A Socioeconomic and Recreational Profile of Surfers in the United States

A report by Surf-First and the Surfrider Foundation

G. Scott Wagner[1]
Chad Nelsen[2]
Matt Walker[3]

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INTRODUCTION

Surfers have historically been considered a fringe group and often marginalized or ignored compared with other sectors of coastal tourism and recreation. Surfing has now evolved into a multi-billion dollar industry (SIMA, 2009) but we know little about this segment of coastal users. Efforts seeking to describe current economics and demographics of surfers in the United States have been limited by lack of data. The Surfrider Foundation, with support from Surfing Magazine, created the Surf-First Surfer Survey to collect a national dataset on the recreational, demographic and economic characteristics of surfers. By collecting these data for surfers in the U.S., we develop national, regional, and area-specific profiles of surfers and describe their economic impacts. This information provides the first national characterization of surfers and assesses the economic contribution of surfer visits to specific locations. These results can inform coastal management decision-making and show that surfers are an important segment of the coastal tourism sector.

There have been few precedents seeking to describe the characteristics of surfers. Leeworthy and Wiley (2001), using data from the 2000 U.S. National Recreation Survey (NRSE), characterize surfers in the United States as young high school graduates who earn middle incomes and live in coastal cities. Nelsen et al. (2007) found that the common profile of a surfer at Trestles beach in Southern California is 34 years old, has a college education or above, and is employed full-time earning between $50,000 and $70,000 per year. The results of the Surf-First survey support the conclusion of Nelsen et al. (2007). Our analysis reveals that American surfers have a median age of 34 years old, have a college education or above, and are employed full-time earning $75,000 a year. In addition, surfers in the U.S. make approximately 100 visits to the beach each year and spend $66 per visit. This amounts to more than $36 million spent each year in coastal communities when summed over our sampled subset of surfers[4]. Our findings suggest that surfers should be considered an important user group in coastal zone management.

DATA

Data was collected using an Internet-based user survey from November 2008 to September 2009 and was advertised through a number of surf forecasting websites. Surfline, a popular website for surf forecasting, news, and media attracted the most responses. The survey design is similar to that developed by Nelsen et al. (2007) and questions were formulated to describe the demographic and recreational characteristics and economic impact of the average surfer. Nelsen et al. (2007) found that surfers have trouble accurately

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[1] M.A. Department of Economics, San Diego State University.
[2] Environmental Director, Surfrider Foundation.
[3] Surf-first founder, surf journalist.
[4] Leeworthy & Wiley (2001) estimate there are over 3.2 million surfers in the U.S. The economic impact figure quoted above accounts for 3,916 of them, or about .1%.

remembering their behavior more than two weeks in the past and thus respondents were surveyed based on their surfing experience on the day of the survey. Annual avidity is based on survey response for average number of days surfed per month over the previous year from the time of the survey response. Fifty-two multi-part questions were asked resulting in a total 184 variables per respondent. We received 5,360 usable responses. Qualifying questions posed at the start of the survey ensured the respondent is a surfer, bodyboarder, or bodysurfer between the ages of 13 and 85 who had surfed on the day of the survey.

The data was accumulated in a database then exported to Microsoft Excel and reviewed for quality, duplication, and anomalies. Of the 5,468 observations gathered, 5,360 (98%) were considered usable. The data was then imported into STATA where many variables were coded numerically or transformed into formats suited for our analysis. Figures 1, 2, and 3 of Appendix I display the response rate by age, state/region, and surfing area.

The survey was designed and conducted as an opt-in Internet-based survey. This is a non-probabilistic method of data collection and is not random so the findings cannot be extrapolated to a larger population of surfers. Internet-based surveying also suffers from other problems including coverage, sampling, and measurement error (Couper, 2000). Participants opt-in and are unsupervised, assumed to understand the questions in their entirety, and are not held to any standards of completion. Surfers represent a small fraction of the general population and are very difficult to capture in a randomly sampled phone-based survey. The U.S. National Recreation Survey (NSRE) used a random digital dial method to sample the entire U.S. population, which allows national extrapolation of the findings and avoids self-selection bias. Even with a sample size of 50,000 they had an insufficient sample size for most states (Leeworthy and Wiley 2001). In order to sufficiently represent the user group using a random sampling approach would require a very large sampling effort that is beyond the scope of this project. The Surf-First survey targets a specific group of surfers and maximizes the sample size within this group. The statistics presented below refer to surfers from our sample frame that have Internet access, visit Surfline.com, and were willing to complete the questionnaire.

