

NATIONAL PARK SERVICE VISITATION AND SEARCH BEHAVIOR: AN UPDATE TO 2010

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Abstract

This purpose of this paper was to examine and update recent findings that proposes that national park visitation is on the decline and to propose other methods for examining the interest in national parks through online searches related to travel intentions. Data from a large, national syndicated secondary dataset were examined by individual participation data collected on an annual basis over the period of 2000-2010. In addition, inquiry data from Google Insights™ for vacation travel to national and state parks was also used as a proxy measure to determine if interest had declined. While there was evidence of some decline in visitation to national parks from 2000-2010, most of the decline was limited to the period of 2000-2004; however, there was also a rebound in interest from 2004 through 2010 with the exception of 2008. The decline does not appear to be dramatic. The decline is not related to a decrease in the market size of individuals interested in national parks but rather a volume issue. The volume issue suggests that the base market of people interested in national parks still exists, but the base market is making fewer visits per visitor to national parks. Additional insights into visitation based on media use (e.g., watching tv and internet use) based on volume segments were explored. There was some indication of decline of interest in visiting national parks during vacation travel through the analysis of Google Insights™ search behavior; however, this decline has been cyclical, not overly dramatic, and appears to reflect the changes in visitation noted here through the national syndicated dataset findings. Interest may also have shifted to other outdoor pursuits and interests via an increase in more choices. Interest in state parks appeared to also be seasonal; but no dramatic decline in the interest in state parks was noted based on Internet searches and Google Insights™ analysis.

1.0 Background and Introduction

The overall purpose of this paper was to examine the assertions made by Pergams and Zaradic (2006) regarding national park visitation, interest in and participation in the outdoors, and to update a previous analysis of these data with more research data from 2000-2010 and to examine other data sets providing insights into the interest in national park visitation and related interests. This effort was to specifically examine some of the specific findings established in the Pergams and Zaradic (2006 and 2008) study by examining data from a large, national syndicated secondary dataset where individual data are collected on an annual basis in a consistently replicated manner over a lengthy study period and search data on parks as retrieved from Google Insights™. The data compiled for this research study were obtained from the research reports of self-reported participation and visitation and interest data, namely the Mediamark's *Topline Research Reports* (2000-2010) and Internet search behavior as reported by Google Insights™. Larger issues of whether interest in the national park visitation can be linked to changes in interests of households and individuals based media related activities were also examined here where possible, including national park visitation by various media use segments (those who watch tv; those who watch prime time tv; and those who use the Internet).

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2.0 Review of Literature

This research was prompted by the attention given to the findings and conclusions of Pergams and Zaradic (2006 and 2008). In this study, other data sets were examined to determine if a similar conclusion could be reached when direct measures of self-reported national park visitation and related activity interests were further analyzed from the current decade (2000-2010) where data were available. Pergams and Zaradic's (2006) study ("Is love of nature in the US becoming love of electron media? 16-year downtrend in national park visits explained by watching movies, playing video games, internet use and oil prices." *Journal of Environmental Management*, 2006, Vol. 80: 387-393.) concluded that the U.S. population and culture are moving into an era of "videophilia" and away from "biophilia." "Videophilia" is a growing interest in being entertained by passive media or video

experiences instead of outdoor engagement including national park visitation and outdoor recreation activity participation in the environmental world. The decline in national park visitation was explained on a number of electronic media, plus other factors (oil prices, foreign travel, hikers). While they also found that vacation days, federal funding, park capacity, and aging baby boomers were not factors affecting this trend, other issues still seem unresolved based on their findings. The weakness in these causes is not because of direct cause and effects, rather their data are collected and associated with these changes. There is no direct connection between data use and park visitation.

In Pergams and Zaradic's (2008) publication ("Evidence of a Fundamental and Pervasive Shift away from Nature-Based Recreation" published in *National Academy of Sciences*), further suggests evidence continues to point to an on-going and fundamental shift away from nature-based recreation. Here, they evaluated and tested for similar longitudinal declines in a 16 year time series analysis representing four classes of nature based participation variables: 1) visitation to various types of public lands in the U.S. and national park visits in Japan and Spain; 2) number of various types of U.S. game licenses issued; 3) indicators in time spent camping; and 4) indicators in time spent backpacking or hiking. They found all four major time series to be in downtrends with linear regressions showing losses of -1.0% to -3.1% per year. The longest and most complete time series suggested that the declines in per capita recreation began between 1981 and 1991, proceeded at rates of -1.0% to -1.3% per year and to date totaled -18% to -25%. However, challenges to their conclusions have appeared since their publications have appeared.

