

Maine's State Parks: *Their Value to Visitors and Contribution to the State Economy*

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Maine's state parks are important to the social and economic well-being of the state, and provide public access to a variety of outdoor activities. In a study reported here, the authors find that visitors have a high level of satisfaction in Maine's day-use parks, campgrounds and historic sites. Moreover, the overall impact of visitor-related park spending exceeds \$30 million in income and 1,449 jobs annually. Even still, the authors point out that the majority of Maine's state parks suffer from long-deferred maintenance and are in immediate need of major capital improvements if they are to continue their vital role in supporting tourism and outdoor recreation. 🐟

The Maine state park system originated in 1935 with the creation of a State Park Commission. The commission was an outgrowth of the first national conference on state parks in 1921, whose purpose was to encourage the development of state park systems. The 1921 conference was an outgrowth of the National Park Service Act passed by Congress in 1916. In that act the purposes of national parks were articulated "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" (Morgan 1996). State parks build on that philosophy, but on a smaller scale. State parks today enhance quality of life, preserve natural and recreational resources, and help to explain our culture and heritage.

Maine's State Park Commission planned early for a system of areas that would protect resources, provide recreation opportunities, and contribute to the state's social and economic well-being. In the 1930s and 1940s, the commission assumed responsibility for federally administered areas including Bradbury Mountain, Lake St. George, Mount Blue, Sebago Lake, and Camden Hills, and for most of Maine's historic forts such as Fort Popham and Fort Knox. Significant private land donations in the 1940s and 1950s, including Reid, Lily Bay, Rangeley Lake, Warren Island, Vaughan Woods, and Moose Point, expanded this system. The availability of federal funds for outdoor recreation (today, the Land and Water Conservation Fund) in the 1960s and early 1970s, matched by funds from two state bond issues in 1967 and 1971, enabled the commission to purchase land and improve or develop facilities so that most of the developed park system in place today was completed by the mid-1970s.

In the 1960s, the scope of the Commission's work expanded beyond management of a state park system to include providing outdoor recreation opportunities at the local level through municipal grant programs and at the regional level through acquisition of strategic properties across the state. A public boat access program was added in 1965. In 1967, a Parks and Recreation agency succeeded the commission, and in 1974, it became a bureau in the Department of Conservation

(DOC). Snowmobile and ATV trail programs were added in the 1970s and 1980s. In the mid-1990s, the Bureau of Parks and Recreation and the Bureau of Public Lands in the Department of Conservation were merged to form the current Bureau of Parks and Lands, which currently manages the Maine state park system.

There are three types of parks:

Day-use parks include many of Maine's most important coastal beaches as well as inland beaches and scenic mountain areas. Examples include Popham Beach in Phippsburg, Damariscotta Lake in Jefferson, and Grafton Notch in Grafton Township.

Historic sites include most of Maine's important historical forts and other important areas. Examples include Fort Knox in Prospect and Colonial Pemaquid in Bristol.

Campground parks include many of the original parks and provide both camping and day use. Examples include Aroostook State Park in Presque Isle, Lake St. George in Liberty, and Sebago Lake in Casco/Naples.

In addition to the state parks, the Bureau of Parks and Lands oversees other park lands and several hundred thousand acres of public reserved and non-reserved lands that also provide outdoor recreation.