RESULTS

I. National Profile

The results of the survey indicate that respondents are adults in their early 30s who are educated and earn a high income. We find that surfers are male (90%), 34 years old, educated (62% have a Bachelor's degree or above), and employed full-time earning $75,000 per year. The respondents to the Surf-First Survey are more affluent and have higher education and income levels than either the 2000 U.S. National Recreation Survey or national census results.

Table 1: Demographic Profile of Surfers in the U.S.

Subject	Median Age (years)	Education (% college & above)	Household Income (median individual)	Employment (% full time)
Surfers (Surf-First)	34	62%	$75,000	67%
Surfers (NSRE)	16-24	23%	$50-$74,000	-
U.S. Citizens	37	28%	$52,175	-

Source: Surf-First Surfer Survey, 2009. Leeworthy, Vernon R. and Peter C. Wiley, "Current Participation Patterns in Marine Recreation," U.S. Department of Commerce, November 2001. U.S. Census Bureau, 2006-2008.

Surfers in the U.S. are experienced and avid athletes who make expenditures in coastal communities each time they surf. Survey responses indicate that the average surfer has 16 years of experience and surfs early in the morning for 2.5 hours and average 108 times per year. On each visit, expenditures will average $66 on items

such as food, gas, rental equipment, lodging, and/or merchandise. The 3,916 respondents[5] went surfing a total of 557,310 times in the past year and assuming a mean expenditure of $66 during each visit, generated an economic impact[6] of $36,782,460. This represents a very small population of surfers relative to the total number of surfers in the U.S. (Wiley et al., 2006). Based on Leeworthy and Wiley's (2001) estimate of about 76 million annual surf visits and using $25 as a conservative value from Hanemann et al. (2004) and $66 found in our survey, we estimate a range for the annual economic impact from U.S. surfers that could be from $2 billion/year to $5 billion/year.

Table 2: National Recreation and Spending Habits

Years Surfing	16
Surfboards Owned	4
Arrival Time	8:15am
Duration (hours)	2:30
Distance Traveled (one way)	10 miles
Annual Visits	108
Total Visits in Sample (n=3,916)	557, 310
Average Expenditure per visit	$66
Economic Impact	$36 million

Note: Figures are medians unless noted. Source: Surf-First Surfer Survey, 2009.

II. State and Regional Profiles

The demographics of surfers show little variation across U.S. regions (Table 3). Summary statistics show the respondents are in their 30s, educated, and employed full time earning middle to high income. Surfers in the Northeast are the youngest and most educated of the group, while surfers in the Gulf region are the least educated. Surfers in Hawaii are the oldest and least likely to be employed full time. In California and the Northeast surfers earn the highest incomes of the group.

Table 3: U.S. Regional Demographic Comparisons

	Median Age (years)	Education (% college & above)	Employment (% full time)	Household Income (median individual)
California	*35	*63%	*65%	*$75,000
Florida	33	*54%	67%	*$50,000
Gulf	35	*49%	69%	$50,000
Hawaii	*38	62%	*59%	*$50,000
Mid-Atlantic	*33	60%	*74%	*$50,000
Northeast	*31	*66%	68%	*$75,000

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: "Florida" does not include Gulf coast. Source: Surf-First Surfer Survey, 2009.

Surfer experience and avidity tends to rise with age and decrease with distance traveled and expenditure per visit. Surfers in Hawaii are the oldest and also the most experienced and avid of the sample, surfing an average of 144 days per year. Surfers in the Gulf region are the least avid, surfing 69 days a year but with each visit they drive and spend the most (25 miles and $100, respectively), while surfers in Hawaii drive the least (8 miles).

[5] Based on respondents who answered the series of questions related to avidity.

