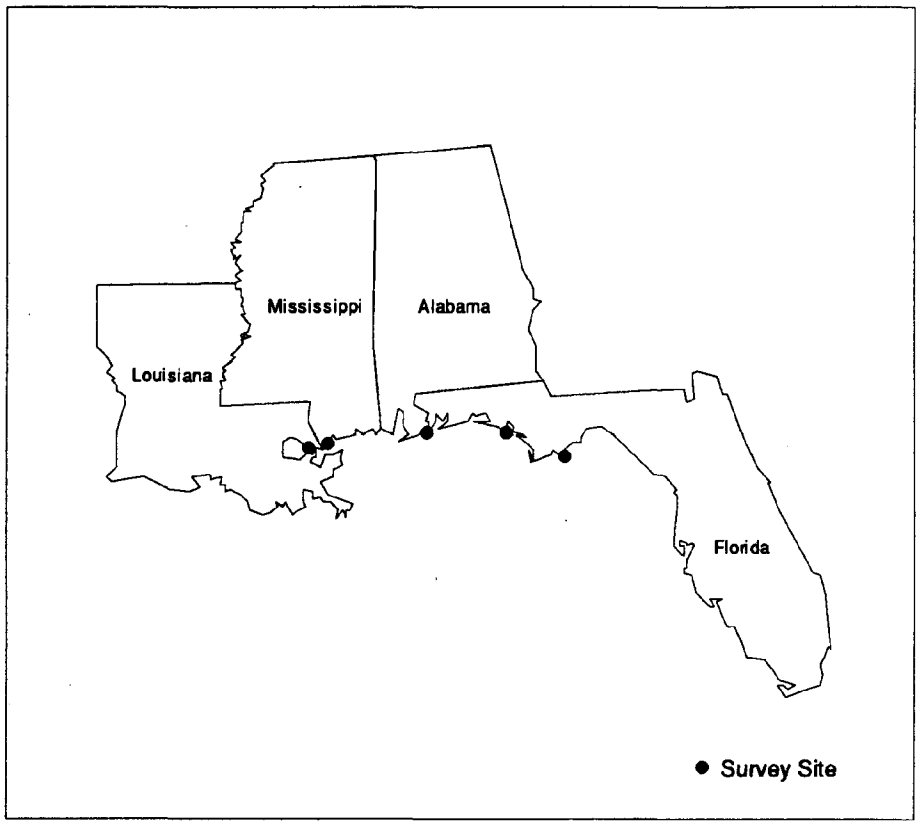
Public Area Recreation Visitors Survey

# *A Socioeconomic Profile of Recreationists at Public Outdoor Recreation Sites in Coastal Areas: Volume 3*

Vernon R. Leeworthy, Norman F. Meade,
Kathleen Drazek and Daniel S. Schruefer

September, 1989




*U.S. DEPARTMENT OF COMMERCE*
*National Oceanic and Atmospheric Administration*

# Coastal and Ocean Resource Economics Program

The Coastal and Ocean Resource Economics Program is an evolving set of activities to develop Nationwide data bases, products and analytical capabilities for conducting economic assessments of activities that directly affect or are affected by the health of the nation's coastal and oceanic resources. The program is conducted by the Strategic Environmental Assessments Division (SEAD) of NOAA's Office of Ocean Resources Conservation and Assessment. It's major program elements are described below. Since 1985, the program has also co-sponsored a set of annual workshops with the Environmental Protection Agency on natural resource and environmental economics to support it's major program elements.

***Inventory and Value of Coastal Recreation.*** Because outdoor recreation has been identified as the single largest category of benefit from the improvements in water quality, SAB began to develop a program to inventory and value coastal recreation. The first product of this program was a data base and report "Public Expenditures on Outdoor Recreation in the Coastal Areas of the U.S.A. (1986)" This led to development of an inventory of all publicly owned and/or managed recreation areas and facilities in the Nation's coastal areas. Summaries for 21 states and 25 groups of estuaries, by county and level of government, are available in a recently published atlas titled "National Estuarine Inventory, Data Atlas: Public Recreation Facilities in Coastal Areas (1988)." A complementary inventory of all privately owned and managed recreation facilities is also being developed through a cooperative agreement between NOAA and the U.S. Forest Service. Plans are to complete this inventory, Coastal Recreation Inventory, in 1992.

*Public Area Recreation Visitors Survey (PARVS).* PARVS is an ongoing intergovernmental cooperative research project involving seven federal and twelve state agencies. The survey was designed to provide data needed to develop highly credible and broadly comparable estimates of the economic importance of providing recreational opportunities on public lands. PARVS also enables development of detailed information about recreation uses and users and can provide estimates of the direct monetary value derived by users of public recreation areas. User values are critical to analyses of conflicts and trade-offs between recreation and other resource uses. In 1987, SAB initiated the effort to collect data at coastal recreation sites. To date, more than 15,000 interviews have been conducted at forty public outdoor recreation sites in the coastal areas of the U.S.A.

For more information on NOAA's Coastal and Oceanic Resource Economics Program, write to:

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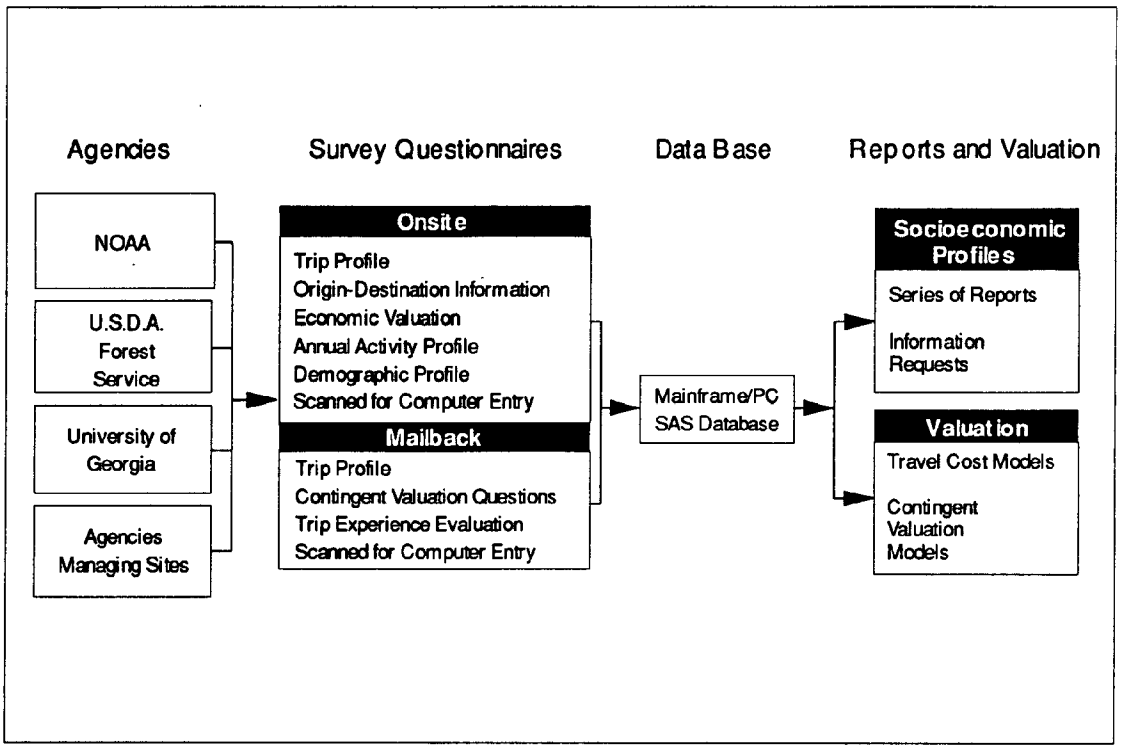


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## Introduction

This report summarizes information collected during the summer of 1988 through surveys conducted at five state parks in Alabama, Florida, Louisiana and Mississippi. Over 1,600 on-site (intercept) interviews were completed from June 20, 1988 to September 7, 1988 at the sites. An additional 450 mailback questionnaires have been completed.

Tabular summaries of the following information are contained in this report: 1) socio-demographic profiles of users; 2) type and extent of recreation activities engaged in; 3) types and amount of expenditures on recreation activities; 4) willingness-to-pay for park access; and 5) satisfaction ratings for various park attributes. Also included are detailed profiles of the five sites from the NOAA Inventory of Public Recreation Areas and Facilities in Coastal Areas. This information is intended for recreation planners and managers and business marketing agents that require simple summary information on the uses and users of coastal recreation sites.

Future reports will provide estimates of activity and site specific user values currently being developed using travel cost demand models and contingent valuation techniques.

## Survey Design

*Survey Questionnaires.* Data collection employed two survey questionnaires: 1) an intercept (completed using a face-to-face interview); and 2) a mailback. The intercept, or on-site questionnaire, obtains information on the users and uses of the site and other information necessary for recreational demand modeling. The mailback questionnaire is used in a follow-up survey to obtain detailed information on trip-related expenditures, willingness-to-pay for park access using contingent valuation questions, and user satisfaction ratings (on a 0 to 10 scale) for several park attributes. The mailback survey also provides information necessary for estimating the importance of parks to local and regional economies.

*Site Selection.* Sites were selected from the NOAA Inventory of Public Recreation Areas and Facilities in Coastal Areas based on several criteria: 1) they had to be adjacent to tidal or ocean waters; 2) the sites had to have at least 100,000 visitors annually; 3) they had to have camping facilities either on-site or nearby to house interviewers; 4) the majority of site usage had to take place during the summer season; 5) the sites had to be geographically dispersed; and 6) the managing agencies had to agree to provide on-site logistical support for the interviewers. Figure 1 shows the geographic dispersion of the five PARVS coastal sites, while Table 1 lists the managing agencies for each site. Detailed profiles of the sites are included in Appendix A.

*Number of Responses.* Overall, 1,639 interviews were completed on-site (intercept survey) while 450 follow-up mailbacks were received, for an overall mailback response rate of about 27 percent (Table 1). Given historical mailback response rates from PARVS, each site was targeted for at least 300-350 on-site interviews to ensure at least 100 mailback responses. The 300-350 on-site interview target was not achieved at Gulf State Park due to low visitation. Lower than expected mailback response rates at St. Andrews State Park (22%) and at Fountainebleau State Park (19%) resulted in less than 100 mailback responses.

