Puerto Rico Coral Reef Ecosystem Valuation

Visitor Profiles: Reef Users

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Puerto Rico







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Funding Partners

NOAA/NOS/ONMS

Office of National Marine Sanctuaries National Ocean Service National Oceanic and Atmospheric Administration

U.S. Environmental Protection Agency Office of Research and Development

Working Partners

ONMS/CSD

- Project leadership
- Develop survey & sample designs
- Provide economic analysis
- Produce reports

Ridge-to-Reefs

Conduct sweepstakes lottery

University of Puerto Rico/ Sea Grant

- Conduct all surveys
- Data entry
- Project management

Puerto Rico Tourism

Provide airport enplanement

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Foreword

We are fortunate to be able to drop into the remarkable world of coral reefs, diving through crystal blue water into forests of branching corals, swaying sea fans and schools of brightly colored reef fish. It is a truly unique and exhilarating experience. This underwater world provides other benefits as well - beautiful white sandy beaches, protection from stormy seas, and delectable seafood. But this vibrant beauty, along with its ecosystem benefits, is under constant threat and continued decline. Year after year since the 1970's, chronic declines and event-driven losses of coral ecosystems have been documented around the globe. The causes vary, but most declines are linked to high-temperature events that can be aggravated by local pressures such as overfishing or sediment and pollutants in terrestrial runoff. To protect reef systems, or even to stem the ongoing deterioration, requires commitment and urgent action to reduce anthropogenic stresses. But such actions will be taken only when decision-makers are clearly aware of the value of coral reefs to economy and society. Healthy coral reef ecosystems are essential to economic benefits from fisheries, tourism, marine biodiversity, natural products discovery and shoreline protection, as well as cultural benefits like aesthetics, art and stewardship. As reefs have declined, so have the benefits they provide. This is a fact that decision-makers must recognize to properly weight their decisions affecting coral reefs.

Placing value on an ecosystem is not a trivial task. Whereas some of the benefits of an ecosystem have economic components determined in the marketplace, such as the value of fish landings, others are not valued through market pricing. In fact, many highly-valued environmental goods and services, such as clean air and water or healthy fish and wildlife populations, are not traded in markets. To estimate non-market value requires approaches that determine how much people would be willing to pay for a particular attribute or characteristic. The six reports presented in this series document a non-market valuation of reef attributes assembled from survey responses of reef-visitors in Puerto Rico. The importance of this survey is to characterize the value of reefs so that individuals and organizations can be fully aware of the consequences of decisions, large and small, that affect coral reefs. Wanting to protect coral reefs, to preserve their unique beauty, is not sufficient; knowing why they should be protected imparts a stronger argument for ensuring their survival.

William S. Fisher, Associate Director for Ecology National Health and Environmental Effects Research Laboratory Office of Research and Development U.S. Environmental Protection Agency

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Funding Partners. A special thank you goes to Pat Bradley (now retired) from the U.S. EPA's Atlantic Ecology Division who got NOAA's Office of National Marine Sanctuaries (ONMS) to agree to have me lead this study. Moreover, to Dan Basta, former Director of ONMS (now retired), for agreeing to allow me to lead the project even though, we currently do not have a national marine Sanctuary in Puerto Rico. We would also like to thank Mitchell Tartt, Chief of the ONMS Conservation Science Division for his continued support of the project. In addition, we would also like to thank the rest of the U.S. EPA team involved in the project. Bill Fisher provided leadership as Director of the Gulf Ecology Division in providing the support of many in his staff. Bill was in charge of the development of a decision-support tool for the Guanica Bay Watershed Restoration Management Plan for which the recreation-tourism was a key component. Bill provided the funding for this effort and organized webinars on different components of the decision-support tool. Debbie Santavy and Susan Yee provided data and interpretation of the EPA/NOAA monitoring data on coral reef ecosystem attributes that were critical to our valuation effort. Debbie also provided maps for the different regions used in the surveys. Evelyn Huertas of EPA's Region 2 Caribbean Environmental Protection Division provided local coordination. Matt Weber at EPA's Western Ecology Division provided key technical advice in the survey's optimal design and economic valuation methods. Marisa Mazzotta from EPA's Atlantic Ecology Division provided review/advise on our economic valuation methods. Lenore Connell provided key administrative support in the EPA/NOAA Inter-agency Agreement and its amendments to conduct the project.

Working Partners. The major working partners were the University of Puerto Rico-Mayaguez and the Sea Grant Office located there. They were in charge of conducting all the surveys under contract to ONMS. When the project first got underway, Manuel Valdez Pizzini was the Project Lead, but early on was promoted to Dean and Ruperto Chaparro, Director of Puerto Rico Sea Grant Extension took over. Ruperto Chaparro, known locally as Chapa, was key to opening doors with the local community. It seems everyone on the island knows and respects Chapa and if Chapa endorses you, people will work with you, which for this kind of project is extremely valuable. Miguel del Pozo was the original Project Manager and conducted the focus groups and one-on-ones used to design the visitor survey questionnaires. After completing that task, Miguel left the University and we hired Glenis Padilla Plaza as the Project Manager. Glenis did a great job recruiting and training the many students that were used to implement the surveys and ensured good working relationships with all the organizations, especially Aerostar at the San Juan Airport. Glenis was also responsible for delivery of all survey data and documentation. Yullisa Garcia Lugo of Puerto Rico Sea Grant provided contract support. Daniel Irizari Oquendo did a great job in developing the illustrations of coral reef ecosystem conditions used in the survey. Michel Schare of Puerto Rico Sea Grant Extension provided local coordination with the business community as did Rafael Boglio, Coordinator of Interdisciplinary Center for Coastal Studies.

Puerto Rico Tourism was another key working partner. Rafael Silvestrini provided the airport enplanement data critical to designing the airport surveys and for extrapolating airport survey sample estimates to population estimates. Rafael also shared Puerto Rico Tourism's past survey results so we could compare coral reef users with the general visitor population. In planning the study Michelle Bauza, Carolina Morales, Edgardo Afanador, Milda I. Luhring Gonzalez, Nilda Diaz Hiraldo and Naireisa Gines all provided their experience and guidance in visitor surveys.

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A key element of this project was the survey at the San Juan Airport. We could not have accomplished our survey objectives without the support of Jamie Paban of Aerostar. Jamie got our students interviewers through security clearance and provided parking at the airport for the students, and most importantly ensured the airlines that our students were approved to conduct the surveys at the gate waiting areas. So a special thank you to Jamie for the support.

Other Project Support

Many other government agencies, NGO's, businesses and business leaders provided project support. The Department of Natural and Environmental Resources pf Puerto Rico (DNER) attended several meetings with us to hear about our project and offer advice on the types of information that would be useful to their agency. Meeting participants included Ernesto Diaz, Director of Coastal Zone Management Program, Craig Lilyestrom, Director of Marine Resources Division, Damaris Delgado, Director, Bureau of Coasts, Reserves & Refuges, Nilda Jimenez Marrero, Coordinator of Coral Reef Committee, Astrid J. Green Caceres of Public Outreach, Israel Umpierre, Assistant to the Secretary and Miguel Canals Sr. (Menqui), Guanica Dry Forest.

From the San Juan Bay Estuary Program, Jorge Bauza, Ernesto M. Olivares and Roberto C. Morales shared their thoughts with us. From the Puerto Rico Port Authority, Ivelisse Lorenzo, Jorge Bairun Benitez and Alfredo Montanez provided guidance. From Puerto Rico Conservation Trust, Soledad Gaztambide and Fernando Lloveras consulted with us. From the U.S. fish and Wildlife Service, Ana M. roman and Gisella Burgos shared their past survey efforts and advice for on-site surveys.

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Student Interns

Finally, we would like to thank the many student interns that have come to Silver Spring, MD from several universities to assist us. Their work was critical to us getting data entry, quality analysis/quality control (QA/QC) of the databases, analysis and report writing. I hope that we provided them a valuable experience. We have made all of them co-authors of our reports so they leave with something on their resumes. Paul Conant, Ph.D. candidate at the University of Connecticut did the data entry, QA/QC, analysis and report writing for the non-market economic valuation report. Sarah Hughes from Roanoke

College and John Vaugh from the College of William and Mary, entered all the data from the airport surveys, conducted QA/QC of the databases, developed tables & graphs and wrote first drafts of sections of the Socioeconomic Profiles report. DeMyra Harris developed tables & figures and wrote sections for the Importance-Satisfaction report. Chase Data also developed tables and wrote sections for the Economic Contributions report.

Preface

This report is part of a six volume series on the socioeconomics of visitor use of Puerto Rico's coral reef ecosystems. The project was sponsored and funded by the U.S. Environmental Protection Agency (EPA), Office of Research and Development. EPA is developing a decision-support tool to evaluate restoration alternatives in the Restoration Management Plan for the Guanica Bay Watershed in southwest Puerto Rico. Several teams were in charge of different ecosystem services (benefits humans receive from coral reef ecosystems). Ecosystem services for coral reef included recreation-tourism, food supply (commercial fishing and consumptive motive of recreational fishing), ornamentals (aquarium trade), pharmaceuticals, and property values from storm protection. Although the EPA decision-support tool was limited to the coral reefs off southwest Puerto Rico, public scoping determined that for recreation-tourism information was need for the entire island's coral reef ecosystems, so this study covers all of Puerto Rico, but due to costs, this study was limited to visitor use of Puerto Rico's coral reef ecosystems. Future studies will address resident's use of Puerto Rico's coral reefs.

This report presents a socioeconomic profile of reef using visitors to Puerto Rico. Estimates are presented on the total amount of visitation measured in person-trips (visits) and intensity of visitation measured in person-days. The concepts of person-trips and person-days are defined and as with many measurements, separate estimates are provided by season (summer and winter). Extensive profiles are presented on activity participation for reef using activities and non-reef using activities for reef using visitors. An extensive set of appendix tables provides details by activity type, region and season. Puerto Rico was divided into five regions for estimation of activity use. Intensity of use is measured in person-days for selected reef using activities by region and season.

The profiles presented in this report also include demographic profiles of the reef using visitors. Place of primary residence (country and within the U.S. the state) age, sex, race, ethnicity, and household income of the survey respondent are provided. Additional items include party size, second home ownership in Puerto Rico, length of stay, number of annual trips to Puerto Rico, number of days annually spent in Puerto Rico and numbers of nights spent in each region of Puerto Rico on the interview trip.

Expenditure profiles are also presented in this report. Here we present the average expenditure by spending category per person per trip and per person per day. These expenditures are used in another report on the economic contribution/impact these expenditures have on the Puerto Rican economy in terms of output/sales, value-added (gross regional product), income and employment, including multiplier or "ripple effects".

The final section of this report addresses special issues identified through public scoping of the project. Special issues included private boats visitors keep in Puerto Rico, likelihood of return visits, cruise ship visits and their influence on making a non-cruise ship visit, visitor's preferences for the level of development, and visitor level of support for different natural resource management issues.

The second volume in the six volume series addresses the economic contribution/impact of visitor reef user's expenditures in Puerto Rico on the Puerto Rican economy. Volume 3 addresses importance-satisfaction ratings by reef using visitors on 25 natural resource attributes, facilities and services. Volume 4 is a technical appendix detailing the methods used in sampling and estimation for items presented in volumes one through three.

Volumes 5 and 6 are fundamental to the EPA decision support tool. These reports address the non-market economic values of the coral reef ecosystems. Non-market economic values are the value people receive when consuming a good or service over and above what they pay to get the good or service. Economists refer to this as "consumer's surplus. These are the appropriate values to include in damage assessments when suing responsible parties for damages to coral reefs and in public investments to protect and/or restore coral reef ecosystems. The attributes approach to valuation is used valuing changes in the condition of coral reef ecosystem attributes (e.g. coral cover, coral diversity, fish abundance and diversity, water clarity, and the opportunity to see large wildlife). Volume 5 presents results for example scenarios using estimated models, while Volume 6 is the Technical Appendix detailing the methods used in survey sampling and economic value estimation.

Here in volume 1, we present short summaries by topic area with detail in appendix tables. One can think of this report as a statistical abstract for visitor coral reef use in Puerto Rico.