[6] Throughout this report we will use Economic Impact as a measure of the benefits brought to local communities from surfers. This is not the Consumer Surplus or Economic Value of the activity, rather the transfer of expenditures from one location to another. Economic Impact is considered the appropriate measure when assessing those affected by changes in surfer attendance. It should be noted that while most of the statistics displayed in the tables are medians, the mean of the sample is used to calculate the Economic Impact. For a more thorough explanation see Wiley et al. (2006).

Surfers across regions share the habit of surfing in the early morning for 2-3 hours. Surfers in the Northeast are the youngest and also the least experienced.

Table 4: U.S. Regional Recreation and Expenditures

	Years Surfing	Arrival Time	Duration (hours)	Distance Traveled (one way)	Visits per year	Expenditure per visit (mean)
California	*16	*8:15am	*2:15	*8 miles	*120	*$59
Florida	*18	8:30am	*3:00	*10 miles	*112	*$59
Gulf	*17	8:45am	*3:00	*25 miles	69	*$100
Hawaii	*22	8:22am	*2:30	*8 miles	*144	$69
Mid-Atlantic	*18	*8:30am	*2:30	*10 miles	92	*$94
Northeast	*14	*8:15am	*3:00	*10 miles	*90	*$69

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: "Florida" does not include Gulf coast. All figures are medians unless noted. Source: Surf-First Surfer Survey, 2009.

Table 5: U.S. Regional Economic Impact

	Total Visits in Sample	Expenditure per visit (mean)	Economic Impact
California	340,305 (n=2,315)	$59	$20,077,995
Florida	53,130 (n=345)	$59	$3,134,670
Gulf	9,875 (n=79)	$100	$987,500
Hawaii	15,259 (n=93)	$69	$1,052,871
Mid-Atlantic	58,092 (n=412)	$94	$5,460,648
Northeast	70,625 (n=565)	$69	$4,873,125

Note: "Florida" does not include Gulf coast. Source: Surf-First Surfer Survey, 2009.

a. California

The majority of respondents to the survey were surfers from California (58%) so the national profile is weighted towards the characteristics of surfing in California (Table 5). Accordingly, the California summary information is similar to the National summary information (see Tables 1 & 2). California is one region where other coastal use studies have been completed, and although not specifically targeted towards surfers, provide an additional benchmark for comparison. Hanneman et al. (2004) undertook the comprehensive Southern California Beach Valuation Project and interviewed thousands of beachgoers. In comparison to the Surf-First survey respondents, the average CA beachgoer is older, is less educated, and earns less income. This is also the case for the average Californian resident, based on U.S. census data.

Table 6: California Profiles: Surfers, Beach Users, and Citizens

Subject	Median Age (years)	Education (%college and above)	Employment (% full time)	Income (median individual)
Surfers[1]	35	63%	65%	$75,000
Beach Users[2]	39	54%	69%	$52,682
CA Citizens[3]	35	29%	-	$61,154

1) Surf-First Surfer Survey, 2009.
2)Hanneman, M.L. et al., "Southern California Beach Valuation Project," National Oceanic and Atmospheric Administration, 2004.
3) U.S. Census Bureau, 2006-2008.

There is little variation across California counties that had high response rates (Table 6). Surfers in each region are middle-aged, educated, employed, and earn $75,000 per year. They are experienced and avid surfers who

come to the beach early in the morning from relatively short distances and spend $54-$70 with each visit. The greatest disparities exist between surfers in the San Francisco Bay Area and Ventura County. Surfers in Ventura are the oldest, most experienced and avid of the group. Surfers in San Francisco are the youngest and least experienced but also more educated, more highly employed, and travel the farthest distance to surf.

Table 7: California Regional Demographic Comparison

	Median Age (years)	Education (% college and above)	Employment (% full time)	Income (median individual)
LA County	*34	*67%	67%	$75,000
Orange County	35	*55%	63%	$75,000
SF Bay Area	*33	*73%	69%	$75,000
San Diego County	*35	*65%	69%	$75,000
Santa Cruz	37	65%	62%	$75,000
Ventura	*39	58%	60%	$75,000

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Source: Surf-First Surfer Survey, 2009.