*Sampling.* The number of interviews at each site were stratified across various access points and time of week (weekdays versus weekends) to give proper representation of the various recreation activities available at each site. The sampling frame was a vehicle, while the sampling unit was an individual. One person was randomly selected from each randomly selected vehicle. Only those age 16 and older were interviewed. Demographic information was collected on up to eight people traveling in the vehicle. The number of people in each vehicle that participated in each activity was also collected. The mailback survey was sent to the person that was interviewed unless someone else paid for their expenses. In these cases, the person that paid expenses was identified and that person received the mailback portion of the survey.

## Profile of Visitors

Information on the users of marine recreational resources, such as where they come from, how far they travel to get there, their age distribution, gender and racial composition, education levels, family incomes, group type and size are all important for assessing current and future demands for park services. These data are also used in economic impact studies to estimate the demand for other goods and services from local areas surrounding the parks.

*Market Area.* Home zipcode, state, and county data was obtained from each person interviewed on-site. This information has been aggregated into Bureau of the Census "census divisions" to show the market areas for each of the sites (Table 2). Each of the census divisions is made up of a group of states and

can be further aggregated into four census regions (Figure 2).

Three of the five sites, (St. George Island, Gulf State Park and Fountainebleau) draw the majority of the visitors from within the census division in which the site is located. For St. Andrews State Park, when the adjacent East South Central division is included, over 82 percent of the visitors are accounted for. And, for Buccaneer State Park, when the adjacent West South Central division is included, about 87 percent of the visitors are accounted for.

For assessing local and regional economic impacts, in terms of sales, employment, income, tax revenues, and the cost of local services, it sometimes is important to know more detail about travel patterns than Table 2 provides. Table 3 shows the in-state and out-of-state distribution of visitors for each of the five sites. All of the sites, except Fountainebleau State Park, draw most of their visitors from outside the states where they are located. These sites are important to their state's economies because they stimulate an influx of expenditures from non-residents.

*Distances Traveled to the Sites.* For modeling recreational demand, it is important to know how far visitors travel to the sites. From this information, a proxy for the willingness-to-pay, or price, of site access is constructed. This is generally referred to as the "travel cost method." See Bockstael et al. (1986) for a review of this popular method for modeling recreation demand.

One of the many issues debated in travel cost modeling is the proper specification of distance traveled. For single purpose, single-destination trips, total distance to the site, or total round trip mileage is appropriate. However, when multiple purpose or multiple destination trips are involved, total distance traveled to the site may overstate the cost of access. Information was obtained in the PARVS interviews to determine the purpose of the trip and if there were destinations other than the park visited. Additional information was also obtained on the primary purpose and destination of the trip. If other destinations were involved, the destination previous to the park where the respondents were interviewed was obtained. From this information, three distance variables were constructed (Table 4).

The first measure is unadjusted and represents the distance from where the trip was started to the park.[1] On average, visitors traveled over 280 miles one-way to the sites. The second measure is adjusted for those that visited multiple sites and for whom the park where interviewed was <u>not</u> the primary destination of the trip. For individuals in this category, the distance from the site visited previously to the site where the interview took place was calculated. On average, for all five sites, this yielded a one-way travel distance of only about 151 miles, or about 46 percent less than the unadjusted measure.

The second measure received another adjustment for about one percent of the sample; those that visited the sites while enroute home from a previously visited site. In these cases, the distance from the most efficient path home to the site where interviewed was calculated (see footnote 3, Table 4). This adjustment made a difference in the averages reported in Table 4. However, in individual cases the adjustments were quite large. It may, therefore, be an important element for improving the results of travel cost modeling.

*Age Distribution of All Visitors.* Table 5 shows the age distribution of all visitors to the five sites. The actual age of up to eight people traveling in each vehicle interviewed was obtained. Eight age groups were formed to correspond to those used by the Bureau of the Census. This allows for the comparison of age distributions across the relevant market areas (i.e., states where the sites are located). Differences between the age distributions in the general market area for each site and the age distributions of visitors of each site suggest that age may be an important factor in explaining park visitation.

*Gender and Racial Composition of All Visitors.* The only significant difference in the male-female distribution between visitors at the five parks and the states or regions where the parks are located, or the U.S. as a whole, was at St. George Island State Park (Table 6). This suggests that gender is not generally an important factor in explaining park visitation. Racial composition, on the other hand, appears to be a significant factor. The percentage of visitors that are white is significantly higher than the general population for St. George Island, St. Andrews, Gulf State Park, and Buccaneer, while blacks make up a significantly higher proportion of visitors at Fountainebleau than the general population in Louisiana.

*Education Levels of All Visitors.* Education level may be an important factor in explaining park visitation, however, the manner in which the data is reported by the Bureau of the Census does not lend itself to direct comparison with defined market areas. It may be possible with further work on Bureau of the Census data tapes to compile comparable categories. Another important use of this information is in park planning, to the extent that park activities are

education dependent. Guided tours of archaeological or historical sites or on nature trails where interpretive services are available are important examples. Table 7 summarizes the education levels of all visitors to the parks.

***Family Income of Visitors.*** Many studies of recreational behavior have found income to be an important factor in explaining both recreational participation and avidity. Table 8 shows the distribution of family incomes of all visitors aggregated into six groups that correspond to those categories reported by the Bureau of the Census. The survey actually collects income using 12 income categories. The family incomes of park visitors at all five sites are significantly higher than the U.S. population as a whole. This lends further support for the hypothesis that income is an important determinant of park visitation.

***Group Size and Type.*** The average group size across all sites consisted of less than seven people, with a high of 13.94 at Fountainebleau and a low of 4.21 at St. Andrews (Table 9). In addition, over 72 percent of all groups were of three or more people. Over 80 percent of all groups were family based (Table 10). These findings are significant. Schomaker and Morck (1986), in a study of group composition in advertisements for recreationally related products and services, found that family groups and groups larger than two persons were underrepresented when compared to the results of the National Recreation Survey (1977). Family groups appeared in only five percent of the ads, with an average group size of only 2.2.

Group type may also be important to park managers in addressing the issue of imposing site fees. McCurdy (1970, 1985) found that family groups, as opposed to single individuals, couples, or groups of friends most readily accepted site fees. Referendum-type contingent valuation questions on site fees, which will be discussed below, are asked as part of the PARVS survey. Thus, the capability exists to further test this proposition.

## Type and Extent of Activities

***Recreational Usage.*** In recreational demand modeling, the two most important pieces of information are a proxy for price and a measure of quantity demanded. Recreational usage information can provide information necessary to obtain both these measures. For example, in many studies the number of trips to the site represent the quantity demanded, while on-site time is used as an input in calculating a portion of the cost of the trip (e.g., total on-site plus travel time multiplied by the value of time). Both the proxy for prices and the measure of quantity demanded have varied across studies depending on the purpose and scope of the analyses. Table 11 reports the average number of days spent on-site during the past 12 months, the average number of trips to the site over the past 12 months, the average length of stay per trip (e.g., the number of days spent on-site during the trip on which the interview was conducted), and the percentage of single day trips. For all five sites, the average person made 4.68 trips to the site where interviewed, and spent an average of 6.42 days there over the past 12 months. The average length of stay for the interview trip was 1.88 days, while 68.9 percent were single day trips.

There was a good deal of variation in these measures across sites. On average, the visitors to St. Andrews State Park made the most trips (8.72) and spent the most days on-site (11.05) during the past 12 months, while visitors to Buccaneer State Park made both the fewest trips (2.24) and spent the fewest days on-site over the past 12 months (3.98). The average length of stay on the interview trip was less than three days at all five sites with the highest at Gulf State Park (2.60 days) and the lowest at Fountainebleau (1.19 days). Over 80 percent of the visits to St. George Island and Fountainebleau are single day visits.

***Main Activities.*** Table 12a reports the ranking of the top ten "main" activities across all five sites and how each of these activities are ranked for each of the sites. The top ten activities are not ranked on the basis of the greatest number of participants in each activity, but by the percent of visitors, age 16 and older, that responded that a particular activity was their main activity. Developed Camping ranked number one across all sites followed by Other Outdoor Swimming and Sunbathing. Unlike most sites covered in previous PARVS surveys (see Volumes 1 and 2), only eight percent of the visitors to these Northern Gulf sites did not have a main activity.

***Activities of All Visitors.*** Table 12b reports the ranking of the top 15 activities. Activities are ranked on the basis of the greatest percent of participants from the sample of visitors of all ages. From 1,639 interviews of people 16 and older, there were 7,190 people of all ages for which activity participation was reported. Picnicking replaces Developed Camping as the number one activity across all sites when based on total participation. Developed Camping drops to six overall. Other Outdoor Swimming and Sunbathing still remain number two and three, respectively.

Participation rate, by activity, varied greatly across

sites. Other Outdoor Swimming and Sunbathing either ranked one or two at three of the five sites (St. George Island, St. Andrews and Gulf State Park). Pool Swimming ranked number one at Buccaneer, while picnicking ranked number one at Fountainebleau with 94 percent of the visitors participating in the activity.

## Spending by Visitors

Studies in the economics of outdoor recreation have utilized expenditures for two purposes: 1) for specifying a proxy for price when modeling the demand for recreation; and 2) for economic impact analysis where the impact of recreational activity is estimated on local and/or regional economies in terms of sales, employment, income, tax revenues etc. It is primarily to the former purpose that NOAA intends to apply the PARVS data.

*Onsite Fees.* Column one of Table 13 reports the average daily on-site fees paid per person. This information was obtained from the intercept portion of the survey. On-site fees represent a portion of the total cost of accessing a site and will be used with travel costs in constructing a proxy for price in future demand modeling work. The average expenditure varied greatly across the five sites with a high of $13.29 per person per day at Gulf State Park and a low of $3.63 per person per day at Fountainebleau.

*Trip Expenditures.* Table 13 also reports all trip related expenditures. These expenditures include: 1) the amount spent while preparing for the trip at home, or upon return from the trip (e.g., film purchased at home in preparation for the trip and film development upon return from the trip); 2) while traveling to and from the site (e.g., expenses for lodging, food and travel); and 3) while visiting the site or immediate area (e.g., expenses for food, lodging, local travel, on-site fees, fishing bait, souvenirs, etc.). This comprehensive expenditure profile is particularly useful for analyzing the economic impact that visitors to parks have on local and/or regional economies.[2]

On average, total trip expenditures ranged from a high of $190 per person at Buccaneer State Park to a low of $108 per person at St. George Island.