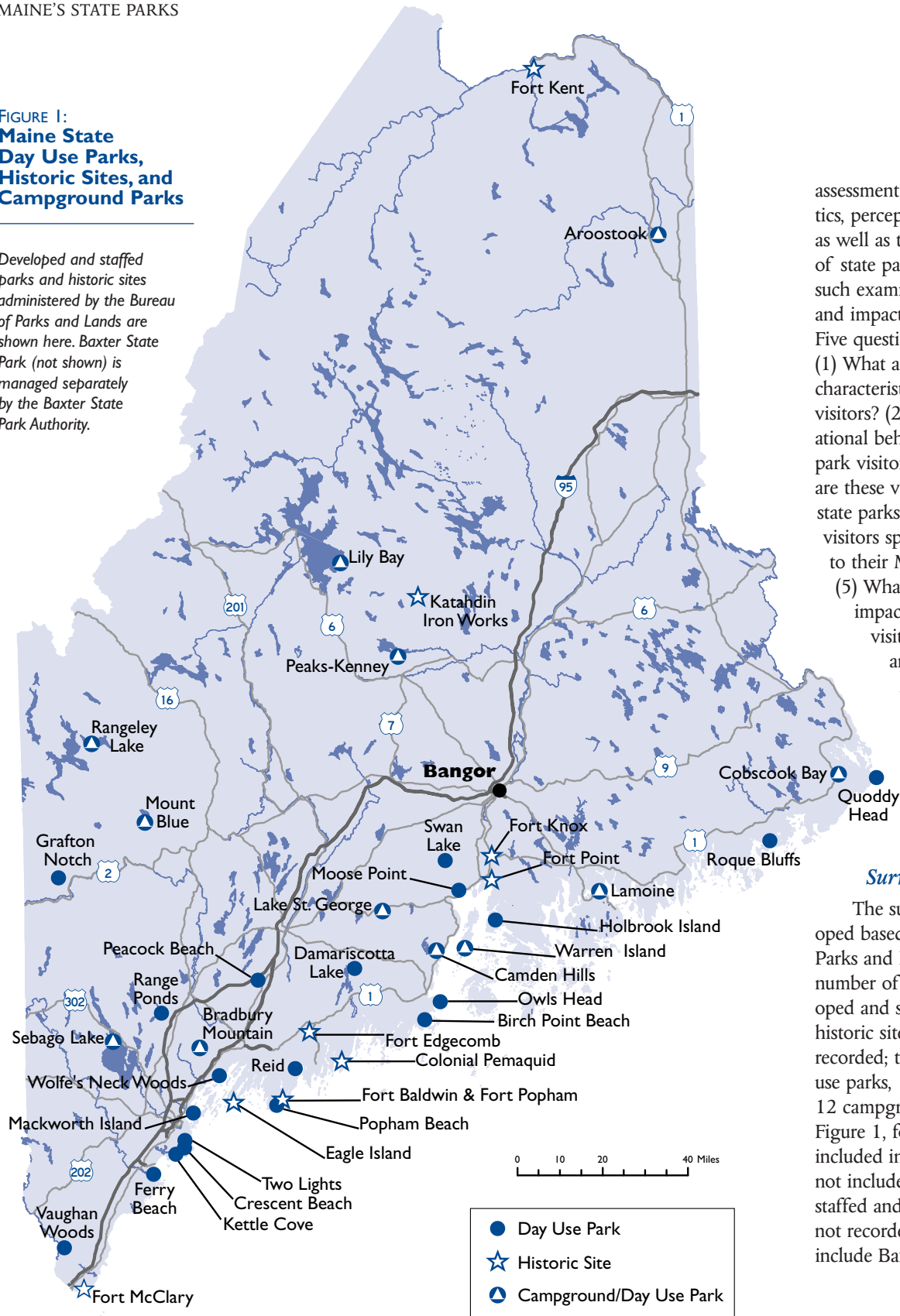
EVALUATING MAINE'S STATE PARKS

Most persons would likely agree that Maine state parks are important to the social and economic well being of Maine. But who uses them and how important are they economically? In 2004, the Department of Conservation contracted with the Margaret Chase Smith Policy Center at the University of Maine to research and provide a comprehensive

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FIGURE 1:
Maine State
Day Use Parks,
Historic Sites, and
Campground Parks

Developed and staffed parks and historic sites administered by the Bureau of Parks and Lands are shown here. Baxter State Park (not shown) is managed separately by the Baxter State Park Authority.



assessment of visitor characteristics, perceptions, and spending, as well as the economic impacts of state parks. This was the first such examination of the usage and impact of Maine's state parks. Five questions guided the research: (1) What are the demographic characteristics of Maine state park visitors? (2) What are the recreational behaviors of Maine state park visitors? (3) How satisfied are these visitors with Maine state parks? (4) How much do visitors spend on items related to their Maine state park visits? (5) What are the economic impacts of Maine state park visitor spending on income and employment in Maine? These questions were addressed in a survey-based study conducted by the Margaret Chase Smith Policy Center in 2005.

Survey Methodology

The survey sample was developed based on 2004 Bureau of Parks and Lands' records of the number of visitors to 42 developed and staffed state parks and historic sites where attendance is recorded; this included 20 day-use parks, 10 historic sites, and 12 campground parks (see map, Figure 1, for the parks and sites included in the survey). We did not include areas that are not staffed and where public use is not recorded. We also did not include Baxter State Park, which

FIGURE 2: Proportion of Parties Participating in Selected Activities

is managed separately by the Baxter State Park Authority.

The survey design included a sample population of 900 individuals from day-use parks (including day visitors to campground parks), 749 individuals from historic sites, and 752 individuals from campground parks. The survey sample was divided proportionally to individual parks within each park type according to 2004 total monthly visitation figures. Monthly samples for each park were evenly divided between weekdays and weekends, and individual surveys were randomly assigned to individual days for distribution. The surveys were distributed from June to mid-October by park personnel according to a prescribed selection and introduction protocol. Respondents were asked to be 18 years or older in order to complete the questionnaire. A total of 1,604 completed questionnaires were received, representing 68.9 percent of the final survey sample.