Table 8: California Regional Recreation and Expenditures

	Years Surfing	Arrival Time	Duration (hours)	Distance Traveled (one way)	Visits per year	Expenditure per visit (mean)
LA County	*15	*8:00am	2:00	*9.5 miles	*108	$54
Orange County	*18	*7:30am	*2:30	*10 miles	*124	$58
SF Bay Area	*10	*9:15am	2:00	*15 miles	*95	$66
San Diego County	*20	*8:15am	*2:00	*5 miles	*144	$58
Santa Cruz	*15	*8:45am	*2:30	*10 miles	*81.5	$70
Ventura	*20	8:30am	*2:30	7.5 miles	*144	n/a

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: All figures are medians unless noted. Source: Surf-First Surfer Survey, 2009. n/a denotes insufficient number of responses.
Source: Surf-First Surfer Survey, 2009.

Surfers contribute significantly to the economies of the communities they visit. Table 9 displays the economic impact generated by our sample of surfers to California regions. As discussed above, we are unable to extrapolate these findings to larger populations due to the nature of the survey. Our small sample of California surfers represents a small percentage of total surf visits in the state but shows expenditures that significantly benefit coastal communities.

Table 9: California Regional Economic Impact

	Total Visits in Sample	Expenditure per visit (mean)	Economic Impact
LA County	51,222 (n=367)	$54	$2,765,988
Orange County	98,822 (n=699)	$58	$5,731,676
SF Bay Area	28,637 (n=222)	$66	$1,890,042
San Diego County	97,698 (n=583)	$58	$5,666,484
Santa Cruz	28,186 (n=218)	$70	$1,973,020
California Total	340,305 (n=2,315)	$59	$20,077,995

Source: Surf-First Surfer Survey, 2009.

i. California Surfing Areas

California is the only state where individual surfing areas received at least 100 responses (Tables 10 & 11). We provide surfing area specific information for these surfing areas. We find a similar profile at the individual surfing areas. Surfers are educated, employed, and committed athletes who earn middle to middle-high incomes. At the individual surfing areas scale, we find more variation in the demographic and economic characteristics. Income, age and experience are higher at San Onofre and Bolsa Chica with median individual income of $100,000, the highest in our sample. Income, age and education are lower at 54th & 56th Streets in Newport Beach, where the median age is only 27 and income $50,000 per year, the lowest in our sample. Surfers at San Onofre, located at the northernmost tip of San Diego County just west of the Camp Pendleton military base, drive the farthest to reach the beach and are also the least avid. Surfers at El Porto, in Los Angeles, are younger than the median age in California but also the most likely to be educated and employed of any sub-sample in the dataset.

Table 10: Surfing Area Demographic Comparison

	Median Age (years)	Education (%college and above)	Employment (% full time)	Income (median individual)
54th & 56th Streets	*27	56%	58%	*$50,000
Bolsa Chica	*47	51%	*69%	$100,000
El Porto	*32	74%	*75%	$75,000
Pacifica/Lindamar	*34.5	71%	62%	$75,000
Pleasure Point	*39	66%	69%	$75,000
San Onofre	*44	56%	68%	*$100,000
Trestles	*37	64%	65%	$75,000

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.Source: Surf-First Surfer Survey, 2009.

Table 11: Surfing Area Recreation and Spending Habits

	Years Surfing	Arrival Time	Duration (hours)	Distance Traveled (one way)	Visits per year
54th & 56th Streets	*15	*7:38am	*2:00	*5 miles	*144
Bolsa Chica	*23	*7:00am	*2:00	10 miles	*96
El Porto	*15	*8:08am	*2:00	*5 miles	108
Pacifica/Lindamar	*7	*9:30am	*2:00	*17 miles	*66
Pleasure Point	*20	*9:00am	*2:30	7.5 miles	*144
San Onofre	*25	*7:45am	*3:00	*25 miles	*57.5
Trestles	*21	*7:30am	*2:30	*15 miles	97

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: All figures are medians unless noted. Source: Surf-First Surfer Survey, 2009.

The disparity between ages and income for Bolsa Chica and 54th & 56th Streets (20 years and $50,000, respectively) is more striking when their proximity is considered: the two beaches are located just 8 miles from one another. Both beaches attract experienced and avid surfers but from different age groups. An explanation of this segregation may be explained by examining the reasons for site selection of the surfing areas (Figure 1). Bolsa Chica attracts an older group of surfers who value uncrowded waves and positive attitudes more than surfers at the other beaches. 54th and 56th Streets attract a younger group who prioritize wave quality above all

other reasons. This shows that surf site characteristics may play an important role in the demographic characterization of a surfing area.