There are several possible problems with the trip expenditures reported in Table 13. First, they are unweighted for sample response bias. Second, the relatively small samples from Fountainebleau (63), St. Andrews (76) and Gulf State Park (83), decreased the reliability of the means because of the increased sensitivity to outliers. Third, about 31 percent of the sample were on multiple destination trips. It is not clear whether all the expenditures made, while preparing for the trip or upon return home from the trip and while traveling to and from the site, should be considered as attributable to the site where interviewed. Future assessments of economic impact will have to address these problems.

## Willingness-to-Pay

The survey used several direct approaches for measuring the willingness-of-visitors to pay site access fees. Each of these approaches utilize the contingent valuation method (CVM). Four separate questions were asked, one on the intercept questionnaire and three in the mailback survey. The question asked on the intercept survey was repeated on the mailback questionnaire[3]. Two of the questions on the mailback survey were open-ended in that the maximum dollar amount the individual would pay was asked and that individual simply fills in a dollar amount. This represents the more traditional CVM approach. One question was asked on-site (repeated on mailback, see footnote 3) and one on the mailback survey using a relatively new approach which asks for "yes" or "no" responses to randomly assigned dollar amounts. This is commonly known as the referendum approach, since each person is simply asked to vote "yes" or "no" to the assigned dollar amount. This approach is thought to have several advantages over the open-ended question approach. For example, the referendum approach avoids strategic bias[4], and is similar to market transactions where consumers either purchase or do not purchase a product at the given market prices. The main disadvantages of this new approach is that it requires more sophisticated analyses in order to yield answers comparable to the open-ended questions and the methods of analysis are still experimental.

*Open Ended Questions.* Table 14 reports the results of two open-ended CVM questions on the willingness-to-pay site access fees. The first question asked what was the maximum amount the individual would be willing to pay for an annual vehicle pass that would permit access to the site for all persons in the vehicle. The pass would apply to the interview site only and would only cover site admission, not any other fees (i.e., camping). The average for all sites was $7.27 and ranged from a high of $11.09 at St. Andrews, to a low of $4.07 at Buccaneer.

The second open-ended question again asked for the maximum amount the individual would be willing to pay for an annual vehicle pass, but the pass would allow admission to all sites the agency manages. It was expected that the willingness-to-pay for this type

of pass would be higher than the pass that allows access to only one site, since it is expected that the option to visit additional sites may have some value. Although the means are lower at all sites for the one site pass, the differences are statistically significant only at St. George Island and Fountainebleau.

The results presented here are only preliminary since several issues in analyzing the data are as yet unresolved. The estimates in Table 14 are unweighted for mailback response bias and neither an analysis of protest bids (i.e., zero bids given because they do not like the idea of fees) nor an analysis of anchoring bias (caused by placing the referendum question before the open-ended question) have been conducted. In the latter case, the true maximum amount may not have been given because the individual may be biasing their bid toward the randomly assigned dollar amount asked in the referendum question. These issues are currently being researched.

**Referendum Questions.** Table 15 presents the percentage of yes votes for each of the ten randomly assigned, per-person per-day charges for site admission that was asked on the intercept questionnaire. As expected, the percent of yes votes generally decline at higher dollar amounts. There are several inconsistencies where a higher percent of "yes" responses occur at higher dollar amounts. When aggregated across all five sites these inconsistencies disappear, suggesting relatively large sample sizes may be required achieve consistent results with this method. An overwhelming majority would be willing to pay at least $2.00 per person per day at all sites except Fountainebleau.

Another referendum question was asked on the mailback portion of the survey. This question asks for the willingness-to-pay for an annual vehicle pass to the site where interviewed. This pass would admit everyone in the vehicle. Again as expected, the percent of yes votes declines with increased dollar amounts with few exceptions (Table 16).

## Satisfaction Ratings

The final section of the mailback survey asks visitors to rate their satisfaction with the site for six attributes on a scale from 0 to 10. The six attributes are: 1) the recreation experience at the site (Table 17); 2) the number of other visitors at the site (Table 18); 3) cleanliness of facilities (Table 19); 4) parking (Table 20); 5) water quality (Table 21); and 6) overall condition of the site (Table 22).

*Recreation Experience.* The mean ratings ranged from a low of 6.24 at Fountainebleau to a high of 8.32 at St. George Island. Over 62 percent of all the visitors at St. George Island gave a rating of 9 or above.

*Number of Visitors.* This attribute is intended as an indicator of individuals perception of crowding conditions on their satisfaction. This attribute received the lowest rating across all sites. The mean scores ranged from 5.36 at Gulf State Park to 6.23 at St. George Island.

*Cleanliness of Facilities.* This attribute generally received high ratings across all sites. Only one site had an average rating of less than seven (Fountainebleau, 6.56). St. George Island had the highest rating (8.9) with over 70 percent giving a rating of 9 or above.

*Parking.* This attribute overall received the highest rating. This would seem to conflict with the ratings given on the number of other visitors. St. George Island had the highest rating (9.24) with over 79 percent giving a rating of 9 or above.

*Water Quality.* Average water quality ratings varied from a low of 5.54 at Fountainebleau to a high of 8.43 at St. George Island. Over 65 percent at St. George Island and over 54 percent at St. Andrews gave ratings of 9 or above.

*Overall Conditions of the Site.* Most visitors were generally pleased with the overall condition of the sites. The average ratings ranged from 7.20 at Fountainebleau to a high of 8.59 at St. George Island. Over 63 percent at St. George Island gave a rating of 9 or above.

## On-Going and Future Activities

*Data Collection.* During the winter and spring of 1989, six sites were surveyed in the Southeast and Gulf of Mexico regions of Florida and Texas. Also, during the summer of 1989, an additional 10 sites were surveyed on the West Coast from California to Washington. At the completion of the 1989 season, the coastal portion of PARVS will include information on 40 sites and contain survey data on over 12,000 visitors to coastal recreation sites across the nation.

Because the forty sites selected in the coastal PARVS sample have a mostly rural, state-federal park focus, the 1990 survey will include 7 to 10 urban coastal sites to give a more representative sample of types of coastal beach sites across the nation. Consideration is also being given to whether PARVS could be extended to include other types of sites such as wildlife

refuges, hunting/game management areas and nature preserves. This would provide the capability to develop a more comprehensive set of activity and site specific user day values for coastal recreation.

***Estimation of User Day Values.*** Researchers at SAB and North Carolina State University are currently developing travel cost demand models and contingent valuation methods using the data summarized in this report. These methods will be assessed for their ability to produce consistent and credible estimates of activity and site specific user day values.

Once accepted, these methods will be applied to the data collected at the remaining thirty sites around the Nation. The result will be a National set of user day values developed with a consistent set of data and methodologies.

***Site Valuation.*** For many policy and management decisions, it is important to know the total annual value generated by a site. Here user day values must be aggregated. Estimates of total site use by activity are required. Updates of total annual site visitation are being compiled for all sites surveyed (See Appendix A for site visitation for 1984, 1982, 1977 and 1972 from NOAA Inventory of Recreation Areas and Facilities) in cooperation with the state and federal agencies managing the site.

***Changes in Site Qualities.*** Total loss of a site is more rare than small, sometimes continuous changes in site qualities. Degradation of the site by water and air pollution and debris washed-up on shorelines result in losses in site value due to losses in user day values and lower visitation rates. Future research efforts will attempt to model (in a broad regional or National context) the losses in site values due to reductions in site qualities. The major focus will be on water quality.

***Total Value of Coastal Recreation.*** A much more ambitious goal of the SAB program is to place a total annual value on all coastal recreation sites. To accomplish this, estimates of total coastal recreational use are required. Very little information currently exists.

To remedy this, SAB will be working with the U.S.D.A. Forest Service and the National Park Service in modifying the 1991 National Recreation Survey to obtain total use estimates for coastal recreation. Although sample sizes will be too small to provide more than broad regional estimates of use, the study combined with PARVS data and analysis will provide the capability to provide regional and National estimates of the total value of coastal recreation.

## Footnotes

1. The respondent was asked how many miles they traveled from where they started their trip to the site. As an alternative we used the highway mileage calculated using a micro-computer based software program called "Hiways and Byways" by New Direction Software, Inc. A comparison of the mileages provided by the respondent and that calculated from the computer program revealed that the absolute value of the differences increased with the total distance traveled. Many include mileage associated with the side trips. The mileage reported in Table 4 is from the Hiways and Byways computer program.

2. The U.S. Forest Service has developed an analytic capability for assessing economic impacts called Implan. Implan provides planning analysts with the capability to construct a local and/or regional input-output model for any applicable area and to perform evaluations of potential economic effects of alternative courses of action. See Cordell et al. (1987) for an example.

3. The on-site referendum question was repeated on the mailback because recent evidence from research being conducted at the University of Colorado, at Boulder, suggests that people may change their bids after they have had more time to think about the decision. The results of this repeat of the question are not reported here. Future analysis of this data will test for this effect.

4. The overstatement of willingness-to-pay when it is perceived that the fee will not be charged but will lead to park protection or improvement, or understatement if it is perceived management is planning to impose fees but the individual is reasonably sure the park will be protected. See Desvouges et al. (1983) for a discussion of biases.

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## List of Figures and Tables*

### Figures



### Tables

Figure 1. Recreation Sites Surveyed During Summer 1988.