Visitor Demographics

The respondents' average age was 46.8 years. Almost two-thirds were Maine residents and just over one-third of respondents were non-Maine residents. The majority of respondents (59.2 percent) was female; a majority (55.9 percent) had at least a bachelor's degree; and a majority (64.7 percent) lived in households with a combined income of \$50,000 or higher.

Respondents almost always visited the park with other visitors.

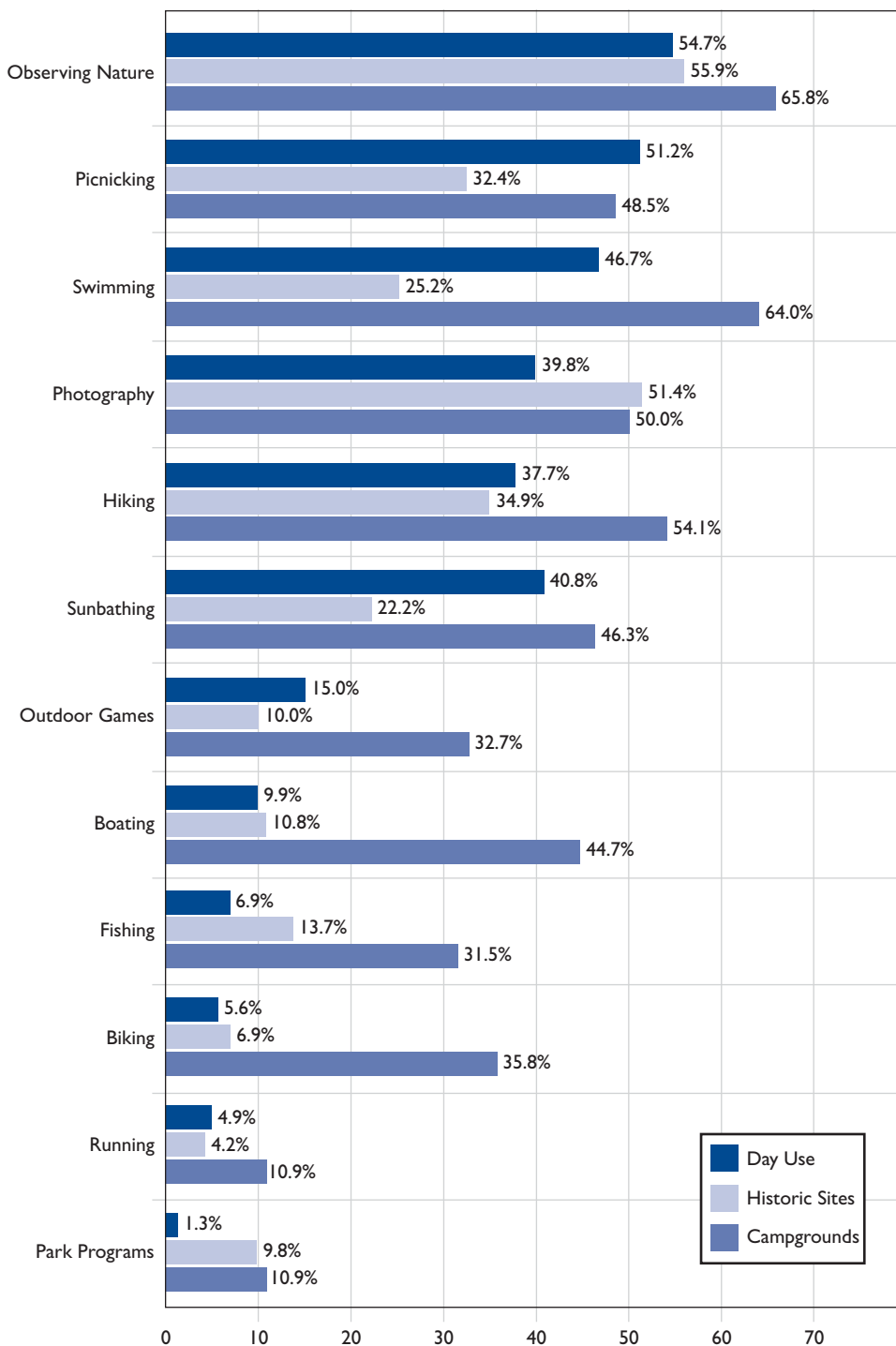
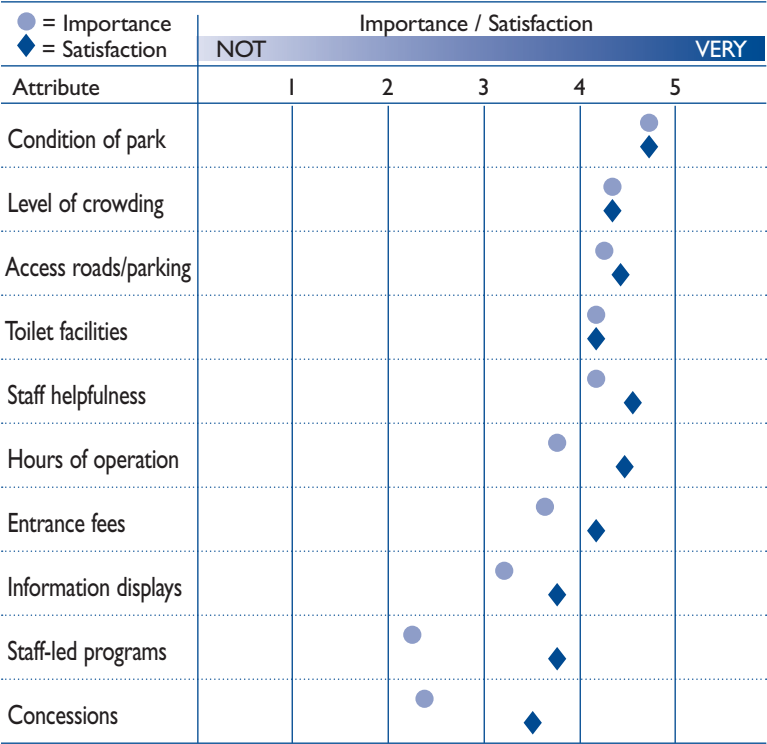