First, there is no direct linkage between park visitation and recreation activity pursuits and media use interests in the Pergams and Zaradic study (2006). For example, some data sets are more comprehensive than others and directly link interest in visitation to media use patterns. Data from Mediamark's *Topline Research Reports*, are collected on self-reported park visitation and their sampling sizes are substantial, in excess of 20,000 subjects per year. In this study, national park visitation data are linked or collected from the same individuals on both their activity interests and media use patterns. Pergams and Zaradic (2006) simply "cherry-picked" data from a variety of different data sources to reach their conclusions. Likewise, other data sets such as Google Insights™ provides long term assessments of individual inquiries into the interests in visiting national parks during vacation travel. These types of inquiries would be more appropriate to determine if indeed visitation and interest have declined and to possibly link some reasons why such declines have occurred.

While Pergams and Zaradic (2006) suggested that their findings of the trends do not bode well for the future of biodiversity conservation, their study period extended only until 2003. Their 2008 study (Pergams and Zaradic, 2008) data were collected only through 2003/2004/2005. A number of digital media activities did not become popular until the mid to the late 1990s (use of the Internet and various social media platforms for example) and substantial long-term trend data is simply not available to jump to long-term trend conclusions about the overall impacts of these media. For example, Google (2011) did not begin its trend analysis on searches until January 2004.

Second, the research findings from Pergams and Zaradic (2006) lumped all households and participants into one large group and assumes that this decline is equally distributed across all demographic segments; household types and regions of the country. Previous research presented at NERR indicated that this is not accurate and that interest in national parks varies dramatically across different demographic segments (See Warnick, et al. 2010). A similar tactic also was associated with their 2008 study; although they attempted to examine in more detail sub-segments of participants in outdoor recreation associated with hunting, fishing, camping and hiking/backpacking in addition to national park visitation. These conclusions of widespread decline are suspect and even if visitation and interest in the environment has declined it is highly likely that it is not equally distributed among all segments of the population. These declines may in fact be more linked to an aging population and smaller cohorts of replacement participants in the key or high participation age.

Third, another issue may also be that new generations of potential visitors, including growing immigrant populations, may have not been introduced to the outdoors and national parks or have less access for visitation purposes, and therefore have simply not taken the time or invested individual efforts into learning about or visiting more distant destinations. Other measures of interest in the outdoors among youth and growing immigrant populations may be also more revealing. For example, is interest in the Boys and Girls Scout Programs declining? Is visitation and interest among Hispanic and Asian American populations also declining? Is the participation in camping programs as measured by the National Camping Association on the decline, too?

Fourth, it seems very critical to determine if a "base market" of participants or visitors to national parks has indeed declined or has their volume of visits actually declined. If this is the case (i.e., the core market of actual visitor types are declining); then, one may be able to conclude that indeed a base or major market segment of natural resource visitors/supporters is indeed contributing to an overall decline in interest in national parks and perhaps related to an overall concern about bio-diversity and the environment.

Since the release of the article considerable attention has been given to Pergams and Zaradic's (2006 and 2008) findings. Balmford, et al. (2009) acknowledged the declining numbers of visits to natural areas in the U.S. and Japan; however, their study of temporal trends in visitor numbers at 280 protected areas from 20 countries suggests increases in numbers in 15 of the 20 countries reviewed. They concluded that nature-related tourism and recreation is far from declining everywhere and that such

trends may still have considerable potential to generate funds for conservation and to shape attitudes toward the environment.

Jacobs and Manfredo (2008) noted in their letter to PNAS that the decline in nature-based recreation is not evident due to two major factors: 1) Pergams and Zaradic (2006) measured participation in a selected few forms of recreation yet draw inference to all forms of outdoor recreation; and 2) the correspondence between support for biodiversity and participation in outdoor recreation would likely be low. They concluded in their letter that while they acknowledge Pergams and Zaradic (2006), they raise important and compelling questions about the decline of selected forms of outdoor recreation and premature to accept their implications.