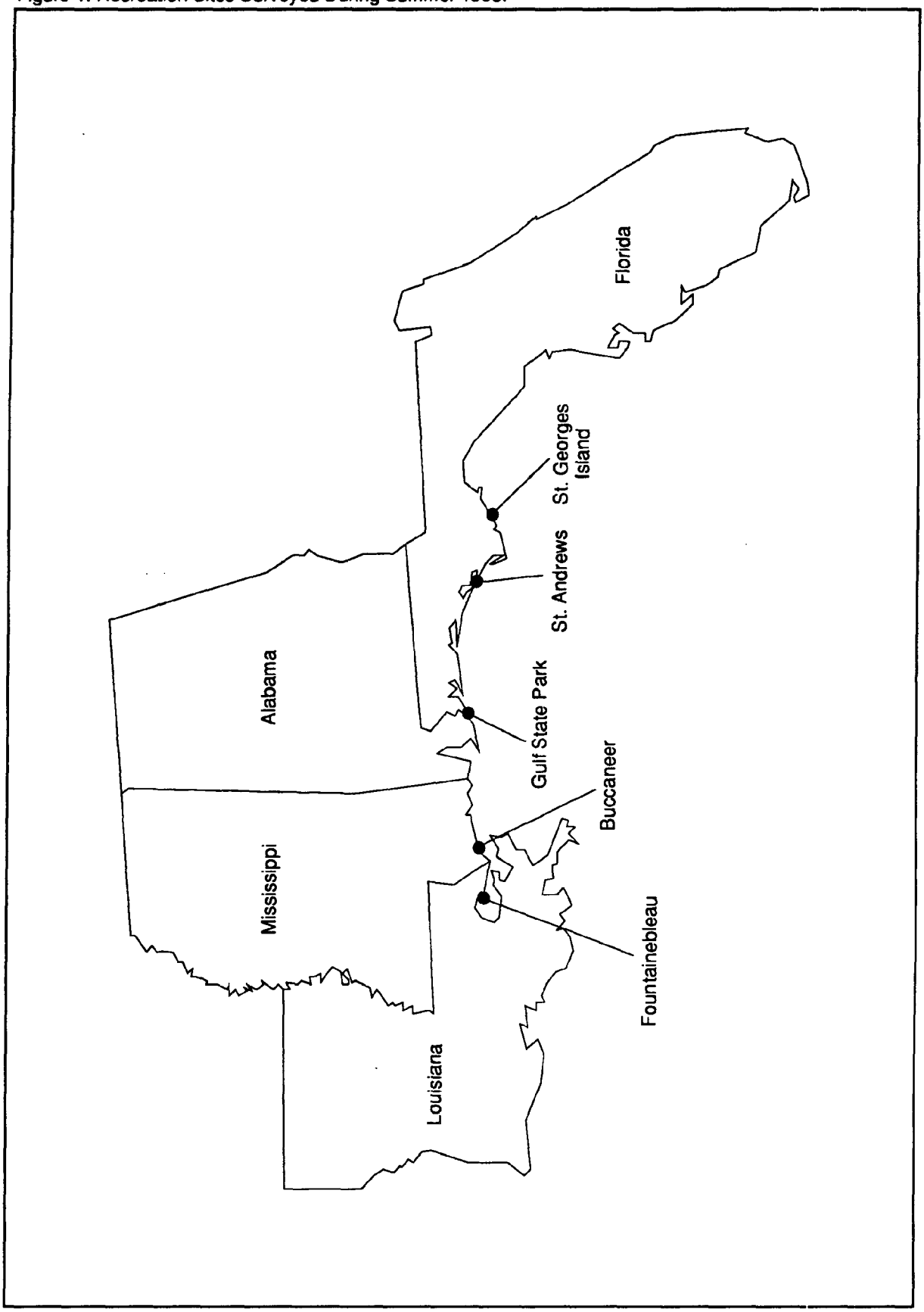

Figure 2. U.S. Bureau of the Census Regions and Divisions of the United States.

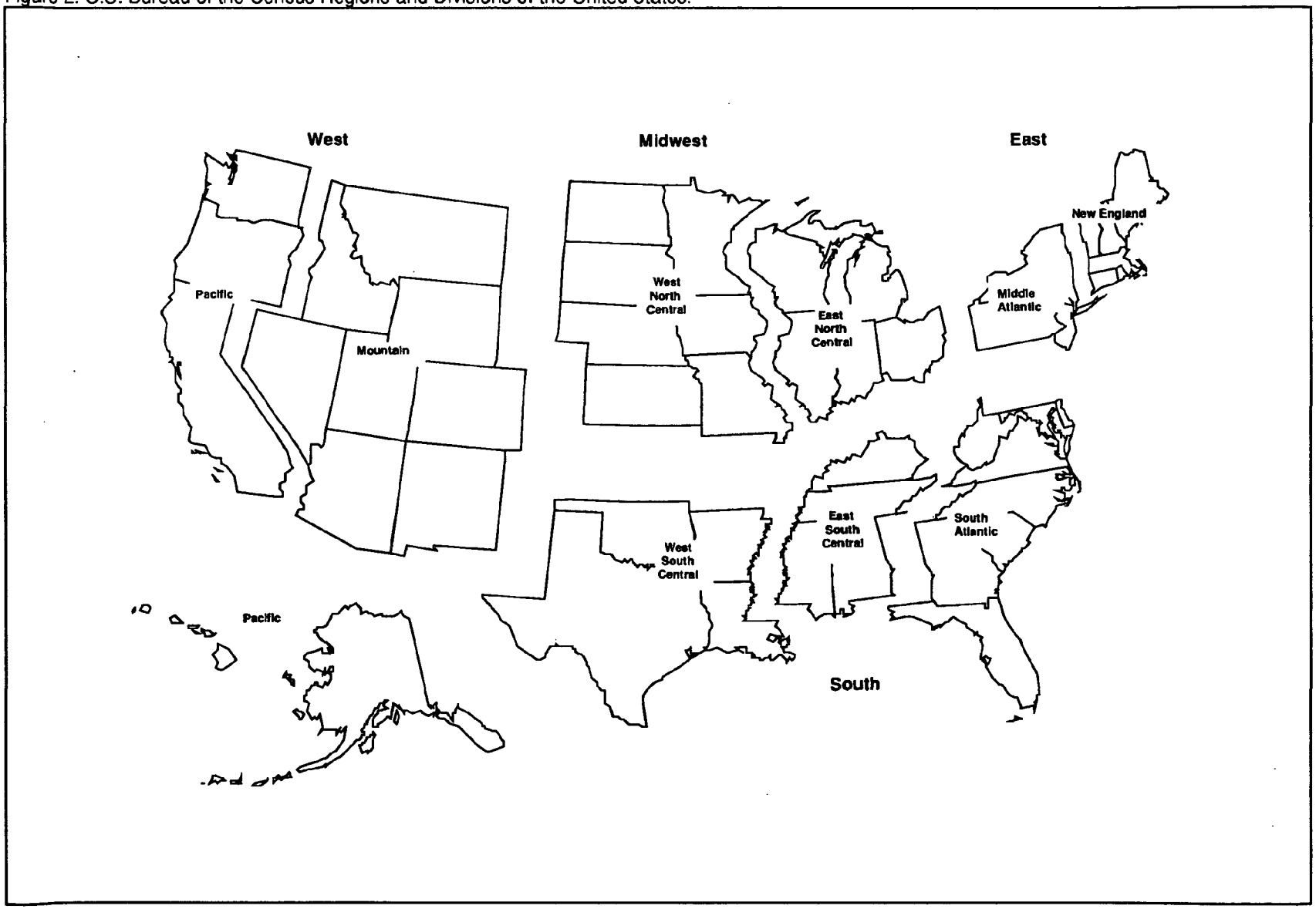

Table 1. Managing Agencies and Number of Completed Interviews for the 1988 PARVS Coastal Sites.

| State/Site | Managing Agency | Number of Interviews | |
|---|---|---|---|
| | | On-site | Mailback |
| Florida | | | |
| St. George Island | FL Department of Natural Resources, | 363 | 103 |
| St. Andrews | Division of Recreation and Parks | 339 | 76 |
| Alabama | | | |
| Gulf State Park | AL Department of Conservation and Natural Resources, Division of State Parks | 259 | 83 |
| Mississippi | | | |
| Buccaneer | MS Department of Natural Resources, Bureau of Recreation and Parks | 355 | 125 |
| Louisiana | | | |
| Fountainebleau | LA Office of State Parks, Department of Culture, Recreation and Tourism | 323 | 63 |
| Northern Gulf of Mexico Total | | 1,639 | 450 |

Table 2. Distribution of Visitors by Census Division or Country of Residence.*

| Census Division - Country | Sites (Percent) | | | | | |
|---|---|---|---|---|---|---|
| | All N. Gulf Sites | St. George Island | St. Andrews State Park | Gulf State Park | Buccaneer State Park | Fountainebleau State Park |
| New England | 0.6 | 0.8 | 0.3 | 0.4 | 0.3 | 0.9 |
| Middle Atlantic | 0.7 | 0.3 | 1.5 | 1.2 | 0.3 | 0.3 |
| South Atlantic | 31.0 | 81.5 | 52.2 | 6.6 | 2.5 | 2.8 |
| East North Central | 2.6 | 2.5 | 5.3 | 1.9 | 2.5 | 0.3 |
| East South Central | 23.1 | 6.1 | 30.1 | 70.7 | 18.9 | 1.2 |
| West North Central | 1.5 | 2.2 | 2.1 | 1.2 | 2.0 | 0.0 |
| West South Central | 37.1 | 3.3 | 5.9 | 15.8 | 67.9 | 91.3 |
| Mountain | 0.5 | 0.6 | 0.3 | 0.4 | 1.1 | 0.0 |
| Pacific | 0.6 | 0.6 | 0.3 | 0.8 | 0.8 | 0.6 |
| Canada | 0.2 | 0.0 | 0.3 | 0.8 | 0.3 | 0.0 |
| All Other Foreign | 2.1 | 2.2 | 1.8 | 0.4 | 3.4 | 2.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Toned areas show Census Division within which the site is located.

Table 3. Distribution of In-State and Out-of-State Visitors, by Site.

| State/Site | Visitors(Percent) | |
|---|---|---|
| | In-State | Out-of-State |
| Florida | | |
| St. George Island | 57.9 | 42.1 |
| St. Andrews | 28.0 | 72.0 |
| Alabama | | |
| Gulf State Park | 59.9 | 40.1 |
| Mississippi | | |
| Buccaneer | 16.3 | 83.7 |
| Louisiana | | |
| Fountainebleau | 89.4 | 10.6 |

Table 4. Average DistanceTraveled to the Five Coastal Sites.

| State/Site | Average Miles to Site | | |
|---|---|---|---|
| | From Where Started Trip [1] | From Site Previously Visited [2] | From Most Efficient Path Home [3] |
| Florida | | | |
| St. George Island | 306 | 135 | 132 |
| St. Andrews | 359 | 235 | 230 |
| Alabama | | | |
| Gulf State Park | 250 | 187 | 185 |
| Mississippi | | | |
| Buccaneer | 371 | 136 | 126 |
| Louisiana | | | |
| Fountainebleau | 94 | 71 | 68 |
| All Sites | 280 | 151 | 147 |

[1]Most people (94%) started the trip from their home, so for the majority, this represents the distance from their home to the site.

[2]About 31 percent of the sample were on trips where they visited multiple sites. Of these, about 67 percent (i.e., 19 percent of the entire sample) did not designate the site (where they were interviewed) as their primary destination. For those that visited other sites and the site of interview was not the primary destination, the distance from the site visited previously to the site of the interview was calculated.

[3]About 2 percent of the sample stopped at the site of the interview while enroute home. In these cases, the distance of the most efficient path home was calculated. For example, those who may have visited New Orleans, LA and who live in Miami, FL would (it is assumed) be traveling on I-10 East. If they decided to stop at Buccaneer State Park (southwest of Clermont Harbor, MS), the mileage from I-10 to Buccaneer State Park was calculated. In most cases this had little effect on the means, however, they may play a greater role in travel cost modeling, where individual differences were sometimes great.