FIGURE 3: **Importance of and Satisfaction in Park Operations**
(All Parks—Average Ratings)



Almost 40 percent of park visitors were children (under 18) and 60 percent were adults. This distribution of visitor ages differs depending on the type of park visited. For historic sites, only 27.6 percent of the visitors were under 18. For campgrounds and day use, the percentages of visitors under 18 were 33.4 percent and 41.1 percent, respectively. Since Maine day-use parks receive the greatest number of visitors, children visit this type of park the most in both relative and absolute terms.

Visitation Frequency and Party Characteristics

Nearly all respondents indicated they had visited a Maine state park at least once in 2004, the prior year, and a majority reported having visited a state park or historic site two or more times in 2004. Almost all (99.7 percent) Maine resident respondents had visited a state park or historic site in 2004 compared to 88.6 percent of out-of-state respondents.

Over three-quarters of respondents indicated they expected to visit state parks or historic sites

two or more times in 2005. Day-use park respondents expected to visit most frequently, with 57.9 percent expecting to visit four or more times in 2005. Similarly, over three-quarters of all respondents indicated they expected to visit multiple state parks or historic sites in 2005 and one-quarter expected to visit four or more state parks or historic sites in 2005. Almost all (97.3 percent) Maine respondents expected to make more than one visit to a state park or historic site in 2005 compared to 66.6 percent of out-of-state respondents.

Respondents were asked how many people were in their party during this visit. Day-use park parties on average were the largest (4.3) and parties visiting historic sites were smallest (3.5). The greatest variation in party size was reported by day-use park respondents.

Overall, nearly one-half (48.1 percent) of all parties visiting all state parks and historic sites include children. Fewer parties visiting historic sites include children than do those visiting day-use parks or campgrounds. Out-of-state parties include fewer children and more elders than do Maine parties. Parties visiting inland parks include more children than do those visiting coastal parks, and parties visiting swim parks include more children than do those visiting parks with no swimming facilities.

