are interested in using cabins, yurts and tent cabins. Where available, these alternative camping facilities are often booked at near capacity during the summer, while coastal cabins are at or near capacity all year. The CSP Planning Division is researching sustainably built, energy efficient and reasonably priced structures to help meet current and future alternative camping demand.

Supplementing park budgets

To maximize park budgets, parks have the opportunity to partner with entities such as agencies, associations, and foundations for additional funding, in-kind donations, and volunteer staff. For example, at Los Angeles SHP, partnerships with educational institutions and community organizations allow for creative and innovative public events, including the Red Nation Pow Wow and the Latino Health Expo with Mayor Villaraigosa.

CSP operates two programs to help parks augment budgets:

- The Office of Grants and Local Services (OGALS) administers grant programs that provide funds to local and state agencies and other organizations.

- The Cooperating Associations Program consists of 82 associations that contribute millions of dollars annually to fund critical staff positions, exhibits, visitor center developments, junior ranger and nature walk programs, living history demonstrations, special events and many other exciting projects.
Public and private sectors invest to keep California parks vital

Public agencies, volunteer citizens, private corporations and organizations across the state work hard to help ensure that Californians can continue to enjoy outdoor activities. Here are just a few of the parks benefitting from the efforts of public and private sector groups:

- The Green Visions Plan for the 21st Century was developed by Southern California’s state land conservancies and the University of Southern California’s Center for Sustainable Cities and GIS Research Laboratory. The plan promotes habitat conservation, watershed health and recreational open space.

- The American River Parkway, managed by Sacramento County Regional Parks, is 23 miles of park hugging the American River as it wends through populated suburban and urban areas. California State Parks and Regional Parks jointly operate the Jedediah Smith Memorial Trail, one of the longest paved bike trails in the nation. A myriad of non-profit and private groups donate time and money; the American River Parkway Foundation is the hub.

- Eastshore State Park is 2,000 acres of tidelands and uplands along 8.5 miles of shoreline on the San Francisco Bay. The park, dedicated in 2002, is the result of many years of advocacy, negotiation and planning by activists, citizens, environmental organizations, the East Bay Regional Park District (which leads planning, development and management), cities and California State Parks. About 2 million people visit annually.
Other recreation trends

Number of U.S. golfers down

Millions of American golfers have left the sport in recent years, according to a 2008 New York Times article by Paul Vitello. The total number of U.S. golfers has decreased from about 30 million to about 26 million since 2000. Overall, the article reports a “gradual but prolonged” slump in the hobby’s popularity.

Vitello identifies a number of possible causes for the decline, including changing family dynamics; young fathers are spending more time driving kids to soccer games and less time on the golf course. Club owners are feeling the pinch from lost business — some are remarketing their facilities to family events, including weddings.

Vitello indicates that the sport’s decline in popularity is “part of a broader decline in outdoor activities.” He refers to a study by the United States Tennis Association that determined that time spent with electronic games is one factor in the decline in the popularity of tennis.


More golf statistics

In 1,800 U.S. golf facilities surveyed, the number of rounds of golf played in 2007 was down 0.5% from 2006. But rounds played rose 2.5% in April 2008 versus April 2007. (Source: NSGA Research Newsletter, June 9, 2008.)

Americans spend free time indoors

Parks have plenty of competition for the average American’s leisure time:

- After sleep and work, TV is the #1 consumer of [Americans’] free time.
- Children ages 5 through 12 spend more leisure time watching TV and movies than playing with toys; 14.9% vs. 9.4%.
- On any given day, 83% of Americans don’t exercise at all.

Source: TrendSCAN (December 2007 and March 2008 issues). Published by the California Park & Recreation Society.

Experts to kids: “Play outside!”

Numerous articles in California papers tout the benefits of outdoor activities. Here is one:

Kids are losing touch with the great outdoors. Jason Eberhart-Phillips, M.D., bemoans the phenomenon of “nature-deficit disorder” and its implications. To encourage more outdoor activity, he recommends that parents encourage kids to explore nearby natural spaces, set limits on their children’s “technology time” and avoid over-scheduling kids’ time with indoor activities. (Sacramento Bee, April 3, 2008.)
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**Bear Facts is now The California Park Planner**

Bear Facts has been updated and renamed **The California Park Planner**. The newly titled publication’s goal is to provide employees of California State Parks and park agencies with information on trends and developments affecting park planning.

**Please share your thoughts.** We would like your ideas for **The California Park Planner**. Here are a few questions for starters:

- What topics would you like to read about?
- How useful is the newsletter to you?
- What can we do to improve the newsletter?

Please email comments and ideas to: The Planning Division, Planning@parks.ca.gov

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**The Central Valley’s changing ethnic composition, 2000-2050**

The article on pages 8-9 highlights how California State Parks is responding to state demographic, health, recreation and budget trends. This graph shows population projections by ethnic group for California’s Central Valley. (Source: California Department of Finance.)

![Population Projections for Central Valley Counties, by Ethnicity](image_url)