Cordell, Carter and Green (2008) commented on it in their recent article, "Nature-based Outdoor Recreation Trends and Wilderness." They suggested the topic of trends needs closer attention and their findings of nature-based recreation activities tracked by the *National Survey on Recreation and the Environment* (Cordell, 2004) found these activities were still growing through the first part of the current decade and reported almost 70 million people age 16 or older had visited a wilderness or other wildland area or went hiking in the previous year. They even reported much larger numbers for such nature-based activities as bird watching or viewing natural scenery in the most recent year. However, they do indicate that the trends in visitation to public natural lands have been unclear, and the visitation trends to wilderness area have been particularly unsettling. Nevertheless, they concluded that visitation to state parks, national parks, and national wildlife refuges had remained relative stable since the mid-1990s following long-term growth from the 1960s through the 1980s. They further suggested that there may indeed be a large number of individuals visiting parks or protected areas that border these lands and enter them without being counted or observed. Finally, they noted a shift from consumptive activities (such as hunting and/or fishing) to passive activities (watching or observing wildlife or scenery) that exceeds any declines in uses of the outdoors for a composite activity level. Siikamäki (2009) noted in a comprehensive study of the use of time for outdoor recreation in the U.S. from 1965 to 2007 that per-capita time use in outdoor recreation has more than doubled since 1965 and the long term increase was driven largely by increases in participation rates. However, it was also noted that in the last decade or two, per capita time use in outdoor recreation has stayed constant or declined slightly. This change was noted and driven by reduced time-use by active participants although participation rates had not changed. Thus, the stage has been set for additional analysis of national park visitation and interest; participation in outdoor recreation activities; and media related video interest/uses.

3.0 Methodology

In this study, two major sources of data were employed to examine national park service visitation; participation in various media; and interest in visiting national and state parks. These data sources included Mediamark's *Topline Research Reports (TRR)* (Mediamark, 2000 to 2010) and Google Insights™ (2004 to 2012). With data now available through 2010 via Mediamark, the line of research serves to examine the claims of Pergams and Zaradic (2006 and 2008) to determine if the downturn in National Park Service visitation is directly related to some of the other interest activities of households, such as watching tv and an increased use of the Internet. The *TRR* data are collected consistently the same way each year and provide an excellent foundation for long-term trend analysis much like the Simmons (SMRB, *Study of Media and Markets*, 1997) data has over the years. The Mediamark data provides an opportunity to examine national park visitation over time, in this case from 2000-2010, to determine if an aggregate level of park visitors is declining as a context compared with the actual annual national park visitation numbers (NPS, 2012). Furthermore, the overall markets can be compared by various demographic segments and within media use segments over time via Mediamark (2000-2010). The examination of the interest in visiting national parks during vacation searches is a proxy measure of interest in national parks through online searches in Google Insights™. This examination included interest in travel via Internet Google™ searches to national parks by use of keyword searches for "national park" within searches in travel (travel destinations), adventure travel (a specialized sub-segment of the travel category) and the outdoors (measured by the term "outdoors" in the leisure category) interested nationally, by states and metro areas. The search analysis provided much more detailed search data on a yearly and seasonal basis and comparative analysis over time. The period covered for the search analysis was from January 2004 to present (April 2012) and in select cases, where search data are available may forecast one year into the future.

For the purposes of this study, several variables were used to describe the trends in these data. The descriptive statistics used included an average annual adjusted percent change rate for each data set. Participation rates of individuals (used for *TRR* data) were used as primary variables to examine the overall trends. Interest in national parks within the search of vacation travel served as the basis for the Google Insights™ review (Google Insights™, 2012). Google Insights™ allows one to examine what people are searching (interested in) for example, "national park"; where they are searching from (the location), and when they are searching (time of year). Google™ collects these data weekly so a typical search on "national park" in the travel category would have measures for 432 time periods from 2004 through 2012. With this search capability and tracking, one can spot trends and determine what people are interested in over time. Thus, if it is true that interest in national parks has declined then some of this would be visible via Google Insights™ tracking and trend analysis. This search program also allows one to do comparisons within categories by selected terms and to identify peaks in interests in various topics over time. Google Insights™ also provides measures of seasonality and allows a comparison of searches from year-to-year by weekly data collection to determine these measures.

Google Insights™ also has a measurement index for reliability for tracking seasonality and predictability. Shimshoni, Efron and Matias (2009) indicated that online searches have a relative high level of predictability due to the volume of search traffic as measured by Google Insights™ for any search query. They found some search queries are quite seasonal and have repeated trend

patterns. For example, in the travel context, the search trends for “skiing” in the U.S. and in Australia peak during the winter seasons; trends in sport interest indicate how searches for “basketball” correlate with annual league events and are consistent from year-over-year. They also found that trends in the aggregated volume of search queries related to particular categories, one can also observe regular patterns in such categories as “Food & Drink” or “Health” or “Travel.” In fact, they also suggest through their research that these three categories have the best predictability ratios and the best seasonality measures of all of the different Google Insight™ categories. Finally, through these measures Google Insights™ can forecast or extend interest in selected terms by extrapolating historical data into the next year or by yearly quarters and months and indexing their error measures of predictability.