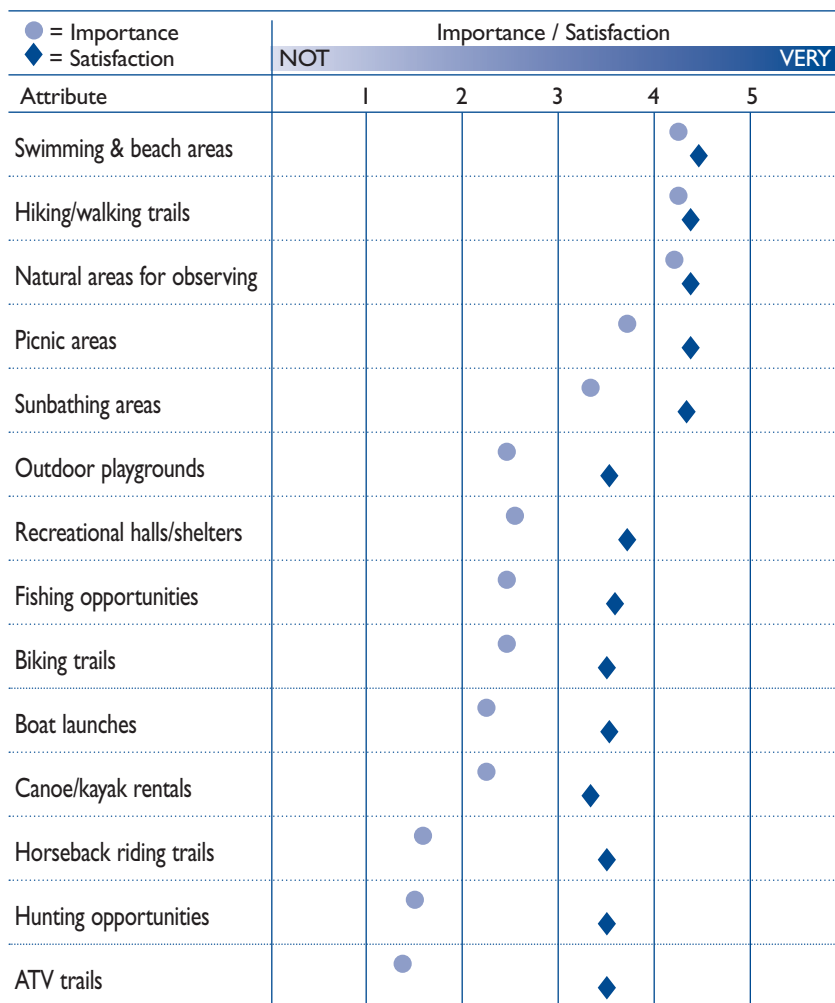
Visitors' Recreation Activities

Respondents were presented a variety of activities and were asked which their party engaged in during their trip to the park (Figure 2, p. 59). The most frequent activities are observing nature and wildlife, picnicking, swimming, photography, hiking, and sunbathing. As expected, fewer historic site respondents reported engaging in swimming and sunbathing than did respondents from day-use parks and campgrounds. In addition, respondents from campground parks reported higher participation rates across most activities since their visits were for more than one day.

Visitor Satisfaction

Respondents were asked to rate a variety of attributes of the park they visited, which were presented in three broad areas: park operations, recreational facilities, and camping facilities. Respondents rated both the importance of the attribute and their level

FIGURE 4 : Importance of and Satisfaction in Recreational Facilities
(All Parks—Average Ratings)



of satisfaction with the attribute during their visit. These ratings provide measures of the relative importance of the attributes to visitors as well as of visitor satisfaction with those attributes. Figures 3, 4, and 5 present the attribute ratings (listed in order of importance) for park operations, recreational facilities, and campsite facilities.

Respondents gave greater than average (i.e., rating of 3) levels of importance to all the park operations attributes except for staff-led programs and concessions (Figure 3). Attributes with the greatest levels of importance are the condition of the park, the level of crowding, toilet/shower facilities, access roads/parking, and staff helpfulness. For these most important attributes, average ratings of satisfaction were close to or above the average ratings of importance. Respondents reported higher levels of satisfaction than importance for all other park operations attributes.

Respondents gave greater than average ratings of importance to five of the 14 recreation attributes: swimming and beach areas, hiking/walking trails, natural areas, picnic areas, and sunbathing areas (Figure 4). Respondents' ratings of satisfaction equaled or exceeded their ratings of importance for these five attributes. Overall, respondents' ratings of satisfaction in all recreation attributes equaled or exceeded their reported importance.

Campground park respondents gave greater than average ratings of importance to seven of the nine attributes (Figure 5, p. 62). Among the categories related directly to campsites, the average satisfaction rating was 4.0 or higher, and slightly less than the average rated level of importance. Overall, campground amenities and camper programs were rated as least important.