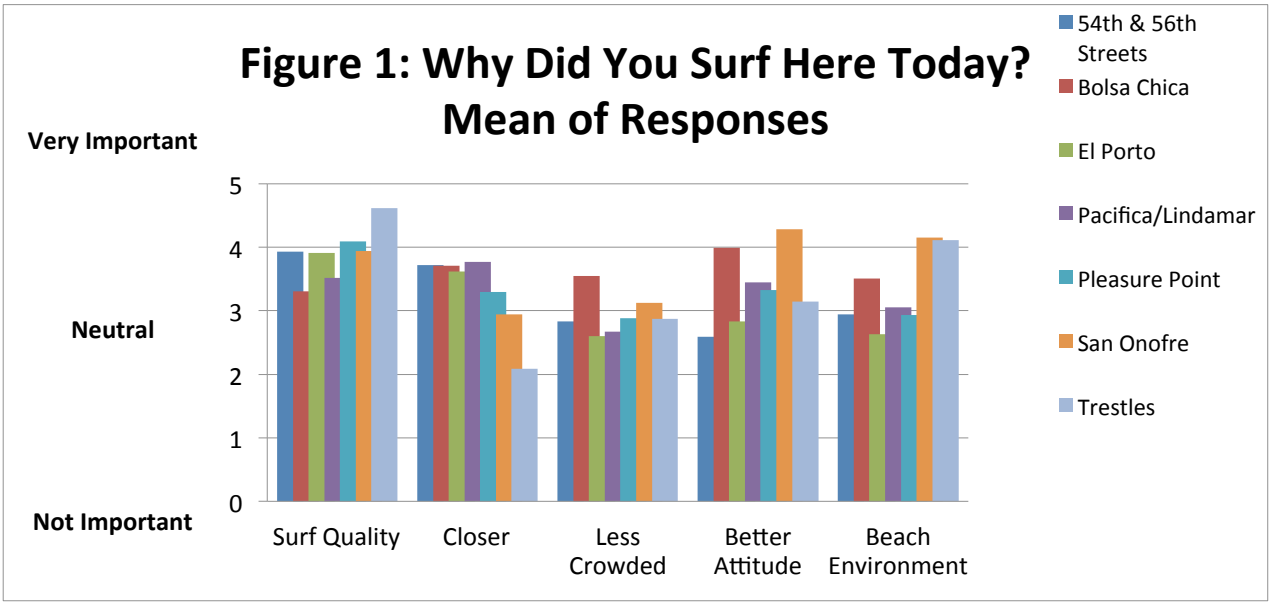

Figure 1: Reason for surfing area site selection

Trestles. Trestles is one of the most popular surfing areas in the world and received the highest response rate of any surf break in our survey. Below are the summary statistics for the surfing area in comparison to an earlier and highly similar survey conducted by Nelsen et al. (2007). See Table 12. The demographic characteristics are similar. The average surfer at Trestles is middle-aged, educated, earns a middle-high income, and spends $40-$55 on each visit. The most significant discrepancy between the two survey responses is the distance traveled. Nelsen et al. (2007) finds visitors to Trestles average a higher travel distance to get to the beach. Nelsen et al.'s (2007) summary of reason for site choice are similar to those found in Figure 1 (above), which shows that wave quality is the highest priority and that proximity is less important to surfers at Trestles.