Table 5. Age Distribution of All Visitors by Site, Compared to the States and the U.S.A.

| State/Site | Age Group (Percent) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | <15 | 15-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65> |
| Florida | 19 | 7 | 8 | 15 | 12 | 10 | 12 | 17 |
| St. George Island | 29 | 9 | 8 | 20 | 18 | 7 | 6 | 3 |
| St. Andrews | 27 | 13 | 7 | 22 | 18 | 7 | 5 | 1 |
| Alabama | 23 | 8 | 9 | 16 | 13 | 10 | 9 | 12 |
| Gulf State Park | 31 | 7 | 5 | 17 | 18 | 9 | 8 | 5 |
| Mississippi | 26 | 9 | 9 | 16 | 12 | 9 | 9 | 12 |
| Buccaneer | 38 | 6 | 5 | 16 | 16 | 8 | 6 | 5 |
| Louisiana | 25 | 9 | 10 | 18 | 12 | 9 | 8 | 10 |
| Fountainebleau | 35 | 9 | 18 | 22 | 15 | 5 | 4 | 2 |
| All Northern Gulf of Mexico Sites | 32 | 9 | 7 | 19 | 17 | 7 | 6 | 3 |
| South Atlantic | 21 | 8 | 9 | 17 | 13 | 10 | 10 | 12 |
| East South Central | 23 | 8 | 9 | 16 | 13 | 10 | 9 | 12 |
| West South Central | 24 | 8 | 9 | 18 | 13 | 9 | 8 | 10 |
| U.S.A. | 22 | 8 | 9 | 17 | 13 | 10 | 9 | 12 |

Table 6. Gender and Racial Composition of Visitors by Site, Compared to the States and the U. S. A.

| State/Site | Gender/Racial Composition (Percent) | | | | | |
|---|---|---|---|---|---|---|
| | Males | Native American | Asian/ Pacific Island | Black | White | Other |
| Florida | 48.0 | <1 | <1 | 14 | 84 | 1 |
| St. George Island | 43.6 | 0 | <1 | 3 | 96 | <1 |
| St. Andrews | 46.3 | <1 | 0 | 1 | 98 | <1 |
| Alabama | 48.1 | <1 | <1 | 26 | 73 | <1 |
| Gulf State Park | 48.0 | <1 | <1 | 2 | 97 | <1 |
| Mississippi | 48.2 | <1 | <1 | 35 | 64 | <1 |
| Buccaneer | 49.2 | <1 | <1 | 11 | 86 | 3 |
| Louisiana | 48.5 | <1 | <1 | 29 | 69 | 1 |
| Fountainebleau | 48.2 | <1 | 5 | 44 | 45 | 6 |
| All Northern Gulf of Mexico Sites | 47.0 | <1 | 1 | 13 | 83 | 2 |
| South Atlantic | 48.4 | <1 | <1 | 21 | 78 | <1 |
| East South Central | 48.4 | <1 | <1 | 20 | 80 | <1 |
| West South Central | 48.9 | 1 | <1 | 15 | 79 | 5 |
| U.S.A. | 48.6 | 1 | 2 | 12 | 83 | 2 |

Table 7. Distribution of Visitors by Highest Education Level Attained, by Site.

| State/Site | Education Levels (Percent completed) | | | | | |
|---|---|---|---|---|---|---|
| | 8th Grade or Less | 9th-11th Grade | High School Graduate | 13-15 Years | College Graduate | Graduate Education |
| Florida | | | | | | |
| St. George Island | 28.3 | 10.2 | 19.9 | 16.6 | 13.4 | 11.6 |
| St. Andrews | 26.0 | 11.3 | 24.5 | 20.8 | 10.3 | 7.1 |
| Alabama | | | | | | |
| Gulf State Park | 31.0 | 10.7 | 22.6 | 17.0 | 10.5 | 8.2 |
| Mississippi | | | | | | |
| Buccaneer | 38.3 | 9.4 | 22.5 | 16.5 | 6.9 | 6.4 |
| Louisiana | | | | | | |
| Fountainebleau | 35.0 | 10.8 | 24.1 | 14.3 | 10.8 | 5.0 |
| All Northern Gulf of Mexico Sites | 31.9 | 10.5 | 22.7 | 17.0 | 10.3 | 7.6 |

Table 8. Distribution of Family Income of Visitors by Site, Compared to the States and the U.S.A.

| State/Site | Family Income Before Taxes (Percent) | | | | | |
|---|---|---|---|---|---|---|
| | Less Than $10,000 | $10,000-19,999 | $20,000-29,999 | $30,000-39,999 | $40,000-49,999 | $50,000 and over |
| Florida | 33 | 32 | 19 | 8 | 3 | 4 |
| St. George Island | 5 | 12 | 28 | 18 | 17 | 20 |
| St. Andrews | 3 | 9 | 18 | 29 | 14 | 27 |
| Alabama | 38 | 30 | 19 | 8 | 3 | 3 |
| Gulf State Park | 5 | 11 | 20 | 22 | 20 | 22 |
| Mississippi | 42 | 30 | 17 | 6 | 2 | 2 |
| Buccaneer | 3 | 18 | 23 | 23 | 17 | 16 |
| Louisiana | 35 | 27 | 20 | 10 | 4 | 4 |
| Fountainebleau | 17 | 16 | 23 | 15 | 15 | 14 |
| All Northern Gulf of Mexico Sites | 6 | 13 | 23 | 21 | 17 | 20 |
| South Atlantic | 31 | 31 | 20 | 9 | 4 | 4 |
| East South Central | 37 | 31 | 19 | 8 | 3 | 3 |
| West South Central | 32 | 29 | 20 | 10 | 4 | 4 |
| U. S. A. | 29 | 29 | 22 | 11 | 4 | 5 |

Table 9. Distribution of Visitors by Group Size.

| State/Site | Average Group Size | Group Size (Percent of total) | | | |
|---|---|---|---|---|---|
| | | One | Two | Three-Four | Five and Up |
| Florida | | | | | |
| St. George Island | 4.72 | 3.3 | 27.3 | 32.8 | 36.6 |
| St. Andrews | 4.21 | 4.8 | 26.8 | 37.2 | 31.2 |
| Alabama | | | | | |
| Gulf State Park | 4.48 | 5.2 | 24.1 | 31.6 | 39.1 |
| Mississippi | | | | | |
| Buccaneer | 7.33 | 0.8 | 21.5 | 29.7 | 48.0 |
| Louisiana | | | | | |
| Fountainebleau | 13.94 | 2.8 | 20.4 | 21.9 | 54.9 |
| All Northern Gulf of Mexico Sites | 6.96 | 3.3 | 24.0 | 30.7 | 42.0 |

Table 10. Distribution of Visitors by Group Type.

| State/Site | Group Type (Percent) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Family | More than One Family | Friends and Family | Friends | Organized Group | One Person | Other |
| Florida | | | | | | | |
| St. George Island | 63.8 | 3.9 | 10.2 | 17.1 | 1.1 | 3.9 | 0.0 |
| St. Andrews | 67.0 | 2.1 | 13.1 | 11.0 | 0.6 | 6.2 | 0.0 |
| Alabama | | | | | | | |
| Gulf State Park | 80.6 | 0.4 | 6.3 | 6.0 | 0.4 | 6.3 | 0.0 |
| Mississippi | | | | | | | |
| Buccaneer | 70.9 | 7.7 | 9.4 | 7.4 | 2.6 | 2.0 | 0.0 |
| Louisiana | | | | | | | |
| Fountainebleau | 58.9 | 1.0 | 11.3 | 13.8 | 10.0 | 5.0 | 0.0 |
| All Northern Gulf of Mexico Sites | 67.6 | 3.2 | 10.2 | 11.4 | 3.0 | 4.6 | 0.0 |

Table 11. Average Annual Number of Days on Site and Trips to the Site, and the Average Length of Stay on Site for the Interview Trip.

| State/Site | Annual | | Interview Trip | |
|---|---|---|---|---|
| | Days | Trips | Days | % Single Day Trips |
| Florida | | | | |
| St. George Island | 5.09 | 4.39 | 1.48 | 81.0 |
| St. Andrews | 11.05 | 8.72 | 1.92 | 69.2 |
| Alabama | | | | |
| Gulf State Park | 8.27 | 4.04 | 2.60 | 52.3 |
| Mississippi | | | | |
| Buccaneer | 3.98 | 2.24 | 2.35 | 49.6 |
| Louisiana | | | | |
| Fountainebleau | 4.30 | 3.97 | 1.19 | 89.7 |
| All Northern Gulf of Mexico Sites | 6.42 | 4.68 | 1.88 | 68.9 |

Table 12a. Ranking of the Top Ten Main Activities of Visitors Age 16 and Olde.r*

| Activities | Sites (Rank and Percent) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All N. Gulf Sites | | St. George Island | | St. Andrews | | Gulf State Park | | Buccaneer | | Fountainebleau | |
| | Rank | % | Rank | % | Rank | % | Rank | % | Rank | % | Rank | % |
| Developed Camping | 1 | 18.5 | 5 | 5.3 | 5 | 5.7 | 2 | 15.9 | 1 | 56.5 | 5 | 5.7 |
| Other Outdoor Swimming | 2 | 17.8 | 3 | 19.0 | 1 | 30.8 | 1 | 31.7 | 6 | 1.1 | 2 | 9.7 |
| Sunbathing | 3 | 13.0 | 1 | 21.3 | 2 | 30.2 | 3 | 11.1 | - | 0.0 | 16 | 0.7 |
| Picnicking | 4 | 11.5 | 8 | 2.2 | 10 | 1.5 | 11 | 1.2 | 3 | 15.3 | 1 | 38.0 |
| No Main Activity | 5 | 8.0 | 2 | 20.7 | 6 | 3.6 | 4 | 8.3 | 4 | 3.4 | 9 | 2.7 |
| Enjoying Outdoors | 6 | 5.7 | 4 | 16.8 | 7 | 3.6 | 6 | 5.2 | - | 0.0 | 10 | 2.0 |
| Pool Swimming | 7 | 3.9 | - | 0.0 | - | 0.0 | - | 0.0 | 2 | 16.7 | 13 | 1.0 |
| Saltwater Fishing | 8 | 3.5 | 6 | 3.6 | 4 | 6.3 | 5 | 7.1 | 8 | 0.8 | 20 | 0.3 |
| Family Gathering | 9 | 3.0 | 7 | 3.4 | 8 | 3.0 | 9 | 3.2 | 9 | 0.8 | 6 | 5.0 |
| Sightseeing | 10 | 2.3 | 9 | 1.7 | 9 | 2.1 | 7 | 3.6 | 7 | 1.1 | 7 | 3.3 |

*After the person interviewed indicated all the activities for which they participated, they were asked which, if any, was their main activity.