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Chapter 1

1. Sampling Methodologies & Estimation Methods

Survey Sampling Methods.

The overall project had many objectives requiring the use of multiple samples and sub-samples of reef using visitors. Sample 1 was the airport survey and it had an on-site survey conducted at the San Juan airport. It was determined early in the project that the flights at the other airports were not significant for reef using visitors. Because the on-site survey at airports requires short surveys due to the limited time people can devote to surveys while waiting for their flights, two mailback surveys were designed to get information that is more detailed on their expenditures and importance-satisfaction ratings for 25 natural resource attributes, facilities and services. Sample 2 is called the "CUSTOMER Survey" and is a longer survey averaging 15 to 20 minutes conducted at various sites (e.g. dive shops, marinas, charter fishing, hotels and coastal parks).

The CUSTOMER Survey obtains details on the number of days and dives for reef using activities in the five regions of Puerto Rico by season (summer and winter). Figure 1.1 details all the objectives achieved from each sample and sub-sample.

Airport Survey.

Separate samples were done for the summer (May – October 2016) and the winter (November 2016 – April 2017). In the summer, 364 on-site surveys were completed, while in the winter 1,659 on-site surveys were completed. The mailbacks were not ready for implementation in the summer season by the University of Puerto Rico. Student recruitment was also limited in the summer resulting in smaller sample sizes than planned. The winter survey actually included October 2016 and May 2017, so some of the mailbacks represent summer season visitors. The October 2016 and May 2017 interviews were assigned to the summer season. However, there were not enough summer season mailback surveys completed to develop separate estimates of spending and importance-satisfaction ratings. Summer season observations are weighted in presenting annual profiles from these survey components (Table 1.1).

Customer Survey.

As with the airport surveys, the University of Puerto Rico was slow to get started and the CUSTOMER Survey was limited to 200 on-site survey completed, while the target sample size for the winter of 750 was achieved (actually 776 completed, Table 1.2). Again, the winter survey included October 2016 and May 2017 and these interviews were assigned to the

summer season for estimation. In this report, the estimates of average number of days and dives for reef using activities was estimated by season and region using the data from the this component of the survey. Nonmarket values of the coral reef use will be presented in Volumes 5 and 6 of this series of reports.

Much more detail on the sampling methodologies, sample weighting, analyses of non-response bias for the mailback components are presented in Volume 4 the Technical Appendix covering the estimation of all items in Volumes 1 to 3. Appendices in Volume 4 include the questionnaires and survey support materials used in the surveys.

Table 1.1 Number of Completed Questionnaires by Season: Airport Visitors

Season	Number Completed
Summer 2016	200
Winter 2017	776
Total	976

Table 1.2 Number of Completed Questionnaires by Season: Customer

 Survey

	Summer			Winter	
	Satisfaction	Expenditure		Satisfaction	Expenditure
On-site	Mailback	Mailback	On-site	Mailback	Mailback
364	17	13	1,659	158	159

Objectives

- Estimate participation and person-trips and person-days to Puerto Rico for reef use activity by region and season
- Develop profiles of reef using visitors (age, race, sex, income, place of residence)
- Provide information on importance/satisfaction attitudes and perceptions about facilities and natural resources
- Spending Profiles and contribution to Puerto Rican economy
- Importance-satisfaction ratings of facilities and natural resource attributes

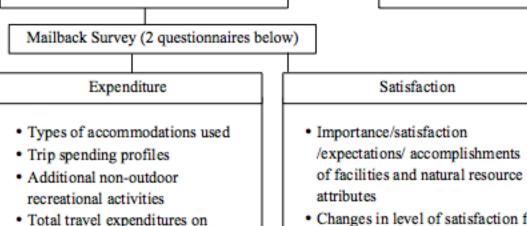
Survey of Air Passengers

On-Site

- Number of reef using visitors as a percent of total visitors
- General activity participation by region and season

current trip

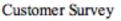
Demographic profiles of reef users



- Changes in level of satisfaction for repeat visitors
- Special issue questions

Objectives

- Estimate intensity of reef use in terms of number of days and dives
- Provide information to estimate the willingness to pay for coral reef attributes and conditions



On-Site

- Reef use number of days and dives by activity, region and season
- Willingness to pay for changes in coral reef attribute condition

Figure 1.1 Puerto Rico Coral Reef Ecosystem Valuation: Visitor Reef Users

Chapter 2

2. Profiles of Reef Using Visitors

Number of Person-trips (Visits) and Person-days.

The sampling designed used in Puerto Rico at the airport allowed for the estimated of the number of person-trips to Puerto Rico by non-residents. The number of person-trips is synonymous with the number of visits. However, the number of person-trips is different from the number of visitors and the number of person-days.

Concept of a Person-Trip.

Each time a person visits Puerto Rico that is considered a person-trip. If a person travels to Puerto Rico once in the spring and once in the fall, then that is considered two visits or two person-trips. The two terms are interchangeable.

Number of Visitors.

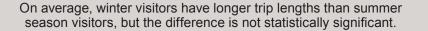
The number of visitors is distinctly different than the number of person-trips or visits. Although, the two number could be equivalent, often times they are not. First, let's consider when the number of visitors would be equal to the number of person-trips. If a person only makes one trip during the period of estimation, then the two measurements would be identically. However, if a person makes five trips during the period of estimation. Than that would be one visitor/person with a total of five person-trips or visits.

The number of person-trips was calculated for all visitors and a subcategory of all visitors; reef using visitors. The total number of trips made to Puerto Rico by visitors from the summer of 2016 1,669,934 person-trips and in the winter season there were 1,738,979 person-trips. Across both season, 3,453,913 person-trips were made to the Island. Looking specifically at reef users, 843,651 person**Table 2.1** All Visitors and Reef Using Visitors by Season to Puerto Rico

 Year 2016-2017

Type of Visitor	Summer	Winter	Annual
All Recreating Visitors	1,669,934	1,783,979	3,453,913
Reef Using Visitors	843,651	327,717	1,171,368
Total Air Enplanement			
Passengers ¹	2,244,535	2,374,207	4,618,742
% of Passengers-Recreating Visitors	74.40	75.14	74.78
% of Passengers-Reef Using Visitors	37.59	13.80	25.36
% of All Recreating Visitors - Reef Using Visitors	50.52	18.37	33.91

1. Air enplanements include all people who get on planes leaving Puerto Rico, so it includes residents traveling, those on business travel, people passing through who just go on the cruise ships, and recreating visitors. Surveys were done to estimate the percent of passengers that were visitors who did recreation activities and those who did reef using activities.



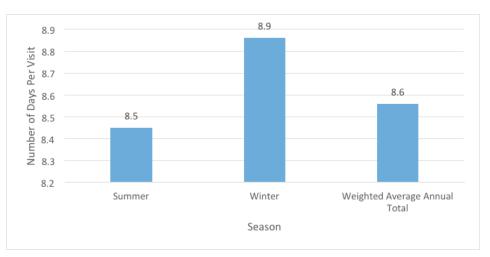


Figure 2.1 Average Length of Stay by Season

Table 2.2 Number of Person-Days by Reef Using Visitors by Season

Reef Using Visitors	Summer	Winter	Annual Total
Person-days	7,128,851	2,903,573	10,032,424

trips were made in the summer and 327,717 in the winter season. A total of 1,171,368 reef using trips were made between the summer and winter. Of all the trips made in the summer, 50.5% were reef using visitors and 18.5% of winter trips were reef using visitors.

Concept of Person-Days.

Another useful measurement is person-days. The length of a visit varies in days across visitors. If the trip is only a day, then the concept of person-day and person-trip is identical. However, given the geographic location of Puerto Rico, it is unlikely that in this application they would be identical. If a person makes a trip to Puerto Rico and they stay for five days, this would be one person-trip with five person-days. Person-days were only calculated for reef using visitors. Visitors to Puerto Rico that did not engage in reef activities were not interviewed for the length of their trips. In total, there were 10,032,424 person-days and the average length of each person-trip was 8.6 days.

Summer (May-October 2016).

The summer season for Puerto Rico starts in May and ends in October. In the summer there were 7,128,851 person-days. The average length of each stay in the summer was 8.5 days.

Winter (November 2016- April 2017).

The winter tourism season begins in November and concludes in April of the following year. In the winter season there were 2,903,573 persondays of visitation. The average length of each stay in the winter was 8.9 days.

Regional Visitation.

Visitation was also analyzed by the regions that each respondent could have visited. Figure 2.3 below shows the geographical boundaries of each of the five regions analyzed. Region 4 of Puerto Rico had the highest number of visitors.

On an average day, there are significantly more reef-using visitors in Puerto Rico in the summer season than in the winter season.

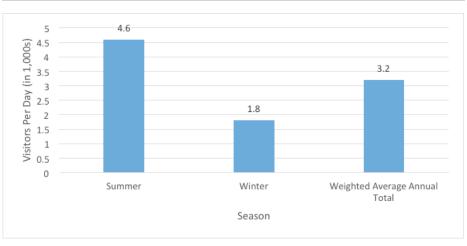


Figure 2.2 Average Number of Reef Visitors in Puerto Rico Per Day by Seasons

Table 2.3 Region	Visitation	by Season
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	Summer		Winter		Annual	
Regions Visited	Number of Visi- tors	Participa- tion Rate (%) ¹	Number of Visi- tors	Participa- tion Rate (%) ¹	Number of Visitors	Participa- tion Rate (%) ¹
Region 1-NW	124,855	14.80	48,568	14.82	173,423	14.81
Region 2-SW	117,801	13.96	33,870	10.34	151,670	12.95
Region 3-SE	61,369	7.27	28,932	8.83	90,301	7.71
Region 4-NE	721,618	85.54	274,734	83.83	996,352	85.06
Region 5-Cule- bra & Vieques	112,158	13.29	54,261	16.56	166,419	14.21
One Region Only	601,701	71.32	244,815	74.70	846,516	72.27
Two Regions	169,295	20.07	60,942	18.60	230,237	19.66
Three Regions	40,913	4.85	10,631	3.24	51,544	4.40
Four Regions	4,938	0.59	5,112	1.56	10,050	0.86
All Regions	9,170	1.09	1,569	0.48	10,739	0.92

1. Participation Rate is the percent of reef using visitors that visited a region or multiple regions. See Apendix Table A. xx for more detail.

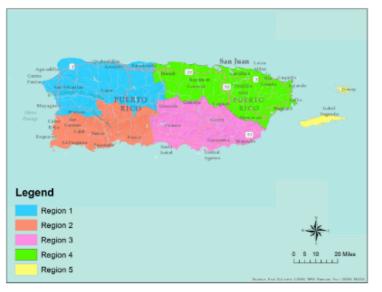


Figure 2.3 Puerto Rico's Five Regions

Region 4, the northeast region of the island, contains Puerto Rico's capital, San Juan. Annually, roughly 85% of all visitors spent time in Region 4. Of the total 843,651 reef using visitors in the summer, 721,618 visited Region 4. In the winter there were 327,717 visitors and 274,734 visited Region 4. The second most popular region to visit was Region 1, the northwest, in the summer. Region 5, an islands of Culebra and Viegues on the eastern coast of Puerto Rico, was the second most popular region to visit in the winter season. The least visited region in both the summer and winter season was Region 3, the southeast region of the country.

In the summer and winter, the majority of visitors (71.3% and 74.7% respectively) only visited one region, meaning they did not travel into other geographical areas detailed in Figure 2.3. Roughly 20% of visitors for the year visited more than two regions. Less than 1% visited all five regions.

Reef Use Activity Participation by Region and Season.

Coral reefs serve many purposes, such as diving, SCUBA, fishing, viewing the scenery and swim to name some uses. Table 2.4 to the right looks at activity by use and season.

The most common activities in the both the summer and winter with over 1,000,000 visitors swimming across both seasons. Diving was the second most common activity followed by viewing nature and wildlife. Over a quarter of a million visitors dove (snorkeling or SCUBA diving) in the summer season and slightly more than 90,000 visitors dove in the winter. In total 369,484 visitors dove in Puerto Rico.

All activities had a higher number of visitors in the summer than the winter with the exception of surfing. There were 19,113 visitors in the winter and 10,581 visitors in the summer season.