Where possible, the changes in participation were compared to national percentage changes households and population growth through a normalization process (Google Insights, 2011). Search numbers are portrayed on a graph that reflects how many searches have been done for a particular term, in this case “national park”, relative to the total number of searches done on Google over time. These data do not represent absolute search volume numbers because they are normalized and presented on a scale from 0-100. Each point on the graph is divided by the highest point or 100. Data that are displayed on graph appear on a scale of 0 to 100, after normalization as each point on the graph has been divided by the highest point or 100 as noted at the Google Insights™ web site and these points are interactive at the site (Note. Please see Google Insights™, 2012 web search here).

Google Insights™ (2012) provides by each search term item a category of relative comparison, too. Under the appropriate category filter and in this application that would be the main “travel” category; but there were be sub-categories including “travel destinations” or “adventure travel” or “outdoors” under “Leisure and Hobbies” Google Insights™ provides a comparison that shows growth relative of the term to the category or sub-category. This shows the change over time as a percentage of growth, with respect to the first date on the graph (or the first date that has data). Here Google Insights™ sets up a table that is scored on a 0-100 label on the y-axis of the category comparison graph, and a label with a range of -100% or +100%, and a starting point of 0 to show where the activity search item(s) has changed over time. Comparisons for searches on “national park” are completed here relative to the travel category – travel destinations, the special travel -- adventure travel category and the outdoors category. One additional search analysis was also performed on “state park” as a search relative to the travel category. In addition, difference by search terms “national park” and “ ‘Google’ + ‘national park’ ” were performed because single term searches of “national park” or “state park” could be misleading and would show decline because the overall volume of searches by various search engines has increased substantially each year since 2004. Combining the term “Google” with each search terms tends to cancel out the affect as Google is used to conduct the searches in the majority of cases.

4.0 Results

A brief summary of data variables examined is presented here. Due to space limitations of these proceedings, not all statistical tables or graphs are available here but are available from the authors. These data are condensed here for publication purposes. As a reference point for the analysis of the TRR data, the estimated U.S. population increased at an average annual adjusted rate of 1.2% per year from 2000 to 2010. Any rates not equaling or exceeding this rate would indeed result in real declines in visitation market size or participation rates. The market size of the number of participants are compared to the national visitation numbers made available by the National Park Service (2012).

4.1 National Park Service Visitation Trends, 2000 to 2010

From the period of 2000 to 2010 using the TRR data (Mediamark, 2000-2010) it was found that the participation rates of individuals who visited national parks on any of their trips over the previous 12 months for each year in the period declined slightly at an average annual participation rate of “-0.4%” per year while the actual market size (number of unique park visitors) was estimated to have grown by “0.8%” per year. The overall participation rate for this variable in 2000 was 5.9% and by 2010 it stood at 5.6%. During the period the participation rate had steadily declined to 5.3% by 2004, rebounded slightly to 5.6% in 2006-2007 and then fell again to the lowest point in the period of 5.2% in 2008 before rebounding to 5.6% in 2009 and in 2010. In 2000, an estimated 11.9 million individuals visited a national park in the previous 12-month period and by 2009, 12.6 million individuals visited a national park in the previous 12 months. When the overall number of estimated visits as supplied by the National Park Service was divided by the number of unique visitors, the average number of visits declined by “-0.7%” per year and per capita visitation rates declined from 1.42 per person to 1.23 per person during this period (a decline of “-1.4%” per year).

4.2. National Park Service Visitation Trends by TV Viewing Quintile Groups, 2000 to 2009

Participation rates of visitors to national parks also were not evenly distributed by the tv viewing habits of U.S. adults. Here, Mediamark provides quintile data by five segments and each quintile that represents one fifth or 20% of all users from heaviest user group to lightest user group of tv viewing. So, for those who watch the most television (Quintile I), National Park Service visitation rates did decline over the period at a rate of “-2.3%” per year from 2000 to 2010. In 2000, the heaviest television viewers held participation rates of visits to national parks of 3.9% and this rate was 2.6% in 2010. Rates of those who watch television the least indicated that their visitation rates had increased from 6.6% in 2000 to 7.2% in 2010 (an average annual increase in the rate of 9.9%). National park visitation trends during the period across the two heaviest television viewing groups declined from 2000 to 2010; however, among the three lightest viewing groups or 60% of all tv viewers, the participation rates of visits to national parks actually grew, and the visitation rates were higher among these groups on average throughout the decade.