Table 12: Profile of a Trestles Surfer

	Surf-First	Nelsen et al.
Age (median individual)	37	34
Education (% college and above)	64%	65%
Income (median individual)	$75,000.00	$50-70,000
Employment (% full time)	65%	76%
Distance Traveled (one way)	15 miles	28 miles
Annual Visits (median)	97	109
Total Visits in Sample	13,945 (n=102)	106,000 (n=973)
Expenditure per visit (mean)	$55	$40
Economic Impact	$766,975	$4.2 million

Source: Surf-First Surfer Survey, 2009. Nelsen, Chad et al., "A socioeconomic study of surfers at Trestles. Beach," *Shore and Beach,* Vol. 75, No. 4, Fall 2007.

b. Florida

Summary statistics describing the demographics and recreational and spending habits of surfers in Florida are comparable to surfers in California and our National summary (Tables 13-15). The average Florida surfer is middle-aged, educated, employed, and experienced. Surfers in California spend an average of $59 with each visit, surfers in Florida spend $63 (Table 14). The total economic impact of our sample is a fraction of California because of the smaller sub-sample size (Table 15). Surfers in Florida do report a lower median income.

Unlike California, the characteristics of Florida surfers exhibit only small variances across regions (Table 13). Education, employment, and income levels remain consistent across North, South, and Central Florida. Recreation and spending habits are also similar. The most significant disparity is regarding avidity. Surfers in South Florida surf less per year than in North or Central Florida. Also, surfers in Florida are younger than the average Florida resident and surfers in North Florida are the youngest of any regional sub-sample.

Table 13: Florida Demographic Comparisons

	Median Age (years)	Education (% college & above)	Employment (% full time)	Household Income (median individual)
North	*30	55%	68%	*$50,000
Central	*36	55%	67%	$50,000
South	34	57%	66%	*$50,000
Florida Total	33	54%	67%	$50,000
FL Citizens	40.2	26%	-	$48,637

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: "Florida Total" includes gulf coast.
Source: Surf-First Surfer Survey, 2009. U.S. Census Bureau 2006-2008.

Table 14: Florida Recreation and Expenditures

	Years Surfing	Arrival Time	Duration (hours)	Distance Traveled (one way)	Visits per year	Expenditure per visit (mean)
North	15	8:30am	3:00	10 miles	*144	$57
Central	20	*8:30am	*3:00	10 miles	122	$63
South	19	*9:15am	*2:30	8 miles	*86	$55
Florida Total	18	8:30am	3:00	10 miles	112	$63

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: "Florida Total" includes gulf coast. All figures are medians unless noted. Source: Surf-First Surfer Survey, 2009.

Table 15: Florida Economic Impacts

	Total Visits in Sample	Expenditure per visit (mean)	Economic Impact
North	20,382 (n=129)	$57	$1,161,774
Central	19,093 (n=121)	$63	$1,202,859
South	11,987 (n=95)	$55	$659,285
Florida Total	57,541 (n=383)	$63	$3,625,083

Note: "Florida Total" includes gulf coast. Source: Surf-First Survey of Surfing, 2009.

c. New Jersey, New York, North Carolina, and Virginia

The Atlantic states of New Jersey, New York, North Carolina, and Virginia received over 100 responses so we conducted further analysis on these states (Table 16-18). Similar to California and Florida, surfers in these states are educated, employed, experienced, and avid surfers. Their median age is lower than other states. Surfers in New Jersey are some of the youngest in the U.S. The median individual is just 6 months older than surfers in North Florida, the youngest of any regional sub-sample. Surfers in New York and Virginia are similarly young. Surfers in North Carolina are the most likely to be employed of any surfer of the regional sub-samples. They are also among those who spend the most with each visit and are some of the most experienced (median 20 years). Surfers in North Carolina are the only respondents in the regional sub-samples who earn less than the average resident[7]. Surfers in Virginia are among the youngest and least likely to be educated. However, they are among the most likely to be employed and the median individual earns a high income of $75,000 a year. Surfers in Virginia are also some of the least avid, surfing an average of 76 days per year compared to the Mid-Atlantic average of 92 days (Table 4).

Table 16 : Demographic Comparisons

	Median Age (years)	Education (%college and above)	Employment (% full time)	Income (median individual)
New Jersey	30.5	61%	70%	*$75,000
New York	31	67%	63%	*$75,000
North Carolina	34	58%	74%	*$50,000
Virginia	32	55%	73%	$75,000

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: All figures are medians. Source: Surf-First Surfer Survey, 2009.