	Summer		Winter		Weighted Annual Average	
	Number of Visi- tors	Participa- tion Rate (%) ¹	Number of Visitors	Participa- tion Rate (%) ¹	Number of Visitors	Participa- tion Rate (%) ¹
Reef Activity						
All Diving	277,925	32.94	91,559	27.94	369,484	31.54
Snorkeling	270,871	32.11	89,874	27.42	360,745	30.8
SCUBA Diving	16,224	1.92	6,449	1.97	22,673	1.94
Reef Fishing	9,876	1.17	3,428	1.17	13,304	1.14
Viewing Nature & Wildlife	147,427	17.47	62,743	19.15	210,171	17.94
Surfing	10,581	1.25	19,113	5.83	29,694	2.54
Swimming	761,120	90.22	264,625	80.75	1,025,745	87.57
Paddle boarding,	55,726	6.61	19,520	5.96	75,246	6.42

Table 2.4. Reef Using Activity Participation by Season: All of Puerto Rico

1. Participation Rate is the percent of all Reef Using Visitors. See Apendix Table A.2 for greater detail.

Table 2.5. Top Rated Reef Activity	by Region and Season-Number of
Participants	

		Participation	Number of
Season/Region	Activity	Participation	Number of
		Rate (%) ¹	Participants
Summer			
Region 1:Northwest	Swimming	10.2	83,236
Region 2: Southwest	Swimming	8.19	69,129
Region 3: Southeast	Swimming	3.01	9,864
Region 4: Northeast	Swimming	75.33	635,560
Region 5: Culebra & Vi-	Swimming	11.79	99,461
eques			
Winter			
Region 1:Northwest	Swimming	9.29	30,442
Region 2: Southwest	Swimming	6.49	21,263
Region 3: Southeast	Swimming	4.41	14,466

1. Participation Rate is the percent of all reef using visitors.

wind surfing, or kite

boarding

In all regions and all seasons swimming was the activity with the highest participation rate. The highest rates of swimming occurred in the summer the northeast and in the winter in the northeast. The second most popular region for swimming was Culebra & Viegues in both the winter and summer seasons. The region with the least visitors was the southeast, Region 3, for both the summer and winter seasons. Further, some visitors only engaged in water-based activities. The northeast region experienced the highest participation rate in only water-based activities. In Puerto Rico's winter season 18.5% of visitors engaged in water-only activities versus 7.4% of participants in the summer season.

Within Region Participation Rates.

Table 2.6 provides a different perspective on activity participation rates. It includes an example of within region participation rates or the percent of reef-using visitors to the region that did the activity in the region. The same number of participants are simply divided by a different number. Within participation, rates answer the question "What percent if visitors to the region do the activity"? Appendix tables A.8 – A.12 provide the details by activity, region and season.

Reef Activity Participation Rates.

Amongst all users, the participation rates for swimming were the highest at roughly 76% and nearly 90% of visitors to the northeast region swam. The second most common activity was diving, participation rates were 23.5% for all users and 27.5% in the northeast region. The least common activities were surfing and reef fishing, with less than 1% of all users participating. More details are provided in appendix Tables A.2 – A.7 by detailed activity, region and season. Although there are more reef-using visitors in all regions in the summer season, a higher proportion of winter season reef-using visitors participate in Only Water-based activities in all regions.

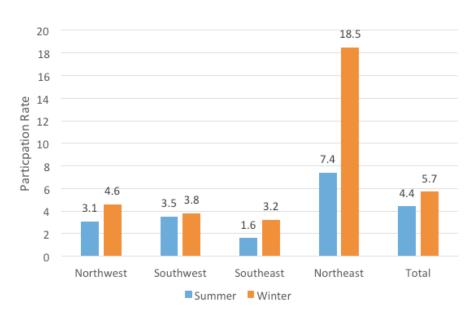


Figure 2.4 Participation in Water-Based Versus Land-Based Activities by Season

Table 2.6. All Reef User Participation Rate vs. Within Region Participation Rate-Northeast Region, Summer Season

	All Reef User	Within Northeast Region
Activity	Participation Rate % ¹	Participation Rate % ²
Diving	23.49	27.47
Snorkeling	23.08	26.98
SCUBA Diving	0.92	1.08
Reef Fishing	0.84	0.98
Viewing Nature & Wildlife	14.21	16.62
Surfing	0.33	0.39
Swimming	76.17	89.05
Paddle boarding, Wind		
Surfing,		
or Kite boarding	5.43	6.35

1. Percent of all reef using visitors to Puerto Rico. See Appendix Tables A.3 to A.7.

2. Percent of reef uisng visitors to the Northeast Region. See Appendix Tables A.8 to A.12.

Number of Days for Top Rated Reef Activities by Region and Season.

For the top rated activity there were 1,716,012 person-days in the summer and 743,299 person-days in the winter in the Northeast region. The region with the second most number of person-days varied by season. In the summer, the northwest region had 208,090 person-days of swimming in the summer. In the winter, Culebra and Vieques had the second most number of swimming person-days (87,724).

Number of Dives by Region and Season.

The number of dives was estimated by mode of access (e.g. shore, charter/ party boat, rental boat and private boat), region and season. This was done separately for snorkeling and SCUBA diving (See Appendix Table A.24 for details). The top rated diving reef-using activity was snorkeling from shore in all five regions during the summer season and for three of the five regions in the winter season (Table 2.8). For regions 2 and 3, snorkeling from a charter/party boat was the top diving mode of access in the winter season, but the numbers of dives were relatively low.

Table 2.7. Top Rated Reef Use Activity by Region and Season-Number of Days

Season/Region	Activity ¹	Number of Days
Summer		
Region 1: Northwest	Swimming	208,090
Region 2: Southwest	Swimming	96,781
Region 3: Southeast	Swimming	9,864
Region 4: Northeast	Swimming	1,716,012
Region 5: Culebra & Vieques	Swimming	188,976
Winter		
Region 1: Northwest	Swimming	73,061
Region 2: Southwest	Swimming	34,021
Region 3: Southeast	Swimming	17,359
Region 4: Northeast	Swimming	743,299
Region 5: Culebra & Vieques	Swimming	87,724

1. See Appendix Tables A.18 to A.23 for details of all reef activites by region and season.

Table 2.8. Top Rated Reef Use Activity by Region and Season-Number of Dives

		Number
Season/Region	Activity ¹	of Dives
Summer		
Region 1: Northwest	Snorkeling from shore	38,092
Region 2: Southwest	Snorkeling from shore	15,519
Region 3: Southeast	Snorkeling from shore	3,836
Region 4: Northeast	Snorkeling from shore	273,360
Region 5: Culebra &	Snorkeling from shore	78,313
Vieques		
Winter		
Region 1: Northwest	Snorkeling from shore	32,177
Region 2: Southwest	Snorkeling from a charter/party boat	7,118
Region 3: Southeast	Snorkeling from a charter/party boat	1,162
Region 4: Northeast	Snorkeling from shore	46,243
Region 5: Culebra &	Snorkeling from shore	39,040
Vieques		

1. See Appendix Table A.24 details of all reef diving by region and season.

Non-reef Use Activity Participation by Region and Season.

Reef users were also asked about the non-reef using activities they participated in during their reef-using trip. The 12 major categories of non-reef using activities are summarized for all of Puerto Rico in Table 2.9 (See Appendix Tables A.25 to A.30 for more detail). Beach activities-not waterrelated was the number one non-reef using activity in both seasons with 79.5% of all reef-using visitors doing the activity in the summer and 80% in the winter. This was closely followed by Cultural, Historic & Tourist Attractions with 78.85% participating in the summer and 72.79% in the winter. Viewing Nature & Wildlife from land was the third highest activity with about 29% in the summer doing the activity and 21% in the winter. In addition, beach activities-not water-related were the top non-reef activity by reefusing visitors in all regions and in both seasons (Table 2.10).

	Summer		Winter		Weighted Annual Average	
	Number of	Participa- tion	Number of	Partici- pation	Number of	Partici- pation
Activity	Partici- pants	Rate % ¹	Partici- pants	Rate % ¹	Partici- pants	Rate % ¹
Offsore Fishing	9,170	1.09	6,012	1.84	15,212	1.30
Personal Watercraft Use	39,502	4.68	15,686	4.79	55,188	4.71
Sailing	40,913	4.85	14,756	4.50	55,669	4.75
Other Boating	110,747	13.13	32,301	9.86	143,048	12.21
Viewing Nature & Wildlife-Land	244,066	28.93	69,424	21.18	313,490	26.76
Beach Activities-not water-based	670,830	79.52	268,053	90.47	938,883	80.15
Camping-Backpack- ing-Hiking-						
Picnicking	341,411	40.47	90,571	27.64	431,982	36.88
Cultural, Historic & Tourist						
Attractions	665,186	78.85	187,474	57.21	852,661	72.79
Outdoor Sports	138,963	16.47	32,185	9.82	171,148	14.61
Bicycling-Horeseback riding-						
Driving for Pleasure	102,282	12.12	25,330	7.73	127,612	10.89
Attended Wedding	23,278	2.76	5,461	1.67	28,739	2.45
Visited a Casino	128,382	15.22	39,389	12.02	167,770	14.32

1. Percent of all reef using visitors. See Appendix tables A.25 to A.30 for details by Activities, Regions and Seasons.

Table 2.10. Top Rated Non-Reef Use Activity by Region and Season-
Number of Participants

		Number of	Participation
Season/Region	Activity	Participants	Rate % ¹
Summer			
Region 1 - Northwest	Beach Activities	80,415	9.53
Region 2 - Southwest	Beach Activities	61,369	7.27
Region 3 - Southeast	Beach Activities	27,510	3.26
Region 4 - Northeast	Beach Activities	556,556	65.97
Region 5 - Culebra &	Beach Activities	95,934	11.37
Vieques			
Winter			
Region 1 - Northwest	Beach Activities	29,106	8.88
Region 2 - Southwest	Beach Activities	19,869	6.06
Region 3 - Southeast	Beach Activities	14,117	4.31
Region 4 - Northeast	Beach Activities	196,189	59.87
Region 5 - Culebra & Vieques	Beach Activities	37,878	11.56

1. Percent of all reef using visitors that did activity in the region. See Appendix tables A.26 to A.30 for details by Activity, Region, and Season.

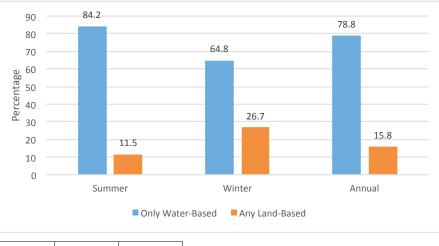
Non-reef Use Activity Participation Within Region.

As with the reef-using activities, the within region participation rates were calculated for each of the five regions. Again, this approach answers the question of what percent of the reefusing visitors that visited a particular region did the activity in the region. Table 2.11 presents an example for Region 4, NE during the summer season comparing the percent of all reef-using visitors to Puerto Rico doing the activity in the region versus the percent of all reef-using visitors that visited Region 4 that did the activity in the region. More detail for all regions and seasons are presented in Appendix Tables A.31 to A.35.

Special Aggregate Activities.

Number of participants and participation rates were also calculated for special aggregates of activities by region and season. In addition, as with the activities presented in other sections, the within region participation rates were also calculated for the special aggregates. Special aggregates were calculated by eliminating double counting across modes of activity (e.g. shore, charter/party boat, rental boat and private boat) for water-related activities. One might also want to know how many reef-using visitors used a charter/party boat across all types of activities. One can also look at what proportion of reef-using visitors did only water activities or any landbased activities. Figure 2.5 shows the proportion of reef-using visitors by season that did only water activities versus any land-based activities. During the summer season, more than 84% of reef-using visitors did at least one land-based activity, while during the winter season almost 65% did. In addition, during the summer season 11.5% of reef-using visitors did only water related activities versus 26.7% during the winter season. Figure 2.6 shows the distribution of participation rates by region and season for any land-based activities by all reef-using

Although All Reef-using visitors by definition participate in water-based activities, a high proportion of reef-using visitors also participate in land-based activities in both seasons.