Similar trends were noted among the prime time viewing habits of U.S. adults and their visitation rates to national parks. The adults who watch prime time television the most, those in the heaviest quintile, experienced national park visitation rates that declined from 5.3% in 2001 to 3.7% in 2008 – a “-2.8%” annual average decline. When compared to the lightest viewing group, average annual participation rates for visiting national parks actually grew from 6.5% in 2001 to as high 7.6% in 2009 and settled in at 6.5% in 2010.

4.3. National Park Service Visitation Trends by Internet Use Quintile Groups, 2004 to 2010

Participation rates of visitors to national parks also were not evenly distributed by the Internet use habits of U.S. adults. Here, Mediamark provides data by Internet use habits of heavy to light quintile groups, but the data years are limited (2004 to 2010). So, for those who used the Internet the most or heaviest, national park visitation rates declined over the period at a negative rate of “-2.2%” per year from 2004 to 2010. In 2004, the visitation rates of national park for the heaviest Internet users was 8.2% and declined to 7.1% in 2010; but still above the national average participation rate of 5.6%. Rates of those who used the Internet the least indicated that their visitation rates peaked in 2007 at 3.2%, but overall the average annual change was 2.6% and for Quintile group 4, the next to the least amount of Internet use, the visitation rate increased at an average annual year rate of 9.7%. National park visitation trends during the period across all the quintile groups showed increases for 4 of 5 Internet use groups however, these rates fluctuated and peaked with the 2006-2008 years.

Table 1. Estimates of Visitors and Visitation to National Parks and Media Use and Park Visitation Rates, 2000 to 2010.

Pop. Visit

Estimates^a

| <i>Population ('000)</i> | | | | | | | | <i>Change Rate</i> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|
| <i>Year</i> | <i>2000</i> | <i>2002</i> | <i>2004</i> | <i>2006</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2000 to 2010</i> |
| Total Population | 201,715 | 204,964 | 213,454 | 218,289 | 222,210 | 225,887 | 228,112 | 1.2% |
| #Unique Visitors | 11,920 | 12,009 | 11,302 | 12,148 | 11,578 | 12,570 | 12,762 | 0.8% |
| Part. Rate - % | 5.9 | 5.9 | 5.3 | 5.6 | 5.2 | 5.6 | 5.6 | -0.4% |
| | 285,891. | | 276,908. | 272,624. | 274,852. | 285,579. | 281,303. | |
| NPS Visits ^b | 3 | 277,299.9 | 3 | 0 | 9 | 9 | 8 | -0.1% |
| NPS- VPV & VPC ^a | | | | | | | | <i>Change '00 to '12</i> |
| VPV -- | <i>2000</i> | <i>2002</i> | <i>2004</i> | <i>2006</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | |
| Visits/Visitor | 23.98 | 23.09 | 24.50 | 22.44 | 23.74 | 22.72 | 22.04 | -0.7% |
| VPC -- | | | | | | | | |
| Visits/Capita | 1.42 | 1.35 | 1.30 | 1.25 | 1.24 | 1.26 | 1.23 | -1.4% |
| <i>Internet Use</i> | <i>2000</i> | <i>2002</i> | <i>2004</i> | <i>2006</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>Change '04 - '10</i> |
| Internet Q I (Heavy) | -- | -- | 8.2 | 7.3 | 7.3 | 6.7 | 7.1 | -2.2% |
| Internet Quintile II | -- | -- | 6.7 | 7.9 | 6.6 | 7.5 | 7.0 | 1.3% |
| Internet Quintile III | -- | -- | 6.5 | 6.0 | 6.0 | 6.6 | 7.3 | 2.3% |
| Internet Quintile IV | -- | -- | 2.6 | 3.7 | 4.0 | 4.5 | 4.4 | 9.7% |
| Internet Q V (Light) | -- | -- | 2.5 | 3.0 | 2.2 | 2.6 | 2.1 | -1.1% |
| <i>TV Viewing</i> | <i>2000</i> | <i>2002</i> | <i>2004</i> | <i>2006</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>Change '00 - '10</i> |
| TV View QI (Heavy) | 3.9 | 5.7 | 3.4 | 3.4 | 3.0 | 2.8 | 2.6 | -2.3% |
| TV View Quint. II | 5.6 | 7.4 | 4.2 | 5.6 | 4.6 | 4.3 | 4.7 | -0.1% |
| TV View Quint. III | 6.2 | 5.9 | 6.0 | 6.3 | 6.0 | 6.6 | 6.6 | 0.7% |
| TV View Quint. IV | 7.2 | 4.9 | 6.9 | 6.1 | 5.7 | 6.6 | 6.8 | 0.6% |
| TV View QV(Light) | 6.6 | 3.4 | 6.0 | 6.4 | 6.8 | 7.6 | 7.2 | 9.9% |