Visitor Expenditures

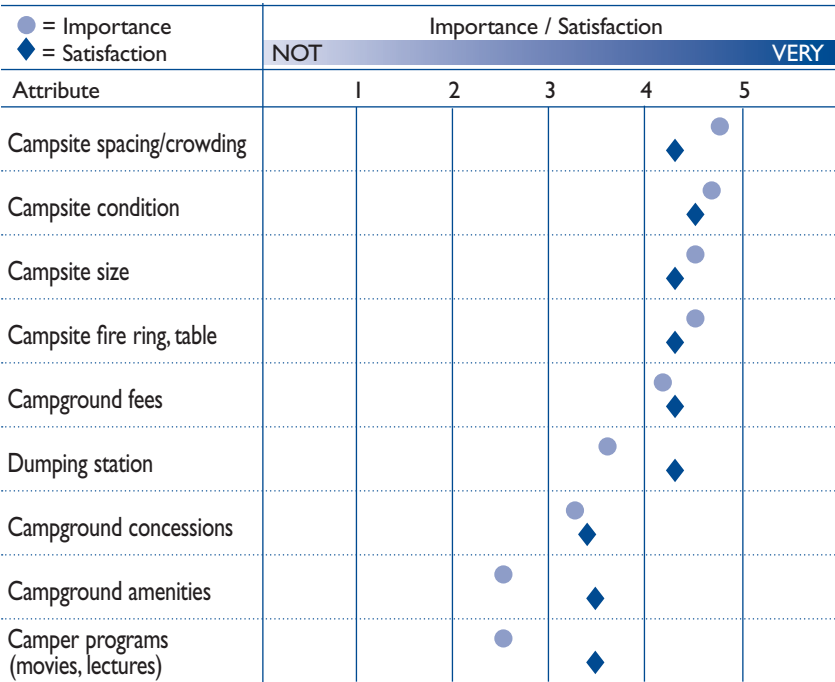
Visitor expenditures include trip-related items (e.g., overnight accommodations, groceries, souvenirs, firewood, and similar items), recreational equipment (e.g., boats, clothing, shoes, fishing equipment, cooking gear) and camping equipment (e.g., camping trailers, motor homes RVs, tents, sleeping bags).

Survey respondents were asked how much their party spent in Maine on trip-related items during the

entire trip (including other destinations during the trip). Since the trip may have been more than one day and the park visit may not have been the only purpose of the trip, we computed a proportion of total trip-related spending that was related to the park visit. The average total reported per party expenditures on trip-related expenses across all park types was \$124.59.

Respondents also were presented a list of categories of outdoor recreational equipment and were asked if each was purchased in Maine during the last 12 months by their party, how much was spent on items in the category, and what proportion of the overall use occurred while visiting Maine state parks and historic

FIGURE 5: **Importance of and Satisfaction in Campsite and Camping Facilities**
(Campground Respondents—Average Ratings)



sites. The average per party total attributable to state parks spent in Maine during the last 12 months for outdoor recreational equipment was also \$124.59.

Respondents who indicated that their party stayed in a state park campground during their visit were presented a list of categories of RV, camper, and tent equipment and were asked if each was purchased from a retail dealer in Maine during the last 12 months by their party, how much was spent on items in the category, and what proportion of the overall use occurs while visiting Maine state parks. Respondents were asked to not include private party sales in their responses. For those staying in campgrounds, the average per party total attributable to state parks spent in Maine during the last 12 months for RV, camper and tent equipment was \$531.90.

***Total State Park-Related
Visitor Spending in Maine***

The average spending per party was used as the basis to estimate total spending by all visitors

to Maine’s state parks based on the 2005 visitation figures provided by the Maine Department of Conservation. The spending per party and visitation figures were adjusted for party-size and repeat visitation as reported by survey respondents. The combined total of all spending attributed to visits to Maine’s state parks in 2005 is \$60.3 million (Table 1). This includes \$58.1 million spent away from the parks and \$2.2 million in admission, camping, and other fees collected at the parks or Bureau of Parks and Lands offices.

Day users are the most frequent users of the state parks, comprising 75 percent of all visitor-days in 2005, compared to 14 percent for historic site visitors and 11 percent for campers. As a result, day users account for the greatest amount of trip-related spending, not including park admission fees (\$33.0 million). Visitors to historic sites spent \$11.1 million on trip-related expenditures, and campers spent \$4.6 million. Across all park types, the largest trip expenditure categories included overnight accommodations, restaurants, groceries, and gasoline. These items account for three-quarters of all trip-related expenditures. Park fees (based on figures reported by the Maine Department of Conservation) are not included in the subtotals because some are not reported by park type.

Outdoor recreational equipment purchases attributed to the state parks totaled \$6.8 million in 2005. This spending represents expenditures during the preceding 12 months and is attributed to the state parks based on the respondents’ reported proportion of the items’ total usage that occurs in state parks. The spending is also adjusted for repeat visitation to avoid duplicative attribution of spending on goods that are used during multiple visits to the parks. Visitors to day-use parks have both the highest average per-party and annual total expenditures for recreational equipment among all park types. The \$4.5 million attributed to day-use park visitors accounts for 65 percent of all recreational equipment spending associated with state parks in Maine. Visitors to historic sites spent \$1.0 million on recreational equipment, and campers spent \$1.4 million. Across all park types, the largest expenditures are associated with watercraft—boats,