Summer	84.2	11.5
Winter	64.8	26.7
Annual	78.8	15.8

Figure 2.5 Participation in Water-Based Versus Land-Based Activities by Season

Table 2.11. All Non-Reef Participation Rates vs. Within Region
Participation Rates: Northeast Region, Summer Season

	Percent of	Percent of
		Northeast
	All Reef	Region
Activity	Users	Reef Users
Offshore Fishing	0.42	0.49
Personal Watercraft Use	3.85	4.50
Sailing	4.52	5.28
Other Boating	10.03	11.73
Viewing Nature & Wildlife from Land	35.28	41.25
Beach Activities-not water-based	65.97	77.13
Camping-Backpacking-Hiking-Picnicking	35.03	40.96
Cultural, Historical & Tourist Attractions	69.31	81.04
Outdoor Sports	14.55	17.01
Bicycling-Horeseback riding-Driving for		
Pleasure	10.70	12.51
Attended Wedding	1.67	1.96
Visited Casino	14.88	17.40

See Appendix tables A.31 to A.35 for details by Activity, Region and Season.

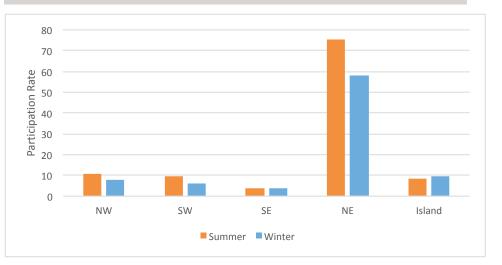
visitors. Greater detail for the special aggregate activities are presented in Appendix Tables A.36 to A.46.

Origin of Reef-using Visitors.

Here the primary residence of reefusing visitors is presented. Foreign versus domestic (U.S.) visitors are compared, top foreign countries are highlighted, U.S. Census Bureau Regions and Divisions are provided and the top states of primary residence are highlighted.

Foreign vs Domestic.

Nearly all visitors came from the U.S. during both seasons. The winter season had slightly higher rates of foreign visitation with 7.41% of all reef-using visitors from foreign countries compared with only 2.2% during the summer (Figure 2.7). Table 2.12 shows the top five foreign countries of primary residence of reef-using visitors in two different proportions. The first proportion is the percent of all reefusing visitors and the second is the proportion of foreign visitors. Mexico and Spain were tied for number one foreign countries in the summer with 0.55% (a little more than one-half of one percent of all reef-using visitors) and 25.0% of foreign reef-using visitors. During the winter season, Canada was the top foreign country accounting for 1.81% of all reef-using visitors and 24.39% of all foreign reefusing visitors. Appendix Table A.47 has the details by country and season. Except for Region 3-SE and Region 5-Culebra & Vieques, a higher proportion of reef-using visitors in the summer season participate in land-based activities than in the winter season.

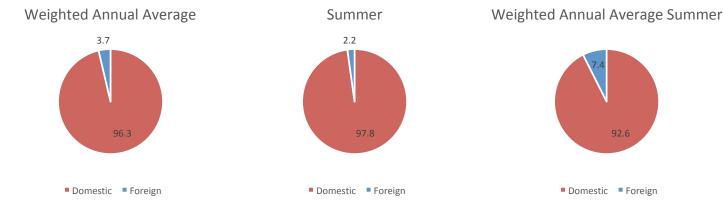


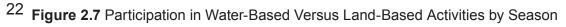
	NW	SW	SE	NE	Island
Summer	10.9	9.6	3.6	75.5	8.7
Winter	8.1	5.9	3.6	58.1	9.5

Figure 2.6 Participation in Water-Based Versus Land-Based Activities by Season

					Weighted Annual	
	Summer		Winter		Average	
		Percent of	:	Percent of	:	Percent of
	Percent of	Foreign	Percent of	Foreign	Percent of	Foreign
			Reef Us-		Reef Us-	
Country ¹	Reef Users ²	Visitors ³	ers ²	Visitors ³	ers ²	Visitors ³
Canada	0.27	12.5	1.81	24.39	0.70	23.66
England	0.27	12.5	0.54	7.32	0.35	7.63
Mexico	0.55	25.0	0.36	4.88	0.50	6.11
Domincan Re-						
public	0.27	12.5	0.36	4.88	0.30	5.34
Spain	0.55	25.0	0.24	3.25	0.46	4.58

1. Top five chosen based on weighted annual average. 2. Percent of all reef using visitors. 3. Percent of all foreign reef using visitors. See Appendix Table A.47 for more detail.





Top States/Territories.

As with countries of primary residence, states and territories are presented in two proportions, the proportion of all reef-using visitors and the proportion of all U.S. reefusing visitors. Florida was the number one state with 27.3% of all reef-using visitors coming from the state and accounting for 26.7% of all U.S. reefusing visitors during the summer, and 17.2% of all reef-using visitors and 15.9% of all U.S. visitors in the winter. Table 2.13 shows the top seven states by season. Appendix Table A.49 has the detail for all states and territories.

Census Regions and Divisions.

For purposes of tracking population, the U.S. Department of Commerce, Bureau of the Census also aggregates states into four Census Regions and nine Census Divisions. Territories are treated separately (Figure 2.9). The South Region was the top region of primary residence for reef-using visitors in both seasons followed by the East Region. The Midwest and West regions were close to the same in both seasons with a slightly higher percent from the Midwest. Less than one percent of reef-using visitors came from the territories in both seasons (Figure 2.8). Across the nine Census Divisions, the South Atlantic was number one in both seasons followed by the Middle Atlantic (Figure 2.10).

Table 2.13. Top Seven States by Season

	Summer		Winter		Weighted Annual Average	
		Percent of	-	Percent of		Percent of
	Percent of	Domestic	Percent of	Domestic	Percent of	Domestic
	Reef		Reef		Reef	
State	Users ²	Visitors ³	Users ²	Visitors ³	Users ²	Visitors ³
Florida	27.3	26.7	17.2	15.9	24.5	23.6
New York	10.1	9.9	13.5	12.5	11.0	10.6
Texas	11.2	11.0	5.5	5.1	9.7	9.3
Maryland	5.9	5.8	4.1	3.8	5.4	5.2
California	4.2	4.1	4.0	3.7	4.2	4.0
New Jersey	3.9	3.9	4.2	3.9	4.0	3.9
Massachusetts	2.8	2.8	6.6	6.1	3.8	3.7

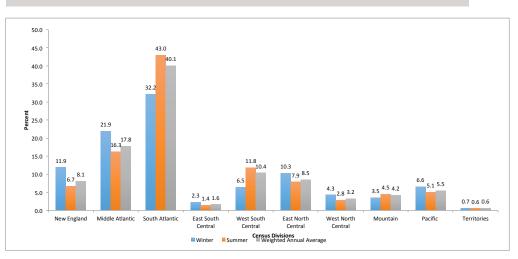
1. Top seven chosen based on weighted annual average.

2. Percent of all reef using visitors.

3. Percent of all domestic (U.S.) reef using visitors.

See Appendix Table A.49 for more detail.

In both seasons, reef-using visitors primarily come from the South and the Northeast U.S. Except for the South, a lower proportion of summer season reef-using visitors come from the other Census Regions compared to the winter season.

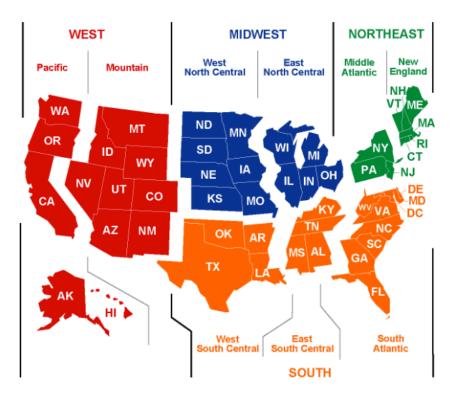


Region	Winter	Summer	Weighted Annual Average
New England	11.9	6.7	8.1
Middle Atlantic	21.9	16.3	17.8
South Atlantic	32.2	43.0	40.1
East South Central	2.3	1.4	1.6
West South Central	6.5	11.8	10.4
East North Central	10.3	7.9	8.5
West North Central	4.3	2.8	3.2
Mountain	3.5	4.5	4.2
Pacific	6.6	5.1	5.5
Territories	0.7	0.6	0.6

Figure 2.8 Census Division of Permanent Residence by Season

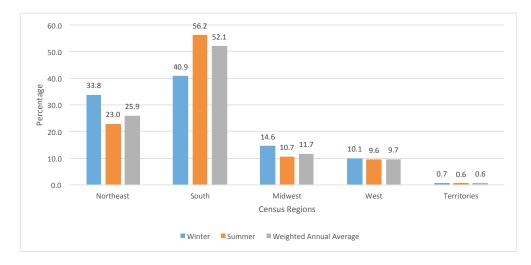
Number of Annual Visits, Days and Length of Stays.

In Chapter 1, the concepts of persontrips, visits and person-days were discussed and at the beginning of this chapter, estimates of total person-trips and person-days in Puerto Rico were presented for reef-using visitors. Here the sample averages and distributions for the annual number of visits and the annual number of days in Puerto Rico are presented along with averages and distributions for length of stay for the interview trip in terms of number of days and number of nights by season. Statistical tests were performed on the differences between summer and winter visitors. When statistical differences are noted, they are based on statistical significance criteria of 0.05 level or lower of significance or 95 percent or higher confidence level. See Leeworthy et al. (2017d) for the details on the statistical tests. In addition, the average number of nights by region and season are presented.





In both seasons, the highest proportion of reef-using visitors came from the South Atlantic Division followed by the Middle Atlantic Division.



	Winter	Summer	Weighted Annual Average
Northeast	33.8	23.0	25.9
South	40.9	56.2	52.1
Midwest	14.6	10.7	11.7
West	10.1	9.6	9.7
Territories	0.7	0.6	0.6

Figure 2.10 Census Region by Season

Number of Annual Visits and Days.

On average, reef-using visitors made 1.35 visits annually to Puerto Rico where they undertook reef-using activities. Over 80% only made one visit annually. There was no difference between summer and winter season visitors (Figure 2.11). In terms of the number of days spent annually in Puerto Rico undertaking reef-using activities, on average, reef-using visitors spent 10.5 days, and although the average was higher for summer season versus winter season visitors, the difference was not statistically significant. The greatest proportion of reef-using visitors were in Puerto Rico 6 to 14 days per year with the next highest proportion at 3 to 5 days (Figure 2.12).

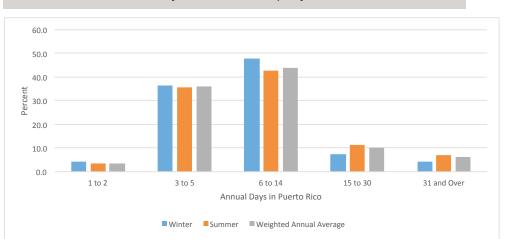
Over 80% of reef-using visitors make only one annual visit (trip) to Puerto Rico and there is no significant difference between summer and winter season visitors.



Column1	Winter	Summer	Weighted Annual Average
Maximum	30	12	30
Minimum	1	1	1
Mean	1.36	1.34	1.35
Median	1	1	1
Mode	1	1	1

Figure 2.11 Annual Visits (Trips) to Puerto Rico for Reef Use by Season

On average, summer season visitors spend more days annually in Puerto Rico than winter season visitors but the difference is not statistically significant. Across both seasons, 44% of reef-using visitors spend 6 to 14 days in Puerto Rico per year.



Column1	Winter	Summer	Weighted Annual Average
Maximum	180	101	180
Minimum	1	1	1
Mean	9.6	10.84	10.49
Median	6	7	7
Mode	5	7	5

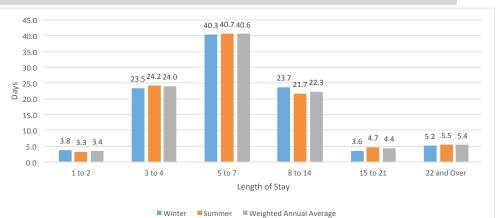
Figure 2.12 Annual Days in Puerto Rico for Reef Using Visitors by Season

Length of Stay (Days) versus Number of Nights.