Table 12b. Ranking of the Top 15 Activities of Visitors of All Ages.

| Activities | Sites (Rank and Percent) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All N. Gulf Sites | | St. George Island | | St. Andrews | | Gulf State Park | | Buccaneer | | Fountainebleau | |
| | Rank | % | Rank | % | Rank | % | Rank | % | Rank | % | Rank | % |
| Picnicking | 1 | 66.3 | 3 | 57.1 | 4 | 46.4 | 4 | 49.4 | 2 | 58.2 | 1 | 94.0 |
| Other Outdoor Swimming | 2 | 56.8 | 1 | 63.1 | 2 | 97.3 | 1 | 78.8 | 4 | 31.2 | 2 | 40.3 |
| Sunbathing | 3 | 42.5 | 2 | 61.6 | 1 | 100.0 | 2 | 60.5 | 8 | 16.9 | 7 | 8.4 |
| Walking for Pleasure | 4 | 40.2 | 4 | 46.3 | 3 | 48.5 | 3 | 55.2 | 5 | 23.6 | 3 | 37.3 |
| Sightseeing | 5 | 30.4 | 5 | 36.1 | 5 | 43.7 | 5 | 45.9 | 6 | 2.3 | 6 | 19.1 |
| Developed Camping | 6 | 21.9 | 9 | 18.2 | 8 | 25.5 | 6 | 45.0 | 3 | 54.7 | 10 | 6.2 |
| Driving for Pleasure | 7 | 18.8 | 7 | 21.5 | 7 | 26.2 | 7 | 36.7 | 9 | 16.5 | 8 | 7.9 |
| Pool Swimming | 8 | 15.7 | 19 | 2.8 | 26 | 3.5 | 26 | 6.2 | 1 | 60.2 | 14 | 4.4 |
| Collecting Seashells, Berries, etc. | 9 | 14.6 | 6 | 27.0 | 9 | 25.5 | 9 | 21.6 | 16 | 6.0 | 15 | 4.3 |
| Other Outdoor Sports | 10 | 14.5 | 16 | 4.6 | 15 | 7.5 | 19 | 8.4 | 20 | 4.1 | 4 | 33.3 |
| Wildlife Observation | 11 | 12.5 | 10 | 15.3 | 10 | 22.6 | 12 | 17.7 | 10 | 11.8 | 16 | 4.1 |
| Photography | 12 | 10.6 | 13 | 8.0 | 11 | 20.9 | 10 | 20.6 | 12 | 8.8 | 17 | 4.0 |
| Saltwater Fishing | 13 | 8.8 | 11 | 10.5 | 12 | 16.9 | 14 | 16.2 | 13 | 8.6 | 25 | 0.9 |
| Bicycling | 14 | 8.5 | 20 | 2.6 | 19 | 6.1 | 11 | 19.9 | 7 | 19.5 | 23 | 1.6 |
| Hiking | 15 | 6.0 | 15 | 6.7 | 22 | 4.2 | 24 | 6.6 | 14 | 7.9 | 12 | 5.2 |

Table 13. Average Daily On-site Fees and Trip Expenditures Per Person.

| State/Site | On-site Fees ($) | % Interviewed That Paid Fees | Average Trip Expenditures Per Person |
|---|---|---|---|
| Florida | | | |
| St. George Island | 3.80 | 74.4 | 108 |
| St. Andrews | 5.99 | 77.3 | 177 |
| Alabama | | | |
| Gulf State Park | 13.29 | 85.3 | 118 |
| Mississippi | | | |
| Buccaneer | 8.86 | 55.0 | 190 |
| Louisiana | | | |
| Fountainebleau | 3.63 | 85.1 | 162 |

Table 14. Maximum Willingness- to-Pay For an Annual Vehicle Pass for the Interview Site Versus Any Site the Agency Manages.

| | Interview Site*($) | | | Any Site Agency Manages ($)** | | |
|---|---|---|---|---|---|---|
| State/Site | Mean | Std Error | N | Mean | Std. Error | N |
| Florida | | | | | | |
| St.George Island | 7.39 | 1.07 | 102 | 13.07 | 1.66 | 102 |
| St. Andrews | 11.09 | 1.61 | 76 | 14.63 | 1.87 | 76 |
| Alabama | | | | | | |
| Gulf State Park | 4.07 | 1.03 | 83 | 6.41 | 1.37 | 83 |
| Mississippi | | | | | | |
| Buccaneer | 5.94 | 1.55 | 125 | 7.30 | 1.39 | 125 |
| Louisiana | | | | | | |
| Fountainebleau | 8.00 | 1.29 | 63 | 14.97 | 2.20 | 63 |
| All Northern Gulf of Mexico Sites | 7.27 | 0.64 | 448 | 11.59 | 0.79 | 428 |

*Pass would admit all persons in the vehicle at the interview site only and is good for one year.
**Pass would admit all persons in the vehicle to any site the agency manages and is good for one year.

Table 15. Willingness- to-Pay Randomely Assigned Dollar Amounts - On-site Survey.

| State/Site | Dollars Per Person Per Day(Percent Yes)* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.00 | 2.00 | 5.00 | 7.50 | 10.00 | 12.50 | 15.00 | 25.00 | 50.00 | 75.00 |
| Florida | | | | | | | | | | |
| St. George Island | 82.2 | 92.5 | 35.7 | 29.7 | 17.5 | 6.9 | 16.1 | 0.0 | 0.0 | 3.7 |
| St. Andrews | 85.3 | 62.8 | 29.4 | 21.2 | 12.5 | 9.4 | 9.1 | 2.9 | 5.9 | 6.1 |
| Alabama | | | | | | | | | | |
| Gulf State Park | 85.7 | 51.7 | 22.6 | 16.7 | 14.8 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 |
| Mississippi | | | | | | | | | | |
| Buccaneer | 83.8 | 82.9 | 42.9 | 33.3 | 18.2 | 13.9 | 14.3 | 8.6 | 2.9 | 0.0 |
| Louisiana | | | | | | | | | | |
| Fountainebleau | 64.5 | 44.4 | 37.9 | 20.0 | 10.0 | 21.9 | 9.4 | 2.6 | 3.0 | 0.0 |
| All Northern Gulf of Mexico Sites | 80.3 | 66.9 | 33.7 | 24.2 | 14.6 | 10.4 | 10.6 | 2.8 | 2.4 | 2.0 |

*Toned areas show dollar amounts for which a majority (i.e., 50% or more) of those interviewed responded that they would pay the fee.

Table 16. Willingness- to-Pay For Annual Vehicle Pass to Site: Randomly Assigned Dollar Amounts - Mailback Survey.

| State/Site | Dollars Per Year Per Vehicle Pass (Percent Yes) | | | | | | | Number of Responses |
|---|---|---|---|---|---|---|---|---|
| | 1.00 | 5.00 | 10.00 | 15.00 | 25.00 | 50.00 | 100.00 | |
| Florida | | | | | | | | |
| St. George Island | 93.3 | 84.6 | 63.6 | 29.4 | 9.1 | 10.0 | 0.0 | 96 |
| St. Andrews | 100.0 | 55.6 | 64.3 | 50.0 | 22.2 | 0.0 | 0.0 | 74 |
| Alabama | | | | | | | | |
| Gulf State Park | 63.6 | 66.7 | 44.4 | 27.3 | 0.0 | 0.0 | 0.0 | 76 |
| Mississippi | | | | | | | | |
| Buccaneer | 53.9 | 35.0 | 25.0 | 7.7 | 18.2 | 5.3 | 5.3 | 122 |
| Louisiana | | | | | | | | |
| Fountainebleau | 88.9 | 33.3 | 45.5 | 20.0 | 25.0 | 25.0 | 0.0 | 58 |
| All Sites | 80.7 | 55.0 | 47.5 | 27.6 | 13.9 | 16.4 | 12.3 | 432 |

*Toned areas show dollar amount for which a majority (i.e., 50% or more) of those interviewed responded that they would buy the pass.

Table 17. Satisfaction Ratings for Recreation Experience at the Site.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 8.32 | .23 | 98 | 3.1 | 1.0 | 0.0 | 1.0 | 0.0 | 6.1 | 4.1 | 10.2 | 12.2 | 19.4 | 42.9 |
| St. Andrews | 7.88 | .27 | 74 | 2.7 | 0.0 | 1.4 | 1.4 | 4.1 | 6.8 | 1.4 | 13.5 | 20.3 | 20.3 | 28.4 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 7.69 | .22 | 74 | 0.0 | 0.0 | 0.0 | 0.0 | 4.1 | 14.9 | 8.1 | 13.5 | 23.0 | 13.5 | 23.0 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 7.44 | .20 | 121 | 2.5 | 0.0 | 0.8 | 3.3 | 0.8 | 12.4 | 4.1 | 19.0 | 26.5 | 8.3 | 22.3 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 6.24 | .26 | 59 | 0.0 | 1.7 | 1.7 | 6.8 | 6.8 | 22.0 | 11.9 | 15.3 | 23.7 | 8.5 | 1.7 |

Table 18. Satisfaction Ratings - Number of Other Visitors at the Site.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 6.23 | .34 | 98 | 11.2 | 2.0 | 3.1 | 9.2 | 1.0 | 12.2 | 9.2 | 6.1 | 13.3 | 8.2 | 24.5 |
| St. Andrews | 6.15 | .33 | 73 | 5.5 | 2.7 | 2.7 | 6.9 | 6.9 | 12.3 | 16.4 | 11.0 | 12.3 | 9.6 | 13.7 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 5.36 | .38 | 74 | 16.2 | 1.4 | 2.7 | 9.5 | 6.8 | 13.5 | 8.1 | 10.8 | 12.2 | 4.1 | 14.9 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 5.54 | .31 | 121 | 17.4 | 0.8 | 4.1 | 4.1 | 8.3 | 12.4 | 7.4 | 6.6 | 16.6 | 9.1 | 13.2 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 5.59 | .36 | 59 | 5.1 | 1.7 | 8.5 | 8.5 | 17.0 | 3.4 | 10.2 | 22.0 | 8.5 | 5.1 | 10.2 |