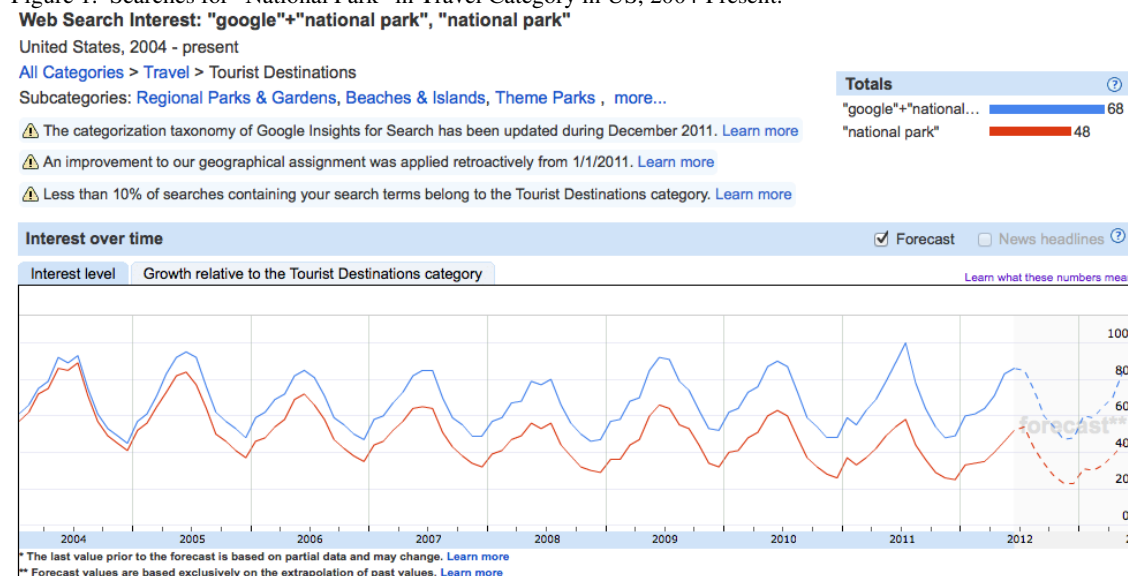
Source: ^aMediaMark, 2000 – 2010. ^bNational Park Service Web Site, 2000-2010.

(Due to space limitations only even number years from 2000 to 2008 shown, individual years 2008, 2009, & 2010.)

4.4 Google Insights™ Searches for National Parks

For the purposes of this section of the trend analysis, Google Insights™ searches were completed on the term “national park” over the period of 2004 to present in the “travel destinations,” and “adventure travel” as sub-categories in the travel section and “outdoors” as a sub-category in the leisure/hobby section. Figure 1 here portrays the interest in a “national park” as part of a travel search has generally declined and that they search behavior is clearly seasonal when the term is singularly searched as “national park.” This means that the peaks in search behavior for national parks had declined slowly with a peaks in the summers of 2004 and 2005. However, when the search is combined with Google™, the search for “national park” has rebounded and peaked at its highest levels in 2009, 2010 and 2011 after peaking at its lowest level in 2008. The seasonal peaks in interest for “national parks” in a travel destination search typically occurs in May/June and may sometimes be seen later in August, but this still appears to be very typical from year-to-year. See Figure 1 for results.

Figure 1. Searches for “National Park” in Travel Category in US, 2004-Present.



4.5 Google Insights™ Searches for National Parks Relative to Destination Searches

When the search term “national park” is compared to the relative travel destination category, there is an indication that searches or interest in them were taking up less of the search volume from 2004 to 2008, but has rebounded in 2009 to present. When these data are normalized and compared to the overall travel destination category, the graphic trend suggests that “national park” searches have increased in relative terms over the past three years. In fact, interest in Google-based searches for “national park” peaked in July 2011 at its highest level in the last decade and was up 67% relative to searches in the tourism destination category overall. Nevertheless, over time during the seasonal period of searches for visits or travel to national parks, interest in the term “national park” with “Google™” exceeded interest in the travel destination category in all nine (9) yearly search periods and when reviewed by the simple searches of only “national park”, this type of search exceeded the growth in the destination category overall in five (5) or the nine (9) years reviewed. See Figure 2 here for results.

Figure 2. Searches for “National Park” Relative to Travel Destination Searches in US, 2004- Present.

Web Search Interest: "google"+"national park", "national park"

United States, 2004 - present

All Categories > Travel > Tourist Destinations

Subcategories: Regional Parks & Gardens, Beaches & Islands, Theme Parks , more...