Length of stay on the interview trip was measured in terms of number of days and number of nights. For almost all trips, number of nights was number of days minus one i.e. there were very few day-trips to Puerto Rico. On average, reef-using visitors spent about 8.6 days per trip in Puerto Rico and, although the winter season had a higher average number of days per trip than the summer season visitors, the difference was not statistically significant. The highest proportion of reef-using visitors were on trips of 5 to 7 days in both seasons. The next highest proportion was almost equal between 3 to 4 days and 8 to 14 days per trip (Figure 2.13). The results were similar for the average number of nights. On average, reef-using visitors spent 7.78 nights per trip in Puerto Rico with no difference by season.

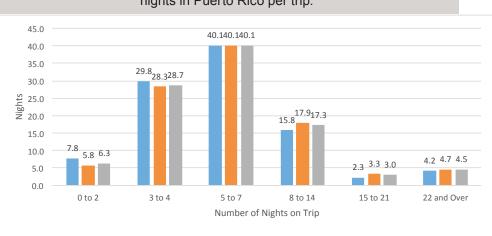
The highest proportion of trips were 5 to 7 nights followed by 3 to 4 nights and 8 to 14 nights (Figure 2.14). The highest average number of nights were spent in Region 4, NE with on average 5.56 nights in the summer and 5.23 nights in the winter. The difference was not statistically significant (figure 2.15).

On average, winter season reef-using visitors have longer stays per trip than summer season visitors do, but the difference is not statistically significant. Over 40% in both seasons stay 5 to 7 days per trip.



Column1	Winter	Summer	Weighted An- nual Average
Maximum	180	101	180
Minimum	1	1	1
Mean	8.86	8.45	8.56
Median	6	6	6
Mode	5	4	5

Figure 2.13. Length of Stay (Days) by Season



■ Winter ■ Summer ■ Weighted Annual Average

On average, both summer and winter season reef-using visitors spent almost eight nights per trip in Puerto Rico. A little more than 40% spent 5 to 7 nights in Puerto Rico per trip.

Column1	Winter	Summer	weighted Annual Average
Maximum	179	89	179
Minimum	0	1	0
Mean	7.78	7.78	7.78
Median	5	6	6
Mode	4	4	4

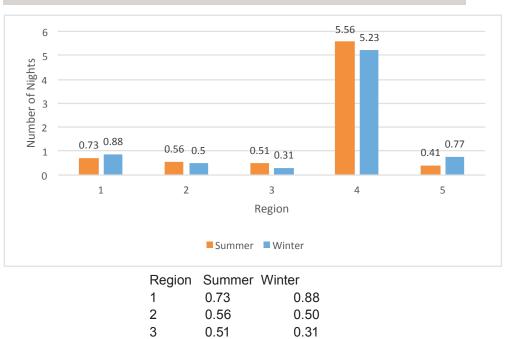
Figure 2.14. Number of Nights in Puerto Rico by Season

Demographic Profiles

In this section, demographic profiles of reef-using visitors are presented in terms of age, sex, race, ethnicity (Spanish, Hispanic or Latino), of the survey respondent only and household income (before taxes), party size, primary purpose of the trip and second home ownership in Puerto Rico.

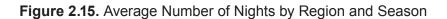
Age.

Winter season reef-using visitors were, on average, older than summer season reef-using visitors. In both seasons, the highest proportion of reef-using visitors were between the ages of 25-34. In the summer season, a very low proportion of reef-using visitors were 65 or older (Figure 2.16). In both seasons, Region 4 – NE was where most of the overnight stays were made by reef-using visitors. On average in both seasons, reef-using visitors spent over five nights per trip in Region 4 – NE.



5.23

0.77



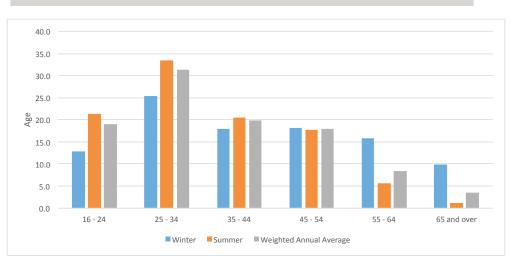
5.56

0.41

4

5

Winter season reef-using visitors are, on average, older than summer season visitors. In both seasons, the highest proportion of reef-using visitors are between the ages of 25 and 34. A much higher proportion of winter season visitors than summer season visitors are age 55 or older.



Column1	Summer	Winter	Weighted Annual Average
Mean	35.2	42.5	37.2
Median	33	41	34
Mode	25	27	27
Min	16	16	16
Max	71	86	86

Figure 2.16. Age of Reef-using Visitors (Survey Respondents) by Season

Sex.

Females made up the highest proportion of reef-using visitors in both seasons, 56.6% in the summer and 52.9% in the winter (Figure 2.17).

Ethnicity.

A significantly higher proportion of summer season visitors were of Spanish, Hispanic or Latino ethnicity, more than 42% in the summer and 29% in the winter (Figure 2.18).

Race.

Race was asked consistent with how the U.S. Census Bureau asks it with people allowed to respond to multiple classifications. For those who responded that they were more than one, the proportions are simply recorded here as more than one race. In both seasons, the overwhelming majority of reef-using visitors selfclassified themselves as "White" with 68.4% in the winter season and 49.2% in the summer season. Annually, reef-using visitors were 15.8% Black or African American with 17.9% during the summer and 10.6% during the winter (Figure 2.19).

In both seasons, a higher proportion of reef-using visitors are female, but the difference by season is not statistically significant.

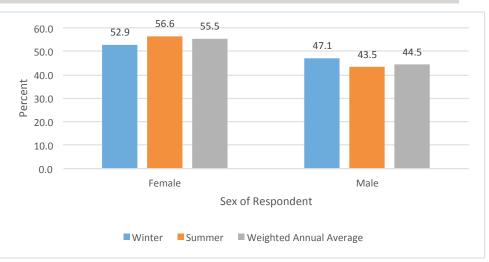
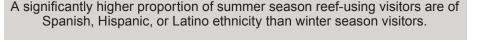


Figure 2.17. Sex of Reef-using Visitors (Survey Respondents) by Season



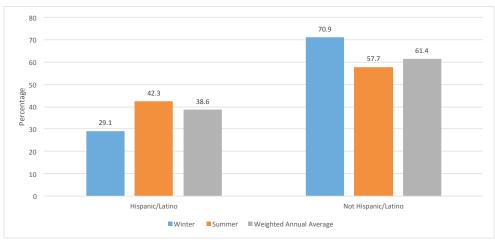


Figure 2.18. Ethnicity of Reef-using Visitors (Survey Respondents) by Season

Household Income (Before Taxes).

Household income (before taxes) was obtained in 15 categories from "Less than \$20,000" to "\$100,000 or more". For presentation, the categories were collapsed to five categories. In addition, household income was also recoded to a continuous variable by setting its value to the middle of each category/interval. For the top category/interval, household income was set to \$200,000. Winter season reef-using visitors had significantly higher household income than summer season visitors did. A much higher proportion of winter season visitors had household incomes over \$100,000 (Figure 2.20).

Reef-using visitors were predominantly White in both seasons, however a significantly higher proportion of winter season visitors were White than summer season visitors. A significantly higher proportion of summer season visitors were Black or African American.

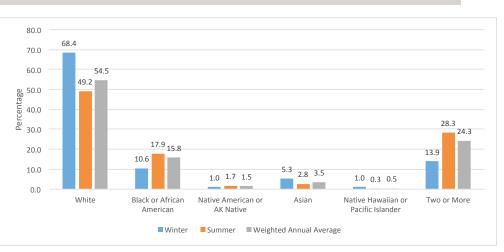


Figure 2.19. Race of Reef-using Visitors (Survey Respondents) by Season

On average, winter season reef-using visitors had higher household incomes than summer season visitors did. A significantly higher proportion of winter season visitors had household income above \$100,000 compared to summer season visitors.

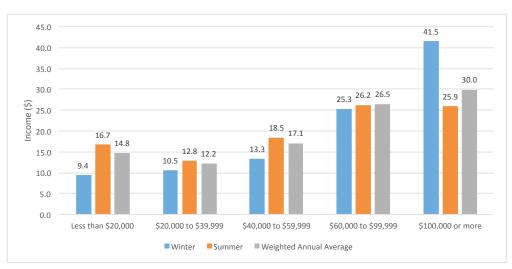


Figure 2.20. Household Income (Before Taxes) of Reef-using Visitors by Season

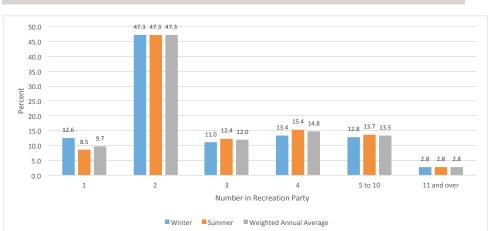
Party Size.

The annual average for the party size of reef-using visitors was 3.3 and, although winter season visitors had on average a slightly higher party size, the difference was not statistically significant. The highest proportion of ref-using visitor's party size was two persons with a little more than 47% in both seasons (Figure 2.21).

Primary Purpose of Trip.

About three-quarters of all reef-using visitors in both seasons were on trips where the primary purpose was recreation or vacation. Visiting family or friends was next accounting for 18.3% annually and 19.2% during the summer and 16% during the winter. Those primarily on business trips were significantly higher in the winter season (Figure 2.22).

Although average party size was slightly higher for winter season visitors than summer season visitors, the difference was not statistically significant. In both seasons, over 47% were in parties of two people.



Number of People in Party Statistics			
Column1	Winter	Summer	Weighted Annual Average
Mean	3.400	3.286	3.318
Median	2	2	2
Mode	2	2	2
Maximum	100	22	100
Minmum	1	1	1



Recreation or vacation was the primary purpose of the trip for about threequarters of reef-using visitors in both seasons, but there was not a significant difference between seasons.

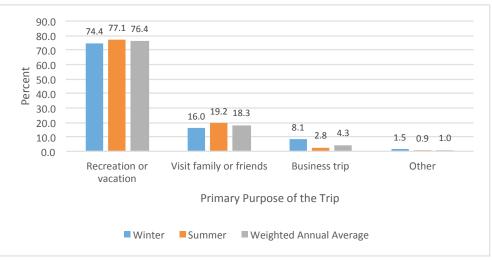


Figure 2.22. Primary Purpose of Trip for Reef-using Visitors by Season

Second Home Ownership in Puerto Rico.

Reef-using visitors were also asked if they owned a second home in Puerto Rico. A small percent of reef-using visitors were seasonal visitors (stayed in Puerto Rico more than one month) and would therefore be more likely to own a second home in Puerto Rico. About 6.3% of all reef-using visitors owned a second home in Puerto Rico and this did not vary by season (Figure 2.23).

Expenditures

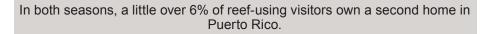
In Leeworthy et al. (2017b), the economic contribution/impact of reefusing visitors is estimated using the expenditures reef-using visitors made on the interview trip for trip-related expenditures plus the amount spent on annual types of expenditures for boat storage and marina fees, condominium and time-share fees, and RV or trailer park fees. These latter three annual expenditures were normalized to per person-trip and per person-day expenditures for purposes of developing average spending profiles. Expenditures were obtained from a mailback survey and as discussed in Chapter 1, insufficient sample sizes were obtained from summer season visitors to develop separate profiles by season.

Expenditures Per Person-trip.

Expenditures were obtained in very detailed categories of spending (see Appendix Table A.50). For profile purposes, the detailed spending categories were aggregated into 10 spending categories (Table 2.14).

Expenditures Per Person-day.

In many studies, expenditures profiles are presented on a per person per day basis for comparisons across other competing destinations. Total annual expenditures were divided by total annual number of person-days to estimate spending per person-day. This type of profile can be useful when analyzing the economic impact/ contribution of strategies to increase person-days of visitation or analyzing the impacts of events, such oil or chemical spills that reduce person-days of visitation.