Table 19. Satisfaction Ratings on Cleanliness of Facilities.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 8.90 | .14 | 98 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 3.1 | 3.1 | 6.1 | 16.3 | 23.5 | 46.9 |
| St. Andrews | 7.40 | .28 | 73 | 1.4 | 1.4 | 4.1 | 4.1 | 1.4 | 6.9 | 6.9 | 8.2 | 28.8 | 20.6 | 16.4 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 7.86 | .26 | 74 | 1.4 | 0.0 | 2.7 | 2.7 | 1.4 | 8.1 | 5.4 | 5.4 | 28.4 | 16.2 | 28.4 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 8.19 | .18 | 121 | 1.7 | 0.0 | 0.0 | 0.0 | 2.5 | 6.6 | 5.0 | 11.6 | 24.0 | 13.2 | 35.5 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 6.56 | .33 | 59 | 0.0 | 3.4 | 1.7 | 8.5 | 8.5 | 13.6 | 13.6 | 8.5 | 11.9 | 18.7 | 11.9 |

Table 20. Satisfaction Ratings on Parking.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 9.24 | .13 | 98 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 3.1 | 1.0 | 4.1 | 11.2 | 15.3 | 64.3 |
| St. Andrews | 7.80 | .26 | 73 | 1.4 | 0.0 | 2.7 | 2.7 | 1.4 | 6.9 | 5.5 | 12.3 | 24.7 | 15.1 | 27.4 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 8.49 | .24 | 74 | 1.4 | 0.0 | 0.0 | 2.7 | 1.4 | 5.4 | 2.7 | 5.4 | 21.7 | 13.5 | 46.0 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 8.69 | .17 | 121 | 1.7 | 0.8 | 0.0 | 0.0 | 0.0 | 4.1 | 2.5 | 7.4 | 19.8 | 14.9 | 48.8 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 8.05 | .29 | 59 | 0.0 | 0.0 | 3.4 | 3.4 | 0.0 | 10.2 | 8.5 | 6.8 | 10.2 | 18.7 | 39.0 |

Table 21. Satisfaction Ratings on Water Quality.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 8.43 | .23 | 98 | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 4.1 | 10.2 | 10.2 | 15.3 | 50.0 |
| St. Andrews | 7.99 | .26 | 73 | 0.0 | 0.0 | 4.1 | 1.4 | 6.9 | 4.1 | 5.5 | 5.5 | 17.8 | 23.3 | 31.5 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 7.41 | .31 | 74 | 4.1 | 1.4 | 1.4 | 2.7 | 2.7 | 10.8 | 8.1 | 5.4 | 20.3 | 17.6 | 25.7 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 7.85 | .24 | 121 | 6.6 | 0.0 | 0.8 | 0.0 | 0.0 | 5.0 | 7.4 | 10.7 | 21.5 | 12.4 | 35.6 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 5.54 | .39 | 59 | 6.8 | 6.8 | 6.8 | 5.1 | 8.5 | 15.3 | 6.8 | 11.9 | 17.0 | 3.4 | 11.9 |

Table 22. Satisfaction Ratings on Overall Condition of the Site.

| State/Site | Mean | Standard Error | N | Rating (Percent) 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Florida | | | | | | | | | | | | | | |
| St. George Island | 8.59 | .19 | 98 | 2.0 | 0.0 | 1.0 | 0.0 | 1.0 | 2.0 | 3.1 | 8.2 | 20.4 | 18.4 | 43.9 |
| St. Andrews | 8.03 | .22 | 73 | 1.4 | 0.0 | 1.4 | 0.0 | 2.7 | 4.1 | 4.1 | 13.7 | 27.4 | 23.3 | 21.9 |
| Alabama | | | | | | | | | | | | | | |
| Gulf State Park | 7.70 | .26 | 74 | 1.4 | 1.4 | 1.4 | 1.4 | 2.7 | 9.5 | 5.4 | 10.8 | 21.6 | 23.0 | 21.6 |
| Mississippi | | | | | | | | | | | | | | |
| Buccaneer | 8.19 | .18 | 121 | 2.5 | 0.0 | 0.8 | 0.0 | 1.7 | 0.8 | 6.6 | 12.4 | 28.1 | 14.9 | 32.2 |
| Louisiana | | | | | | | | | | | | | | |
| Fountainebleau | 7.20 | .27 | 59 | 0.0 | 0.0 | 0.0 | 6.8 | 6.8 | 13.6 | 6.7 | 13.6 | 28.8 | 18.6 | 10.2 |

## APPENDIX

A. Site Profiles - NOAA Inventory of Public Recreation Areas and Facilities in Coastal Areas.

# NOAA INVENTORY OF PUBLIC OUTDOOR RECREATION AREAS AND FACILITIES IN COASTAL AREAS, FY 1984

SITE NAME: ST. GEORGE ISLAND STATE PARK

MANAGING AGENCY: FL PARKS & RECREATION

LATITUDE - LONGITUDE: 2939N08425W

1984 ACREAGE BY COASTAL COUNTY *

| COUNTY | ACRES |
|---|---|
| FRANKLIN | 1963 |

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## TYPE OF AREA

| | |
|---|---|
| ADJACENT TO OR INCLUDING A BODY OF WATER | YES |
| ADJACENT TO BODIES OF WATER UNDER TIDAL INFLUENCES | YES |
| ADJACENT TO OPEN OCEAN WATERS | YES |
| OFFSHORE | YES |
| ON BARRIER ISLAND | YES |
| ON OPEN OCEAN ISLAND | NO |
| ON ESTUARY/EMBAYMENT ISLAND | NO |
| ON UNCLASSIFIED ISLAND | NO |

## ACREAGE

| | LAND | WATER | TOTAL |
|---|---|---|---|
| 1984 | 1963 | 0 | 1963 |
| 1982 | 1963 | 0 | 1963 |
| 1977 | 1883 | 0 | 1883 |
| 1972 | 318 | 0 | 318 |

* 0 PERCENT OF THE 1984 ACREAGE IS IN NONCOASTAL COUNTIES.

## INVENTORY OF FACILITIES

| | | |
|---|---|---|
| ARTIFICIAL REEFS | 0 | # |
| FISHING PIERS | 0 | # |
| BOAT RAMPS | 3 | # |
| BOAT SLIPS | 0 | # |
| BOAT DOCKS (WITHOUT SLIPS) | 1 | # |
| CAMPSITES (RV AND TENT) | 60 | # |
| RECREATIONAL SHELLFISH BEDS | B | ACRES |
| HUNTING/GAME MANAGEMENT AREA | 0 | ACRES |
| CONSERVATION/SCENIC AREA | 0 | ACRES |
| BEACH | 73920 | LINEAR FT |
| TRAILS | 3 | MILES |
| OUTDOOR SWIMMING POOLS | 0 | # |
| PICNIC TABLES | 147 | # |
| GOLF COURSES | 0 | # |
| DRIVING RANGES | 0 | # |
| OUTDOOR COURTS | 0 | # |
| FIELD SPORT AREAS | 0 | # |
| PARKING SPACES AT HISTORICAL/CULTURAL SITES | 0 | # |
| PARKING SPACES AT ALL OTHER SITES | . | # |

## BUDGET & PERSONNEL

| | EXPENDITURES | | REVENUE | PERSONNEL |
|---|---|---|---|---|
| | CAPITAL ($) | OPERATING ($) | $ | (FTE) |
| 1984 | 338131 | 232023 | 52231 | 10.0 |
| 1982 | 47344 | 203934 | 37114 | 11.0 |
| 1977 | B | B | 0 | 11.0 |
| 1972 | B | B | 0 | B |

## USER DAYS - ATTENDANCE

| | |
|---|---|
| 1984 | 107632 |
| 1982 | 75377 |
| 1977 | B |
| 1972 | B |

## MISSING INFORMATION CODES

A = SITE DID NOT EXIST
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E = AGENCY LOST RECORDS
F = SATELITTE PARK - DATA IN OTHER PARK
G = LATTITUDE - LONGITUDE NOT FOUND

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# NOAA INVENTORY OF PUBLIC OUTDOOR RECREATION AREAS AND FACILITIES IN COASTAL AREAS, FY 1984

SITE NAME: ST. ANDREWS STATE RECREATION AREA

MANAGING AGENCY: FL PARKS & RECREATION

LATITUDE - LONGITUDE: 3007N08541W

1984 ACREAGE BY COASTAL COUNTY *

| COUNTY | ACRES |
|---|---|
| BAY | 1080 |

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## TYPE OF AREA

| | |
|---|---|
| ADJACENT TO OR INCLUDING A BODY OF WATER | YES |
| ADJACENT TO BODIES OF WATER UNDER TIDAL INFLUENCES | YES |
| ADJACENT TO OPEN OCEAN WATERS | YES |
| OFFSHORE | YES |
| ON BARRIER ISLAND | YES |
| ON OPEN OCEAN ISLAND | NO |
| ON ESTUARY/EMBAYMENT ISLAND | NO |
| ON UNCLASSIFIED ISLAND | NO |

## ACREAGE

| | LAND | WATER | TOTAL |
|---|---|---|---|
| 1984 | 1080 | 0 | 1080 |
| 1982 | 1906 | 0 | 1906 |
| 1977 | 1906 | 0 | 1906 |
| 1972 | 1906 | 0 | 1906 |

* 0 PERCENT OF THE 1984 ACREAGE IS IN NONCOASTAL COUNTIES.