⚠ The categorization taxonomy of Google Insights for Search has been updated during December 2011. [Learn more](#)

⚠ An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)

⚠ Less than 10% of searches containing your search terms belong to the Tourist Destinations category. [Learn more](#)

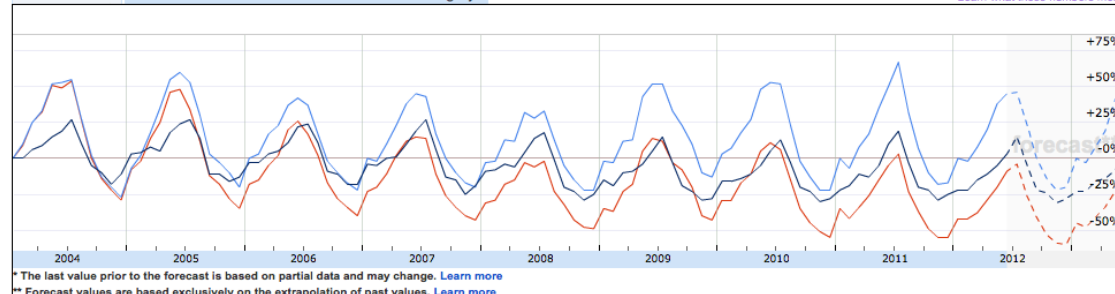
| Totals | |
|------------------------|----|
| "google"+"national..." | 68 |
| "national park" | 48 |

Interest over time

Forecast News headlines

Interest level Growth relative to the Tourist Destinations category

[Learn what these numbers mean](#)



4.6 Google Insight™ Searches for National Parks Relative to Adventure or Specialty Travel

Another comparison, displayed here shows the interest in “national park” when adventure travel as a category is selected or searched. Findings suggest that although interest in “adventure travel” is less than 10% of all travel searches, national parks are a significant destination for this type of vacation interest and comparatively are increasing at higher search rates in selective cyclical time periods than adventure travel interest. This holds true for both “national park” and “Google™” and “national park.” See Figure 3 here for results.

Figure 3. Searches for “National Park” Relative to Adventure/Specialty Travel Searches in US, 2004-Present.

Web Search Interest: "google"+"national park", "national park"

United States, 2004 - present

All Categories > Travel > Specialty Travel > Adventure Travel

⚠ The categorization taxonomy of Google Insights for Search has been updated during December 2011. [Learn more](#)

⚠ An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)

⚠ Less than 10% of searches containing your search terms belong to the Adventure Travel category. [Learn more](#)

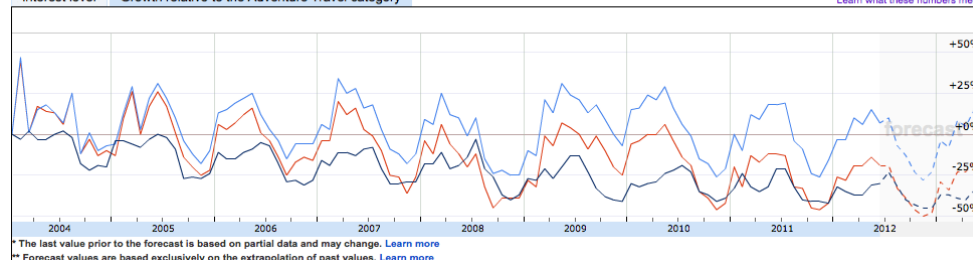
| Totals | |
|------------------------|----|
| "google"+"national..." | 70 |
| "national park" | 57 |

Interest over time

Forecast News headlines

Interest level Growth relative to the Adventure Travel category

[Learn what these numbers mean](#)



4.7 Google Insight™ Searchers for National Park within Outdoor Recreation

Next, when the term “national park” is searched within the outdoors category, there is very little indication of any decline and certainly not a dramatic decline. Actually, when individuals search for outdoor recreation activities, the national park search as an indicator of interest is also a significant portion of this interest and appears to be growing especially when combined with Google™ searches. See Figure 4 here for results.