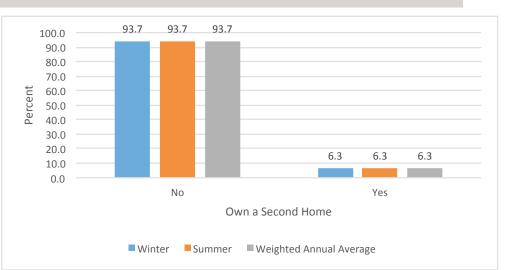


Figure 2.23. Second Home Ownership of Reef-using Visitors by Season

	Per Person	Per Person
Category ¹	Per Trip	Per Day
Lodging	\$455.95	\$53.24
Food & Beverage	\$320.72	\$37.45
Transportation	\$667.49	\$77.93
Boating	\$38.59	\$4.51
Fishing	\$5.23	\$0.61
Diving	\$14.34	\$1.67
Sightseeing	\$35.71	\$4.17
Other Activity	\$20.95	\$2.45
Miscellaneous	\$77.37	\$9.03
Services	\$5.88	\$0.69
Total Trip-related	\$1,642.23	\$191.74
Annual Expenditures	\$8.79	\$1.03
Total	\$1,651.02	\$192.77

Table 2.14. Average Expenditures Per Person Per Trip and Per Day inPuerto Rico by Reef Using Visitors

1. See Appendix Table A. 50 for more detail.

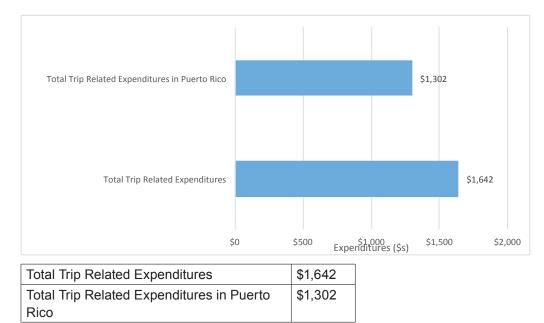


Figure 2.24. Average Total Trip Expenditures Per Person by Season

For more information in this section, See Appendix Tables A.

Special Issue Questions

In this section, special issues are addressed that the local community and project partners requested. The questions were included in the satisfaction mailback and therefore results are not available by season due to small sample sizes for the summer season.

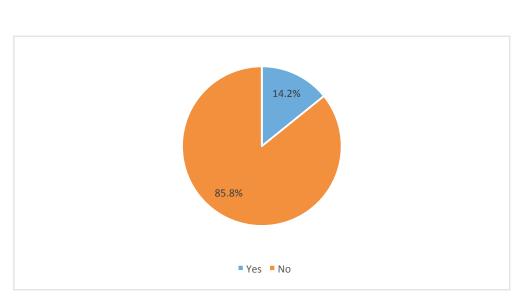
Boat Ownership.

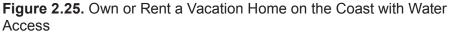
Reef-using visitors were asked if they owned a private boat in Puerto Rico. None of the survey respondents answered yes to this question (Table 2.25). However, it probably is not true that not all reef-using visitors do not own a boat in Puerto Rico. The probability of boat ownership is low, and would require much larger sample size to estimate of the number of reefusing visitors that own a private boat in Puerto Rico.

Own or Rent a Vacation Home on the Coast with Water Access.

Reef-users were asked if they owned or rented a vacation home on the coast of Puerto Rico with water access. A little over 14% of reef-using visitors said they did (Figure 2.25). Table 2.15. Boat Ownership in Puerto Rico by Reef Using Visitors







Importance of Beaches in Decision to Visit Puerto Rico.

Reef-users were asked how important beaches were in their decision to visit Puerto Rico using a five-point Likert scale where 1=Not Important, 2=Somewhat important, 3=Important, 4=Very Important and 5=Extremely important. Only 5.11% of reef-using visitors said it was not important and 80.11% responded that it was very or extremely important (Figure 2.26).

Current Trip First Visit to Puerto Rico for Recreation Activities.

Over half (52.54%) of all reef-using visitors were on their first visit to Puerto Rico for recreation activities (Figure 2.27). This is an important metric to measure over time because if the percent of first time visitors is rising it can signal trouble about retaining repeat customers if total visitation remains constant or is not increasing more than the increase in first time visitors. Importance-satisfaction ratings of natural resource attributes, facilities and services found in Leeworthy et al. (2017c) can help in assessing the areas that might need improvement.

Number of Years have been coming to Puerto Rico for Recreation Activities.

Including only those not on their first trip to Puerto Rico (the 47.46% in Figure 2.27), reef-using visitors have been coming to Puerto Rico for recreation an average of 11 years. Almost 64% of the reef-using visitors not on their first trip to Puerto Rico for recreation have been coming to Puerto Rico for recreation for five or more years (Figure 2.28). Of all reefusing visitors that would translate into 31.37% (47.46% times 63.86%) have been coming to Puerto Rico for recreation for five or more years.

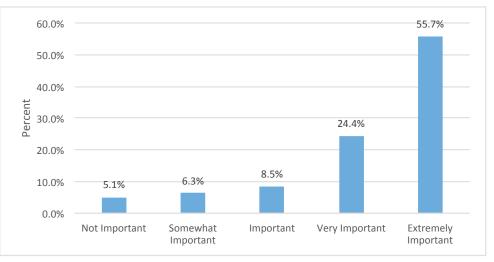
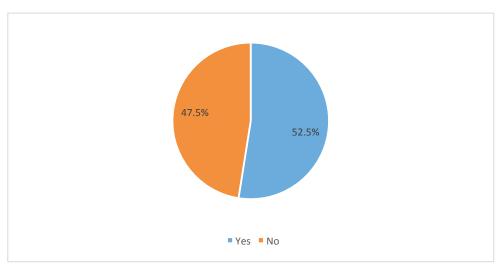
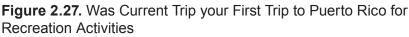


Figure 2.26. Importance of Beaches in Decision to Visit Puerto Rico





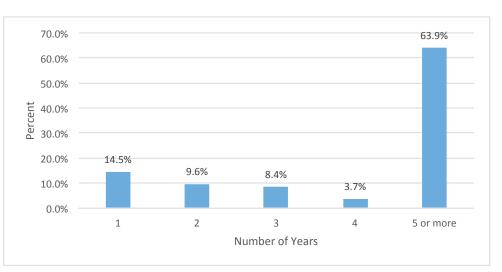


Figure 2.28. Number of Years have been coming to Puerto Rico for Recreation Activities

Likelihood that Recommend Puerto Rico to a Friend or Family for their next Vacation.

Table 2.16 contains the actual question and responses. Almost 73% of reef-using visitors are very likely to will recommend Puerto Rico to friends or family for their next vacation. Only 2.26% will not recommend.

Likelihood that will Return to Puerto Rico for a visit.

The question and responses are in Table 2.16. A little over 67% said they were very likely to will return to Puerto Rico for a visit. Only 3.39% said that they will not return and about 5%, either did not answer or did not know.

How soon will return to Puerto Rico.

For those who said they were somewhat likely to will return (91.52%), 48.81% said greater than one year and 38.1% said they will return is less than one year. A little over 10% said they did not know (Table 2.16). The next set of questions asked about the role of cruise ships and reef-using visitor's decisions about choosing Puerto Rico as a destination for a non-cruise ship visit. Table 2.16. Likelihood of Recommending Puerto Rico and Return Visits

	1
Question/Response	
How likely is it that you will recommend Puerto Rico to a	
friend or family member for their next vacation?	
Will not recommend (%)	2.26%
Somewhat likely (%)	9.04%
Likely (%)	15.25%
Very Likely (%)	26.55%
Will recommend (%)	46.33%
Don't know (%)	0.56%
How likely is it that you will return to Puerto Rico for a visit?	
Will not return (%)	3.39%
Somewhat likely (%)	6.78%
Likely (%)	17.51%
Very Likely (%)	24.29%
Will recommend (%)	42.94%
Don't know (%)	2.82%
Did not answer (%)	2.26%
How soon might you return to Puerto Rico?	
In less than 3 months (%)	2.98%
3 to 6 months (%)	7.74%
6 to 12 months (%)	30.36%
Greater than one year (%)	48.81%
Don't know (%)	10.12%

Was first visit to Puerto Rico on a Cruise Ship stopover.

Almost 11% of reef-using visitors said their first visit to Puerto Ricco was on a cruise ship stopover (Table 2.17).

Did Cruise Ship Stopover Result in Choice of Puerto Rico as a destination for a non-cruise ship visit.

Of the almost 11% of reef-using visitors whose first visit to Puerto Rico was a cruise ship stopover, 58.82% answered it did result in a non-cruise ship visit (Table 2.17). That would translate into about 6.5% (10.98% times 58.82%) of all reef-using visitors chose to visit Puerto Rico for a noncruise ship visit based on their first visit via a cruise ship stopover.

If Cruise Ship First Visit to Puerto Rico, Did Experience lead to planning a non-cruise trip visit.

Three quarters (75%) of those whose first trip to Puerto Rico was via a cruise ship stopover said that the cruise ship experience did lead to them planning a non-cruise ship visit (Table 2.17). That would translate into about 8% (10.98% times 75%) of all reef-using visitors who planned a noncruise ship visit based on their cruise ship visit. **Table 2.17.** Cruise Ship Stopovers and Decisions to Visit Puerto Rico on

 Non-Cruise Ship Visits

Question/Response	% Yes	% No
On your first visit ever to Puerto Rico, was your visit on a cruise ship stopover?	10.98%	89.02%
Did your stopover experience in Puerto Rico result in you choosing Puerto Rico as a destination for a non- cruise ship visit? (Percent of those that on first visit on cruise ship)	58.82%	`41.18%
If this cruise ship visit was your first visit, did your	75.00%	25.00%
experience lead you to think about planning a future non-cruise ship visit to Puerto Rico? (Percent of those on first visito on crusie ship)		

Opinions on Natural Resource Management Issues

In this section, results are presented on the importance to reef-users on seven natural resource management issues. A five-point Likert scale of agreement was used on their support for different management approaches. The five-point Likert scale for agreement was 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Disagree. A mean score over 3.0 indicates support for the approach. For all seven statement there was strong support for the management approaches with the lowest mean score of 4.15 (2, support for marine reserves). Over 93% supported the creation of marine protected areas that allow activities as long as they don't harm the resources. Almost 78% supported the creation of marine reserves that prohibit all activities that take things like fishing and ornamental trade for aquariums. Over 79% supported the creation of research only areas that only allow scientific and education activities. Over 98% support the increased protection of threatened and endangered species like turtles and elk and staghorn corals. Almost 94% support increased enforcement of environmental laws and regulations, 92% support increased education and outreach for violators of environmental laws and regulations. And finally, 90% support a balanced approach to using education and outreach and enforcement on violators of environmental laws and regulations (Table 2.19).

Table 2.18. Reef User's Opinions on Development Issues

Question/Response	% Yes
Islands like Puerto Rico face competing demands for de- velopment. When choosing a destination for your vacation and/or recreation activities, what is your preference?	
Low development, small town atmosphere along the coast.	43.93%
Dense development, large town with high-rise hotels and casinos, many restaurants and shopping oppor- tunities.	4.62%
Mix of low development and dense development places.	42.20%
No preference.	9.25%
Some people may be okay with staying in dense developed areas, but when doing certain recreation activities like visiting beaches, fishing, SCUBA diving, snorkeling, boat- ing, surfing, wind surfing, paddle boarding, viewing wildlife, photography and hiking trails prefer to have views unob- structured by development (e.g. big hotels, offshore oil and gas platforms, wind turbines, etc.).	
How important to you is to have areas with natural views protected?	
Not important	1.13%
Somehwat important	3.95%
Important	9.04%
Very Important	28.81%
Extremely important	57.06%

 Table 2.18.
 Importance of Natural Resource Management Issues to Reef Using Visitors

		2	ω	4	J	
	Strongly				Strongly	Mean
Statement	Disagree (%)	Disagree (%)	Neutral	Agree	Agree (%)	(Std. Er-
			(%)	(%)		ror)
1. I support the creation of marine protected areas that allow	0.57%	0.57%	5.11%	21.59%	72.16%	4.64
activities as long as they don't harm the resource.						(0.05)
2. I support the creation of marine resources that prohibit all	2.30%	6.32%	18.39%	20.11%	52.87%	4.15
activities that take things like fishing and ornamental trade for						(0.08)
aquariums.						
3. I support the creation of research only areas that only al-	0.57%	2.84%	17.05%	%86'87	50.57%	4.26
low scientific and educational activities.						(0.07)
4. I support increased protection of threatened and endan-	0.00%	0.00%	1.70%	21.59%	76.70%	4.75
gered species like turtles and el and staghorn corals.						(0.04)
5. I support increased enforcement of environmental laws	0.57%	1.14%	4.55%	18.18%	75.57%	4.67
and regulations.						(0.05)
6. I support increased education and outreach for violaters of	0.00%	0.57%	7.39%	24.43%	67.61%	4.59
environmental laws and regulations.						(0.05)
7. I support a balanced approach to using education and	1.14%	0.00%	8.52%	26.70%	63.64%	4.52
outreach and enforcement on violaters of environmental laws						(0.06)
and regulations.						