## INVENTORY OF FACILITIES

| | | |
|---|---|---|
| ARTIFICIAL REEFS | 0 | # |
| FISHING PIERS | 1 | # |
| BOAT RAMPS | 2 | # |
| BOAT SLIPS | 0 | # |
| BOAT DOCKS (WITHOUT SLIPS) | 0 | # |
| CAMPSITES (RV AND TENT) | 178 | # |
| RECREATIONAL SHELLFISH BEDS | B | ACRES |
| HUNTING/GAME MANAGEMENT AREA | 0 | ACRES |
| CONSERVATION/SCENIC AREA | 0 | ACRES |
| BEACH | 14750 | LINEAR FT |
| TRAILS | 1 | MILES |
| OUTDOOR SWIMMING POOLS | 0 | # |
| PICNIC TABLES | 97 | # |
| GOLF COURSES | 0 | # |
| DRIVING RANGES | 0 | # |
| OUTDOOR COURTS | 0 | # |
| FIELD SPORT AREAS | 4 | # |
| PARKING SPACES AT HISTORICAL/CULTURAL SITES | B | # |
| PARKING SPACES AT ALL OTHER SITES | . | # |

## BUDGET & PERSONNEL

| | EXPENDITURES | | REVENUE | PERSONNEL |
|---|---|---|---|---|
| | CAPITAL ($) | OPERATING ($) | $ | (FTE) |
| 1984 | 113383 | 412544 | 534342 | 16.0 |
| 1982 | 75885 | 353709 | 464064 | 16.0 |
| 1977 | B | B | 227257 | 13.0 |
| 1972 | B | B | B | B |

## USER DAYS - ATTENDANCE

| | |
|---|---|
| 1984 | 569514 |
| 1982 | 553591 |
| 1977 | 496526 |
| 1972 | 480345 |

## MISSING INFORMATION CODES

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G = LATTITUDE - LONGITUDE NOT FOUND

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# NOAA INVENTORY OF PUBLIC OUTDOOR RECREATION AREAS AND FACILITIES IN COASTAL AREAS, FY 1984

SITE NAME: GULF STATE PARK

MANAGING AGENCY: AL STATE PARKS

LATITUDE - LONGITUDE: 3015N08738W

1984 ACREAGE BY COASTAL COUNTY *

| COUNTY | ACRES |
|---|---|
| BALDWIN | 6150 |

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## TYPE OF AREA

| | |
|---|---|
| ADJACENT TO OR INCLUDING A BODY OF WATER | YES |
| ADJACENT TO BODIES OF WATER UNDER TIDAL INFLUENCES | YES |
| ADJACENT TO OPEN OCEAN WATERS | YES |
| OFFSHORE | NO |
| ON BARRIER ISLAND | NO |
| ON OPEN OCEAN ISLAND | NO |
| ON ESTUARY/EMBAYMENT ISLAND | NO |
| ON UNCLASSIFIED ISLAND | NO |

## ACREAGE

| | LAND | WATER | TOTAL |
|---|---|---|---|
| 1984 | 4950 | 1200 | 6150 |
| 1982 | 4950 | 1200 | 6150 |
| 1977 | 4950 | 1200 | 6150 |
| 1972 | 3750 | 1200 | 4950 |

* 0 PERCENT OF THE 1984 ACREAGE IS IN NONCOASTAL COUNTIES.

## INVENTORY OF FACILITIES

| | | |
|---|---|---|
| ARTIFICIAL REEFS | 4 | # |
| FISHING PIERS | 1 | # |
| BOAT RAMPS | 8 | # |
| BOAT SLIPS | 12 | # |
| BOAT DOCKS (WITHOUT SLIPS) | 0 | # |
| CAMPSITES (RV AND TENT) | 468 | # |
| RECREATIONAL SHELLFISH BEDS | 0 | ACRES |
| HUNTING/GAME MANAGEMENT AREA | 0 | ACRES |
| CONSERVATION/SCENIC AREA | 2000 | ACRES |
| BEACH | 26400 | LINEAR FT |
| TRAILS | 1 | MILES |
| OUTDOOR SWIMMING POOLS | 2 | # |
| PICNIC TABLES | 192 | # |
| GOLF COURSES | 1 | # |
| DRIVING RANGES | 1 | # |
| OUTDOOR COURTS | 6 | # |
| FIELD SPORT AREAS | 0 | # |
| PARKING SPACES AT HISTORICAL/CULTURAL SITES | 0 | # |
| PARKING SPACES AT ALL OTHER SITES | 252 | # |

## BUDGET & PERSONNEL

| | EXPENDITURES | | REVENUE | PERSONNEL |
|---|---|---|---|---|
| | CAPITAL ($) | OPERATING ($) | $ | (FTE) |
| 1984 | 14359 | 2411846 | 2338046 | 39.0 |
| 1982 | 170000 | 1762179 | 1963907 | 41.0 |
| 1977 | 0 | 1246621 | 1439014 | B |
| 1972 | 400000 | 375387 | 314148 | B |

## USER DAYS - ATTENDANCE

| | |
|---|---|
| 1984 | 2248885 |
| 1982 | 1475984 |
| 1977 | 3380704 |
| 1972 | 2138720 |

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# NOAA INVENTORY OF PUBLIC OUTDOOR RECREATION AREAS AND FACILITIES IN COASTAL AREAS, FY 1984

SITE NAME: BUCCANEER STATE PARK

MANAGING AGENCY: MS RECREATION & PARKS

LATITUDE - LONGITUDE: 3020N08927W

1984 ACREAGE BY COASTAL COUNTY *

| COUNTY | ACRES |
|---|---|
| HANCOCK | 398 |

**********

## TYPE OF AREA

| | |
|---|---|
| ADJACENT TO OR INCLUDING A BODY OF WATER | YES |
| ADJACENT TO BODIES OF WATER UNDER TIDAL INFLUENCES | YES |
| ADJACENT TO OPEN OCEAN WATERS | YES |
| OFFSHORE | NO |
| ON BARRIER ISLAND | NO |
| ON OPEN OCEAN ISLAND | NO |
| ON ESTUARY/EMBAYMENT ISLAND | NO |
| ON UNCLASSIFIED ISLAND | NO |

## ACREAGE

| | LAND | WATER | TOTAL |
|---|---|---|---|
| 1984 | 225 | 173 | 398 |
| 1982 | 225 | 173 | 398 |
| 1977 | 225 | 173 | 398 |
| 1972 | 225 | 173 | 398 |

* 0 PERCENT OF THE 1984 ACREAGE IS IN NONCOASTAL COUNTIES.

## INVENTORY OF FACILITIES

| | | |
|---|---|---|
| ARTIFICIAL REEFS | 0 | # |
| FISHING PIERS | 0 | # |
| BOAT RAMPS | 0 | # |
| BOAT SLIPS | 0 | # |
| BOAT DOCKS (WITHOUT SLIPS) | 0 | # |
| CAMPSITES (RV AND TENT) | 149 | # |
| RECREATIONAL SHELLFISH BEDS | 0 | ACRES |
| HUNTING/GAME MANAGEMENT AREA | 0 | ACRES |
| CONSERVATION/SCENIC AREA | 173 | ACRES |
| BEACH | 5600 | LINEAR FT |
| TRAILS | 1 | MILES |
| OUTDOOR SWIMMING POOLS | 2 | # |
| PICNIC TABLES | 300 | # |
| GOLF COURSES | 0 | # |
| DRIVING RANGES | 0 | # |
| OUTDOOR COURTS | 4 | # |
| FIELD SPORT AREAS | 3 | # |
| PARKING SPACES AT HISTORICAL/CULTURAL SITES | 0 | # |
| PARKING SPACES AT ALL OTHER SITES | 575 | # |

## BUDGET & PERSONNEL

| | EXPENDITURES | | REVENUE | PERSONNEL |
|---|---|---|---|---|
| | CAPITAL ($) | OPERATING ($) | $ | (FTE) |
| 1984 | 0 | 336946 | 227693 | 21.0 |
| 1982 | 355003 | 295114 | 187884 | 21.0 |
| 1977 | 0 | B | 80511 | B |
| 1972 | B | B | 0 | B |

## USER DAYS - ATTENDANCE

| | |
|---|---|
| 1984 | 453297 |
| 1982 | 509943 |
| 1977 | B |
| 1972 | B |

## MISSING INFORMATION CODES

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# NOAA INVENTORY OF PUBLIC OUTDOOR RECREATION AREAS AND FACILITIES IN COASTAL AREAS, FY 1984

SITE NAME: FONTAINEBLEAU STATE PARK

MANAGING AGENCY: LA OFFICE OF STATE PARKS

LATITUDE - LONGITUDE: 3020N09001W

1984 ACREAGE BY COASTAL COUNTY *

| COUNTY | ACRES |
|---|---|
| ST. TAMMANY | 2809 |

**********

## TYPE OF AREA

| | |
|---|---|
| ADJACENT TO OR INCLUDING A BODY OF WATER | YES |
| ADJACENT TO BODIES OF WATER UNDER TIDAL INFLUENCES | YES |
| ADJACENT TO OPEN OCEAN WATERS | NO |
| OFFSHORE | NO |
| ON BARRIER ISLAND | NO |
| ON OPEN OCEAN ISLAND | NO |
| ON ESTUARY/EMBAYMENT ISLAND | NO |
| ON UNCLASSIFIED ISLAND | NO |

## ACREAGE

| | LAND | WATER | TOTAL |
|---|---|---|---|
| 1984 | 2809 | 0 | 2809 |
| 1982 | 2809 | 0 | 2809 |
| 1977 | 2809 | 0 | 2809 |
| 1972 | 2809 | 0 | 2809 |

* 0 PERCENT OF THE 1984 ACREAGE IS IN NONCOASTAL COUNTIES.

## INVENTORY OF FACILITIES

| | | |
|---|---|---|
| ARTIFICIAL REEFS | 0 | # |
| FISHING PIERS | 0 | # |
| BOAT RAMPS | 0 | # |
| BOAT SLIPS | 0 | # |
| BOAT DOCKS (WITHOUT SLIPS) | 0 | # |
| CAMPSITES (RV AND TENT) | 250 | # |
| RECREATIONAL SHELLFISH BEDS | 0 | ACRES |
| HUNTING/GAME MANAGEMENT AREA | 0 | ACRES |
| CONSERVATION/SCENIC AREA | 0 | ACRES |
| BEACH | 500 | LINEAR FT |
| TRAILS | 1 | MILES |
| OUTDOOR SWIMMING POOLS | 2 | # |
| PICNIC TABLES | 245 | # |
| GOLF COURSES | 0 | # |
| DRIVING RANGES | 0 | # |
| OUTDOOR COURTS | 0 | # |
| FIELD SPORT AREAS | 0 | # |
| PARKING SPACES AT HISTORICAL/CULTURAL SITES | 0 | # |
| PARKING SPACES AT ALL OTHER SITES | 150 | # |

## BUDGET & PERSONNEL

| | EXPENDITURES | | REVENUE | PERSONNEL |
|---|---|---|---|---|
| | CAPITAL ($) | OPERATING ($) | $ | (FTE) |
| 1984 | . | 401201 | 124630 | 21.0 |
| 1982 | 200000 | 90902 | 94219 | 22.0 |
| 1977 | 490000 | D | D | 15.0 |
| 1972 | D | D | D | 15.0 |

## USER DAYS - ATTENDANCE

| | |
|---|---|
| 1984 | 469321 |
| 1982 | 210351 |
| 1977 | 237530 |
| 1972 | 486109 |

## MISSING INFORMATION CODES

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# List of Publications


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