TABLE 1: Total Expenditures by Visitors to Maine State Parks, 2005

	Day Use	Historic Site	Campground	All Visitors
Trip-related expenditures	\$32,954,940	\$11,125,002	\$4,636,378	\$48,716,320
Outdoor recreation equipment	\$ 4,456,897	\$ 946,053	\$1,447,520	\$ 6,850,470
Camping equipment			\$2,543,518	\$ 2,543,518
Subtotal	\$37,411,837	\$12,071,055	\$8,627,416	\$58,110,308
Park fees*				\$ 2,219,189
TOTAL	\$37,411,837	\$12,071,055	\$8,627,416	\$60,329,497

* Includes day-use, camping, and miscellaneous fees, some of which are aggregated and not reported by park type, and includes some river corridor fees.

canoes, and kayaks (\$3.1 million)—swimsuits, towels, and clothing (\$0.9 million), and footwear (\$0.7 million).

Visitors to state park campgrounds report total expenditures of \$2.5 million for camping equipment, adjusted for the proportion of time that the equipment is used in state parks and for repeat visitation. This total includes \$1.7 million for campers and trailers, \$0.7 million for recreational vehicles, and \$148,000 for tents, tarps, sleeping bags and backpacks.

TOTAL ECONOMIC CONTRIBUTION OF STATE PARKS IN MAINE

The total economic contribution of state parks in Maine includes the visitor spending mentioned above, the economic activity associated directly with park operations, and their related multiplier effects. The economic multiplier effects are estimated separately for the spending by visitors that takes place outside of the parks and for the economic activity associated directly with park operations. The multiplier effect is the relationship between the direct spending and the resulting total change throughout the statewide economy. We estimate the multiplier effect using an input-output model of the Maine economy that describes the relationships that exist between businesses as they interact with each other and between businesses and the final consumers of their products.

Because the fees paid by visitors do not directly fund the parks' operations, they are not included in the trip expenditure impacts. The economic activity directly attributable to parks operations, which includes

TABLE 2: Direct and Multiplier Effects of Economic Activity Associated with Maine's State Parks

	Direct Impacts	Multiplier Effect	Total Economic Activity
Output			
Visitor spending	\$58,110,308	\$21,667,299	\$79,777,607
Park operations	\$ 8,704,813	\$ 7,229,032	\$15,933,845
TOTAL	\$ 66,815,121	\$ 28,896,331	\$ 95,711,452
Employment (number of jobs)			
Visitor spending	832	252	1,084
Park operations*	282	83	365
TOTAL	1,114	335	1,449
Income (wages and benefits)			
Visitor spending	\$15,280,087	\$6,606,521	\$21,886,608
Park operations*	\$ 5,566,695	\$3,680,116	\$ 9,246,811
TOTAL	\$ 20,846,782	\$ 10,286,637	\$ 31,133,419

*Includes some administrative positions in the Augusta and regional offices.

most visitor fees, is analyzed separately from the other spending by park visitors.

Table 2 presents a summary of the spending, the multiplier effect, and the total level of economic activity that spending by state park visitors and the operations of the state parks has in Maine. The \$58.1 million of visitor spending in Maine plus the \$8.7 million operating budget of the state parks results in \$66.8 million of economic activity in Maine's

economy that is directly associated with the state parks.¹ Through the multiplier effect, the visitor spending and the operations of the parks indirectly generate an additional \$28.9 million of economic activity throughout the state. The combined direct and indirect impacts produce an estimated \$95.7 million of economic activity in the state.

...Maine's state parks increasingly are recognized as key public components of the "green infrastructure" that supports the tourism and outdoor recreation sectors of the economy....

A part of the \$95.7 million of economic activity generated by the state parks is the employment and associated incomes of people employed by the state parks or whose jobs are directly and indirectly supported by the visitor spending. The direct spending outside of the parks by visitors supports 832 full- and part-time jobs that provide \$15.3 million of income. In addition, the state parks directly employ 282 people in full- and part-time jobs that are both year-round and seasonal including some administrative positions in the Augusta and regional offices of the Maine Department of Conservation. The employment directly supported by visitor spending plus the jobs at the state parks constitute a combined total of 1,114 jobs that provide \$20.8 million of income. The multiplier effect of the visitor spending and state park operations generates an additional 335 jobs and associated income of \$10.3 million. Altogether, the direct and indirect effects of economic activity linked to the state parks supports 1,449 jobs and \$31.1 million of income in Maine.

Finally, the economic activity, employment, and personal income attributed to spending by state park visitors and park operations generate tax revenues for state and local governments in Maine. In addition to the economic contributions shown in Table 2, state and

local governments in Maine receive approximately \$5.9 million of sales, income, property, and other tax revenues and fees through the economic activity generated by state park visitors and the operations of the state parks. This does not include the state park fees paid by visitors to use the state parks or historic sites. In 2005, the state parks collected \$2.2 million in admission, camping and other fees. Of that amount, \$1.8 million was returned directly to the state's General Fund, \$0.3 million was disbursed to the towns and cities in which state park lands are located, and approximately \$56,000 in lodging taxes were collected.