Table 17: Recreation and Expenditures

	Years Surfing	Arrival Time	Duration (hours)	Distance Traveled (one way)	Visits per year	Expenditure per visit (mean)
New Jersey	15	8:00am	3	*7 miles	105	*$75
New York	*12.5	*8:15am	3	*15 miles	*84	*$55
North Carolina	*20	*9:00am	3	*7 miles	*74	*$111
Virginia	16	8:30am	2.5	*10 miles	76	*$69

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: All figures are medians. Source: Surf-First Surfer Survey, 2009.

Table 18: Economic Impacts

States	Total Visits in Sample	Expenditure per visit (mean)	Economic Impact
New Jersey	35,123 (n=266)	*$75	$2,634,225
New York	21,345 (n=177)	*$55	$1,173,975
North Carolina	27,247 (n=171)	*$111	$3,024,417
Virginia	14,811 (n=120)	*$69	$1,021,959

[7] The average North Carolina resident earns $52,175 per year. U.S, Census Bureau, 2006-2008.

*Bonferroni, Scheffe, and/or Sidak multiple comparison tests indicate the mean of the sample is significantly different from at least one other at the .05 significance level or greater.
Note: All figures are medians. Source: Surf-First Surfer Survey, 2009.

Summary of State Profiles

Table 19: Summary of State Profiles

	California	Florida	New Jersey	New York	North Carolina	Virginia	Hawaii
Age (median)	35	33	30.5	31	34	32	38
Education (% college and above)	63%	54%	61%	67%	58%	55%	62%
Income (median individual)	$75,000	$50,000	$75,000	$75,000	$50,000	$75,000	$50,000
Employment (% full time)	65%	67%	70%	63%	74%	73%	59%
Arrival Time (median)	8:15am	8:30am	8:00am	8:15am	9:00am	8:30am	8:22am
Years Surfing (median)	16 years	18 years	15 years	12.5 years	20 years	16 years	22 years
Distance Traveled (one way)	8 miles	10 miles	7 miles	15 miles	7 miles	10 miles	8 miles
Annual Visits (median)	120	112	105	84	118	76	144
Total Visits in Sample	340,305 (n=2,315)	57,541 (n=383)	35, 123 (n=266)	21,345 (n=177)	27, 247 (n=171)	14,811 (n=120)	15,259 (n=93)
Expenditure per visit (mean)	$59	$63	$75	$55	$111	$69	$69
Economic Impact	$20,077,995	$3,625,083	$2,634,225	$1,173,975	$3,024,417	$1,021,959	$1,052,871

Source: Surf-First Survey of Surfing, 2009.

CONCLUSION

Our findings strongly contradict the historic stereotype of surfers as an uneducated and unemployed fringe group of coastal users. The surfers in our sample of over 5,360 respondents are avid athletes in their early 30's who are highly employed and well paid. Our national profile is a 34 year-old, educated and employed male who earns $75,000 per year. The average surfer in the U.S. has 16 years of experience, surfs 108 times per year, and spends an average $40 per visit. Their surfing-related expenditures benefit local economies. Surfers arrive at the beach early in the morning from nearby communities and surf for 2-3 hours. This characterization was similar in each regional and surf spot sub-sample. All of the sub-samples found full-time employment above 50% and income above $50,000. The surfers we sampled tend to be more educated and have higher income levels than the general public. This result is not surprising because surf equipment is expensive and the cost of living along coastal areas where surfing is popular tends to be high.

Surfers are uniquely affected by development policies that change the natural formation of surfing areas and are at high risk to water pollution (Dwight et al., 2004). When devising coastal policy local officials should consider surfers as an important constituency whose economic impact is tied to coastal protection.

To our knowledge this is the first detailed national profile of surfers. These results are limited to the 5,360 respondents and cannot be extrapolated to the larger population of surfers because of the survey methodology. The survey instrument was an Internet-based opt-in survey, which is a non-probability method and therefore cannot be extrapolated. The total number of respondents is larger for a survey of this scale but represents a small portion of the estimated 3.3 million surfers in the U.S. Surveying surfers using a random probabilistic method is challenging because the relatively small number of surfers relative to the national population and would require a very large sample frame to capture enough respondents to establish a reliable profile. Future research using a stratified sampling approach or a representative Internet panel could provide more insight into the demographic and economic profile of surfers in the U.S.

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APPENDIX I: SURVEY RESPONSE RATES