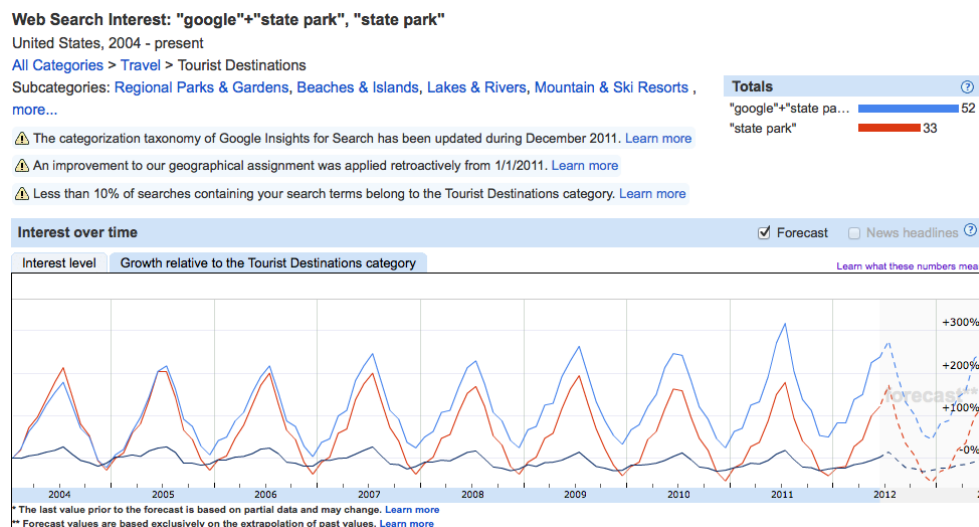
Figure 4. Searches for “National Park” Relative to Outdoor Recreation Searches in US, 2004-Present.



4.8 Google Insight™ Searches for State Park within Travel Destinations

Finally when the term, “state park” is searched relative to travel destinations, the term “state park” has a relatively high normalized index for interest in the travel category and much higher than national parks. However, the overall search volume for “state parks” is less than 10%, concentrated and relatively high when indexed to normal travel destination search behavior. It appears that if indeed there is any decline in seeking information about national park some of this interest may be directed towards state parks. See Figure 5 here for these results.

Figure 5. Searches for “State Park” Relative to Travel Searches in US, 2004-Present.



5.0 Conclusion, Discussion and Implications

Participation rates for visitation to national parks from the period of 2000-2010 have declined, but the decline during this period has been slight and it is not uniform across all demographic variables as noted in earlier reviews (Warnick, et al., 2010). Visitation to the parks has remained largely within the 11-12 million range which indicate at least one visit to a national park in the previous 12 month period and actually increased in the more recent years from 2004 through 2009 with an exception of a decline in 2008. The numbers suggest that perhaps a portion of the decline has actually been in the volume of visits and not in an overall decline in the number of people interested and actually visiting national parks. This demonstrates that the base or number of unique visitors to national parks appears to be relative stable and not declining. This would seem to suggest that part of the decline may be reflected in the finding by Siikamäki (2009) who noted that reduced time-use by active participants has

occurred while participation rates had not changed substantially. These findings also hold with the updated data collected here in the demographic trends but not are fully discussed within the context of this paper. A full discussion was presented in the previous NERR 2010 article (See Warnick et al., 2010).

While there is some support with the decline in visitation to national parks as noted by Pergams and Zaradic (2006), the decline in the most recent decade is not dramatic as noted in these findings. While the overall volume may be the confounding issue here, there also may be some evidence that the declines may be attributed to the after effects of 9-11 and the beginning of the downturn in the economy with the lower rates of post 9-11, the 2008-2009 recession and cost of energy.. The participation rates appeared to fluctuate more around these dates. However, when these data are examined by interest in national parks by online searches as a proxy indicator of interest there is no widespread justification for declines in neither interest in this activity nor related declines in travel, outdoor recreation or even media related activities associated interest in national parks. While heavy media users shows some decline in interest and participaiton, not all media users were found to be experiencing declines in national park visitation.

Some of the interest may have shifted to state park visitation and associated interests with outdoor recreation. Findings here also suggest that interest is typically seasonal and when the measures are taken as a critical point due to the highly seasonal nature of visitation. In addition, the measures of Internet use are not at all conclusive in terms of visitation to parks. The conclusions seem to suggest that the causation of national park visitation declines is likely more complicated than simply linking associated increases in other activities such as passive media interests as a direct cause and effect reason. Google Insights™ review suggests that search behavior has recovered nicely in the most recent years on these terms. If search behavior within travel can and is linked to actual visitation and can serve as a proxy measure or direct link to visitation; then, the conclusion of decreased interest in national parks is unfounded here. More research is needed here and more direct linkage within measured households and among participants is necessary. Google Insights™ research on the search behavior of individuals and interests in national parks and related outdoor recreation sites does not appear to indicate widespread declines as noted by Pergams and Zaradic (2006 and 2008). Perhaps it is more complicated as the level and types of travel options are available to a traveling public and not such an easy cause and effect as suggested by those authors (Pergams & Zaradic, 2006 and 2008).

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