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Table A1. Region Visitation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Regions Visited	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Region 1-NW	124,855	14.80	48,568	14.82	173,423	14.81
Region 2-SW	117,801	13.96	33,870	10.34	151,670	12.95
Region 3-SE	61,369	7.27	28,932	8.83	90,301	7.71
Region 4-NE	721,618	85.54	274,734	83.83	996,352	85.06
Region 5-Culebra &	112,158	13.29	54,261	16.56	166,419	14.21
Vieques						
One Region Only	601,701	71.32	244,815	74.70	846,516	72.27
Region 1-NW Only	23,278	2.76	11,503	3.51	34,781	2.97
Region 2-SW Only	40,207	4.77	5,345	1.63	45,552	3.89
Region 3-SE Only	7,759	0.92	10,806	3.30	18,565	1.58
Region 4-NE Only	506,473	60.03	200,430	61.16	706,902	60.35
Region 5-Culebra & Vieques Only	23,983	2.84	16,732	5.11	40,715	3.48
Two Regions	169,295	20.07	60,942	18.60	230,237	19.66
Regions 1 and 2	5,643	0.67	4,648	1.42	10,291	0.88
Regions 1 and 3	0	0.00	0	0.00	0	0.00
Regions 1 and 4	57,842	6.86	17,952	5.48	75,794	6.47
Regions 1 and 5	0	0.00	174	0.05	174	0.01
Regions 2 and 3	0	0.00	349	0.11	349	0.03
Regions 2 and 4	31,743	3.76	8,540	2.61	40,283	3.44
Regions 2 and 5	0	0.00	0	0.00	0	0.00
Regions 3 and 4	15,519	1.84	2,963	0.90	18,482	1.58
Regions 3 and 5	2,116	0.25	407	0.12	2,523	0.22
Regions 4 and 5	56,432	6.69	25,911	7.91	82,342	7.03
Three Regions	40,913	4.85	10,631	3.24	51,544	4.40
Regions 1, 2 and 3	0	0.00	58	0.02	58	0.00
Regions 1, 2 and 4	10,581	1.25	3,195	0.98	13,776	1.18
Regions 1, 2, and 5	0	0.00	116	0.04	116	0.01
Regions 1, 3, and 4	12,697	1.51	3,660	1.12	16,357	1.40
Regions 1, 3, and 5	0	0.00	0	0.00	0	0.00
Regions 1, 4 and 5	8,465	1.00	1,278	0.39	9,743	0.83
Regions 2, 3 and 4	6,349	0.75	755	0.23	7,104	0.61
Regions 2, 3 and 5	0	0.00	639	0.20	639	0.05
Regions 3, 4, and 5	2,822	0.33	930	0.28	3,751	0.32
Four Regions	4,938	0.59	5,112	1.56	10,050	0.86
Regions 1, 2, 3 and 4	4,938	0.59	4,473	1.37	9,411	0.80
Regions 1, 2, 3, and 5	0	0.00	0	0.00	0	0.00
Regions 2, 3, 4 and 5	0	0.00	639	0.20	639	0.05
All Regions	9,170	1.09	1,569	0.48	10,739	0.92

Table A2. Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	277,925	32.94	91,559	27.94	369,484	31.54
All Snorkeling	270,871	32.11	89,874	27.42	360,745	30.80
Snorkeling from charter/party boat	110,041	13.04	31,604	9.64	141,645	12.09
Snorkeling from a rental boat	7,759	0.92	6,216	1.90	13,975	1.19
Snorkeling froma private boat	4,232	0.50	5,635	1.72	9,868	0.84
Snorkeling from shore	163,651	19.40	59,199	18.06	222,851	19.02
All SCUBA Diving	16,224	1.92	6,449	1.97	22,673	1.94
SCUBA Diving from charter/party boat	10,581	1.25	3,021	0.92	13,602	1.16
SCUBA Diving from a rental boat	5,643	0.67	1,569	0.48	7,212	0.62
SCUBA Diving from a private boat	0	0.00	116	0.04	116	0.01
SCUBA Diving from shore	0	0.00	1,801	0.55	1,801	0.15
Special Activities while Diving						
Diving for lobsters	0	0.00	523	0.16	523	0.04
Underwater Photography	1,411	0.17	11,154	3.40	12,565	1.07
Spear Fishing	2,822	0.33	988	0.30	3,809	0.33
All Reef Fishing	9,876	1.17	3,428	1.17	13,304	1.14
Inshore and light tackle fishing	9,876	1.17	2,789	0.85	12,664	1.08
Fishing from a charter/party boat	7,054	0.84	2,091	0.64	9,145	0.78
Fishing from a rental boat	2,822	0.33	581	0.18	3,403	0.29
Fishing from a private boat	2,822	0.33	116	0.04	2,938	0.25
Other Fishing	0	0.00	639	0.20	639	0.05
Other Fishing from a charter boat	0	0.00	523	0.16	523	0.04
Other fishing from a party boat	0	0.00	58	0.02	58	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	58	0.02	58	0.00
Fishing from shore	0	0.00	1,394	0.43	1,394	0.12
Viewing Nature and Wildlife	147,427	17.47	62,743	19.15	210,171	17.94
Glass bottom boat rides	17,635	2.09	6,274	1.91	23,909	2.04
Inshore boating excursions	21,162	2.51	13,362	4.08	34,524	2.95
Viewing nature-private/rental boat	22,573	2.68	9,237	2.82	31,810	2.72
Bioluminescent Bays	35,975	4.26	37,878	11.56	73,853	6.30
Ocean Kayaking	71,245	8.44	17,487	5.34	88,732	7.58
Whale Watching	0	0.00	2,266	0.69	2,266	0.19
Manatee Watching	9,170	1.09	1,743	0.53	10,913	0.93
Other Reef Activities	773,112	91.64	274,153	83.66	1,047,265	89.41
Surfing	10,581	1.25	19,113	5.83	29,694	2.54
Swimming	761,120	90.22	264,625	80.75	1,025,745	87.57
Paddle boarding, wind surfing or kite boarding or	55,726	6.61	19,520	5.96	75,246	6.42

Table A3. Region 1 NW Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	26,805	3.18	14,931	4.56	41,736	3.56
All Snorkeling	23,278	2.76	14,582	4.45	37,860	3.23
Snorkeling from charter/party boat	5,643	0.67	813	0.25	6,456	0.55
Snorkeling from a rental boat	0	0.00	465	0.14	465	0.04
Snorkeling froma privatel boat	0	0.00	58	0.02	58	0.00
Snorkeling from shore	19,046	2.26	14,175	4.33	33,221	2.84
All SCUBA Diving	3,527	0.42	639	0.20	4,166	0.36
SCUBA Diving from charter/ party boat	3,527	0.42	0	0.00	3,527	0.30
SCUBA Diving from a rental boat	0	0.00	116	0.04	116	0.01
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	523	0.16	523	0.04
Special Activities while Diving						
Diving for lobsters	0	0.00	116	0.04	116	0.01
Underwater Photography	0	0.00	2,730	0.83	2,730	0.23
Spear Fishing	0	0.00	232	0.07	232	0.02
All Reef Fishing	0	0.00	930	0.28	930	0.08
Inshore and light tackle fish- ing	0	0.00	871	0.27	871	0.07
Fishing from a charter/party boat	0	0.00	349	0.11	349	0.03
Fishing from a rental boat	0	0.00	465	0.14	465	0.04
Fishing from a private boat	0	0.00	58	0.02	58	0.00
Other Fishing	0	0.00	58	0.02	58	0.00
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	58	0.02	58	0.00
Fishing from shore	0	0.00	0	0.00	0	0.00
Viewing Nature and Wildlife	2,822	0.33	2,963	0.90	5,784	0.49
Glass bottom boat rides	0	0.00	349	0.11	349	0.03
Inshore boating excursions	0	0.00	290	0.09	290	0.02
Viewing nature-private/rental boat	0	0.00	116	0.04	116	0.01
Bioluminescent Bays	0	0.00	1,569	0.48	1,569	0.13
Ocean Kayaking	2,822	0.33	58	0.02	2,880	0.25
Whale Watching	0	0.00	1,278	0.39	1,278	0.11
Manatee Watching	0	0.00	58	0.02	58	0.00
Other Reef Activities	86,058	10.20	31,894	9.73	117,953	10.07
Surfing	7,054	0.84	9,353	2.85	16,407	1.40
Swimming	83,236	9.87	30,442	9.29	113,679	9.70
Paddle boarding, wind surfing or kite boarding	4,232	0.50	2,847	0.87	7,079	0.60

Table A4. Region 2 SW Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	15,519	1.84	10,167	3.10	25,685	2.19
All Snorkeling	15,519	1.84	9,876	3.01	25,395	2.17
Snorkeling from charter/party boat	0	0.00	2,847	0.87	2,847	0.24
Snorkeling from a rental boat	0	0.00	697	0.21	697	0.06
Snorkeling froma private boat	0	0.00	465	0.14	465	0.04
Snorkeling from shore	15,519	1.84	6,158	1.88	21,677	1.85
All SCUBA Diving	4,938	0.59	755	0.23	5,693	0.49
SCUBA Diving from charter/ party boat	0	0.00	465	0.14	465	0.04
SCUBA Diving from a rental boat	4,938	0.59	290	0.09	5,228	0.45
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	0	0.00	0	0.00
Special Activities while Div- ing						
Diving for lobsters	0	0.00	0	0.00	0	0.00
Underwater Photography	2,116	0.25	813	0.25	2,930	0.25
Spear Fishing	0	0.00	58	0.02	58	0.00
All Reef Fishing	2,822	0.33	174	0.05	2,996	0.26
Inshore and light tackle fishing	2,822	0.33	174	0.05	2,996	0.26
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	2,822	0.33	116	0.04	2,938	0.25
Fishing from a private boat	2,822	0.33	58	0.02	2,880	0.25
Other Fishing	0	0.00	0	0.00	0	0.00
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	0	0.00	0	0.00
Viewing Nature and Wildlife	11,992	1.42	9,179	2.80	21,171	1.81
Glass bottom boat rides	0	0.00	523	0.16	523	0.04
Inshore boating excursions	2,116	0.25	3,544	1.08	5,660	0.48
Viewing nature-private/rental boat	8,465	1.00	2,672	0.82	11,137	0.95
Bioluminescent Bays	7,759	0.92	4,473	1.37	12,233	1.04
Ocean Kayaking	2,116	0.25	1,743	0.53	3,859	0.33
Whale Watching	0	0.00	0	0.00	0	0.00
Manatee Watching	0	0.00	0	0.00	0	0.00
Other Reef Activities	69,129	8.19	22,715	6.93	91,844	7.84
Surfing	0	0.00	871	0.27	871	0.07
Swimming	69,129	8.19	21,263	6.49	90,392	7.72
Paddle boarding, wind surfing or kite boarding	2,116	0.25	930	0.28	3,046	0.26