DISCUSSION

Travel and tourism has become Maine's largest industry. Including all types of travel, it is estimated that Maine residents and visitors spent \$6.2 billion on food, lodging, transportation, amusements, and retail purchases during 2004. Tourism, or vacation travel, accounts for \$4.0 billion of that spending—the result of 20.8 million day trips and 4.2 million overnight trips. Including the multiplier effect, Maine tourism spending supported 176,633 jobs with a combined payroll of \$3.8 billion (Longwoods International 2005).

The study reported here confirms that Maine's state parks are an integral part of the state's tourism economy. During 2005, the state parks and historic sites recorded over 1.8 million visitor-days and 226,000 camper-nights.² The value of the parks is further underscored by the level of economic activity that is attributed to the parks' usage. Park visitors contribute to overall spending in Maine through purchases during their trips to the parks (trip-related spending for food, fuel, lodging, etc.), for recreational equipment that is integral to their recreational activities in the parks (fishing, hiking, picnicking, etc.), and through the operations of the parks themselves.

The Maine state park system provides public access to a variety of outdoor activities across the state, especially for the state's residents. While nearly two-thirds of overall tourism travel in Maine is attributed to out-of-state visitors, our study found that approximately two-thirds of visitors to the state parks are Maine

residents. Since the operations of the parks are funded primarily by the state's General Fund, it is worth noting that visitors (two-thirds of whom are Maine residents) are very satisfied with the conditions at the parks and the activities and amenities offered. Every one of 33 different day-use and campground attributes was rated better than average, and more than 95 percent of survey respondents rated their visit as good or excellent.

Consistently high visitor satisfaction ratings reflect the value of the sites themselves and a staff emphasis on providing high-quality visitor experiences. However, the average visitor is unlikely to know that a buried water line is 70 years old, that shoreline erosion is threatening important historic artifacts, or that demand for group picnic shelters far exceeds the number available. The 47 sites and 100,000 acres that constitute the state park system have major capital-improvement needs that exceed \$30 million, according to a 2004 study.³ Moreover, the capital allotment for state parks in the last two budgets was \$0, and the last successful bond issue for state park improvements was for \$3 million in 1996. If deferred maintenance and needed improvements are not addressed in the near future, visitor satisfaction may well decline, and as a byproduct, there could be a decrease in visitation and its economic impact.

Far from being expendable amenities, Maine's state parks increasingly are recognized as key public components of the "green infrastructure" that supports the tourism and outdoor recreation sectors of the economy and sustains a society that values its health and that of the natural environment. For example, in June 2006, the Governor's Steering Committee on Maine's Natural Resource-based Industry hosted "Sustaining Maine's Green Infrastructure," a forum to explore ways of supporting this infrastructure.

The image of healthful, vigorous, clean outdoor recreation is Maine's brand image. L.L. Bean and Tom's of Maine market this public perception very effectively. Maine has a great brand image. And, as every successful company knows, a great brand image is worth protecting and enhancing. With its coastal islands and sand beaches, inland lakes and mountains, colonial settlements and border fortifications, the state parks and historic sites are the places that signify Maine

to residents and visitors alike. The land and the facilities that enable people to use and enjoy these places are public investments that require ongoing care to continue to attract and serve visitors, contribute to the economy, and inspire environmental values. 



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Please turn the page for article endnotes, references, and additional author information.



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Thomas Allen is Senior Research Analyst in the Center for Tourism Research and Outreach (CentRO) at the University of Maine and a collaborating researcher at the Margaret Chase Smith Policy Center. Prior to joining CentRO, his research at the University of Maine focused on Maine economic development issues.



Cindy Bastey is Chief Planner for the Bureau of Parks and Lands in the Maine Department of Conservation. She has a background in geography (Clark University, 1969), worked for a number of years in Maine regional and city planning, and joined the bureau in 1984.

ENDNOTES

1. The parks' operating budget includes \$8.1 million in General Fund and dedicated revenues and an annual average of \$0.6 million in grant funds.
2. Visitor days and camper nights at state parks include adults and children. Longwoods International's measure of trips includes only persons age 18 and older.
3. *Maine State Parks Major Capital Improvements Plan*, Clough Harbour & Associates, LLP, in association with F.W. Horton & Associates, Architects, Pinkham & Greer, Consulting Engineers, Inc., and Turk, Tracey and Larry, Architects, LLC. October, 2004; Revised December 2004.

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