Table A5. Region 3 SE Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	1,918	0.59	1,220	0.37	3,138	0.27
All Snorkeling	1,918	0.59	1,220	0.37	3,138	0.27
Snorkeling from charter/party boat	0	0.00	1,162	0.35	1,162	0.10
Snorkeling from a rental boat	0	0.00	174	0.05	174	0.01
Snorkeling froma private boat	0	0.00	0	0.00	0	0.00
Snorkeling from shore	1,918	0.59	58	0.02	1,976	0.17
All SCUBA Diving	0	0.00	0	0.00	0	0.00
SCUBA Diving from charter/ party boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from a rental boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	0	0.00	0	0.00
Special Activities while Div- ing						
Diving for lobsters	0	0.00	116	0.04	116	0.01
Underwater Photography	0	0.00	174	0.05	174	0.01
Spear Fishing	0	0.00	116	0.04	116	0.01
All Reef Fishing	0	0.00	58	0.02	58	0.005
Inshore and light tackle fishing	0	0.00	0	0.00	0	0.00
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Other Fishing	0	0.00	58	0.02	58	0.00
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	58	0.02	58	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	290	0.09	290	0.02
Viewing Nature and Wildlife	0	0.00	2,556	0.78	2,556	0.22
Glass bottom boat rides	0	0.00	1,046	0.32	1,046	0.09
Inshore boating excursions	0	0.00	58	0.02	58	0.00
Viewing nature-private/rental boat	0	0.00	116	0.04	116	0.01
Bioluminescent Bays	0	0.00	1,046	0.32	1,046	0.09
Ocean Kayaking	0	0.00	1,336	0.41	1,336	0.11
Whale Watching	0	0.00	0	0.00	0	0.00
Manatee Watching	0	0.00	0	0.00	0	0.00
Other Reef Activities	9,864	3.01	14,582	4.45	24,446	2.09
Surfing	548	0.17	465	0.14	1,013	0.09
Swimming	9,864	3.01	14,466	4.41	24,330	2.08
Paddle boarding, wind surfing or kite boarding	0	0.00	407	0.12	407	0.03

Table A6. Region 4 NE Reef Activity Participation by Season

	Summer		Winter	-	Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	198,216	23.49	52,228	15.94	250,444	21.38
All Snorkeling	194,689	23.08	51,008	15.56	245,697	20.98
Snorkeling from charter/party boat	96,639	11.45	20,972	6.40	117,611	10.04
Snorkeling from rental boat	7,759	0.92	4,241	1.29	12,000	1.02
Snorkeling froma private boat	4,232	0.50	2,440	0.74	6,672	0.57
Snorkeling from shore	100,871	11.96	29,454	8.99	130,326	11.13
All SCUBA Diving	7,759	0.92	4,299	1.31	12,058	1.03
SCUBA Diving from charter/ party boat	7,054	0.84	1,801	0.55	8,855	0.76
SCUBA Diving from a rental boat	705	0.08	1,278	0.39	1,983	0.17
SCUBA Diving from a private boat	0	0.00	58	0.02	58	0.00
SCUBA Diving from shore	0	0.00	1,162	0.35	1,162	0.10
Special Activities while Diving						
Diving for lobsters	0	0.00	58	0.02	58	0.00
Underwater Photography	22,573	2.68	7,669	2.34	30,241	2.58
Spear Fishing	1,411	0.17	232	0.07	1,643	0.14
All Reef Fishing	7,054	0.84	2,150	0.66	9,204	0.79
Inshore and light tackle fishing	7,054	0.84	1,743	0.53	8,797	0.75
Fishing from a charter/party boat	7,054	0.84	1,743	0.53	8,797	0.75
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Other Fishing	0	0.00	407	0.12	407	0.03
Other Fishing from a charter boat	0	0.00	407	0.12	407	0.03
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	407	0.12	407	0.03
Viewing Nature and Wildlife	119,917	14.21	34,393	10.49	154,310	13.17
Glass bottom boat rides	11,992	1.42	1,336	0.41	13,328	1.14
Inshore boating excursions	14,813	1.76	6,274	1.91	21,088	1.80
Viewing nature-private/rental boat	11,286	1.34	4,531	1.38	15,818	1.35
Bioluminescent Bays	50,788	6.02	22,076	6.74	72,865	6.22
Ocean Kayaking	53,610	6.35	9,586	2.93	63,196	5.40
Whale Watching	0	0.00	930	0.28	930	0.08
Manatee Watching	9,170	1.09	1,510	0.46	10,681	0.91
Other Reef Activities	642,614	76.17	213,966	65.29	856,580	73.13
Surfing	2,822	0.33	8,598	2.62	11,420	0.97
Swimming	635,560	75.33	206,472	63.00	842,031	71.88
Paddle boarding, wind surfing or kite boarding	45,851	5.43	12,432	3.79	58,283	4.98

Table A7. Region 5 Culebra & Vieques Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Partici- pants	Rate (%)	Participants	Rate (%)
All Diving	57,137	6.77	28,583	8.72	85,720	7.32
All Snorkeling	56,432	6.69	28,409	8.67	84,840	7.24
Snorkeling from charter/party boat	12,697	1.51	7,901	2.41	20,598	1.76
Snorkeling from rental boat	2,116	0.25	2,498	0.76	4,614	0.39
Snorkeling from a private boat	0	0.00	2,905	0.89	2,905	0.25
Snorkeling from shore	43,029	5.10	19,520	5.96	62,549	5.34
All SCUBA Diving	2,116	0.25	1,046	0.32	3,162	0.27
SCUBA Diving from charter/party boat	1,411	0.17	813	0.25	2,224	0.19
SCUBA Diving from a rental boat	705	0.08	58	0.02	763	0.07
SCUBA Diving from a private boat	0	0.00	116	0.04	116	0.01
SCUBA Diving from shore	0	0.00	116	0.04	116	0.01
Special Activities while Diving						
Diving for lobsters	0	0.00	232	0.07	232	0.02
Underwater Photography	6,349	0.75	4,241	1.29	10,590	0.90
Spear Fishing	1,411	0.17	349	0.11	1,759	0.15
All Reef Fishing	0	0.00	116	0.04	116	0.01
Inshore and light tackle fishing	0	0.00	0	0.00	0	0.00
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Other Fishing	0	0.00	116	0.04	116	0.01
Other Fishing from a charter boat	0	0.00	116	0.04	116	0.01
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	697	0.21	697	0.06
Viewing Nature and Wildlife	35,975	4.26	18,765	5.73	54,740	4.67
Glass bottom boat rides	5,643	0.67	3,137	0.96	8,780	0.75
Inshore boating excursions	4,232	0.50	4,357	1.33	8,590	0.73
Viewing nature-private/rental boat	2,822	0.33	3,834	1.17	6,656	0.57
Bioluminescent Bays	27,510	3.26	11,793	3.60	39,304	3.36
Ocean Kayaking	16,929	2.01	5,519	1.68	22,449	1.92
Whale Watching	0	0.00	58	0.02	58	0.00
Manatee Watching	0	0.00	174	0.05	174	0.01
Other Reef Activities	105,809	12.54	48,858	14.91	154,667	13.20
Surfing	0	0.00	1,801	0.55	1,801	0.15
Swimming	99,461	11.79	43,862	13.38	143,323	12.24
Paddle boarding, wind surfing or	5,643	0.67	4,531	1.38	10,175	0.87
kite boarding						

Table A8. Region 1 NW Reef Activity Participation Within Region by Season¹

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	26,805	21.47	14,931	30.74	41,736	24.07
All Snorkeling	23,278	18.64	14,582	30.02	37,860	21.83
Snorkeling from charter/party boat	5,643	4.52	813	1.67	6,456	3.72
Snoreling from a rental boat	0	0.00	465	0.96	465	0.27
Snorkeling froma private boat	0	0.00	58	0.12	58	0.03
Snorkeling from shore	19,046	15.25	14,175	29.19	33,221	19.16
All SCUBA Diving	3,527	2.82	639	1.32	4,166	2.40
SCUBA Diving from charter/party boat	3,527	2.82	0	0.00	3,527	2.03
SCUBA Diving from a rental boat	0	0.00	116	0.24	116	0.07
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	523	1.08	523	0.30
Special Activities while Diving						
Diving for lobsters	0	0.00	116	0.24	116	0.07
Underwater Photography	0	0.00	2,730	5.62	2,730	1.57
Spear Fishing	0	0.00	232	0.48	232	0.13
All Reef Fishing	0	0.00	930	1.91	930	0.54
Inshore and light tackle fishing	0	0.00	871	1.79	871	0.50
Fishing from a charter/party boat	0	0.00	349	0.72	349	0.20
Fishing from a rental boat	0	0.00	465	0.96	465	0.27
Fishing from a private boat	0	0.00	58	0.12	58	0.03
Other Fishing	0	0.00	58	0.12	58	0.03
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	58	0.12	58	0.03
Fishing from shore	0	0.00	0	0.00	0	0.00
Viewing Nature and Wildlife	2,822	2.26	2,963	6.10	5,784	3.34
Glass bottom boat rides	0	0.00	349	0.72	349	0.20
Inshore boating excursions	0	0.00	290	0.60	290	0.17
Viewing nature-private/rental boat	0	0.00	116	0.24	116	0.07
Bioluminescent Bays	0	0.00	1,569	3.23	1,569	0.90
Ocean Kayaking	2,822	2.26	58	0.12	2,880	1.66
Whale Watching	0	0.00	1,278	2.63	1,278	0.74
Manatee Watching	0	0.00	58	0.12	58	0.03
Other Reef Activities	86,058	68.93	31,894	65.67	117,953	68.01
Surfing	7,054	5.65	9,353	19.26	16,407	9.46
Swimming	83,236	66.67	30,442	62.68	113,679	65.55
Paddle boarding, wind surfing or	4,232	3.39	2,847	5.86	7,079	4.08
kite boarding						

Table A9. Region 2 SW Reef Activity Participation Within Region by Season¹

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	15,519	13.17	10,167	30.02	25,685	16.94
All Snorkeling	15,519	13.17	9,876	29.16	25,395	16.74
Snorkeling from charter/party boat	0	0.00	2,847	8.40	2,847	1.88
Snorkeling from a rental boat	0	0.00	697	2.06	697	0.46
Snorkeling froma private boat	0	0.00	465	1.37	465	0.31
Snorkeling from shore	15,519	13.17	6,158	18.18	21,677	14.29
All SCUBA Diving	4,938	4.19	755	2.23	5,693	3.75
SCUBA Diving from charter/party boat	0	0.00	465	1.37	465	0.31
SCUBA Diving from a rental boat	4,938	4.19	290	0.86	5,228	3.45
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	0	0.00	0	0.00
Special Activities while Diving						
Diving for lobsters	0	0.00	0	0.00	0	0.00
Underwater Photography	2,116	1.80	813	2.40	2,930	1.93
Spear Fishing	0	0.00	58	0.17	58	0.04
All Reef Fishing	2,822	2.40	174	0.51	2,996	1.98
Inshore and light tackle fishing	2,822	2.40	174	0.51	2,996	1.98
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	2,822	2.40	116	0.34	2,938	1.94
Fishing from a private boat	2,822	2.40	58	0.17	2,880	1.90
Other Fishing	0	0.00	0	0.00	0	0.00
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	0	0.00	0	0.00
Viewing Nature and Wildlife	11,992	10.18	9,179	27.10	21,171	13.96
Glass bottom boat rides	0	0.00	523	1.54	523	0.34
Inshore boating excursions	2,116	1.80	3,544	10.46	5,660	3.73
Viewing nature-private/rental boat	8,465	7.19	2,672	7.89	11,137	7.34
Bioluminescent Bays	7,759	6.59	4,473	13.21	12,233	8.07
Ocean Kayaking	2,116	1.80	1,743	5.15	3,859	2.54
Whale Watching	0	0.00	0	0.00	0	0.00
Manatee Watching	0	0.00	0	0.00	0	0.00
Other Reef Activities	69,129	58.68	22,715	67.07	91,844	60.56
Surfing	0	0.00	871	2.57	871	0.57
Swimming	69,129	58.68	21,263	62.78	90,392	59.60
Paddle boarding, wind surfing or	2,116	1.80	930	2.74	3,046	2.01
kite boarding						

Table A10. Region 3 SE Reef Activity Participation Within Region by Season¹

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Partici- pants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	1,918	3.13	1,220	4.22	3,138	3.48
All Snorkeling	1,918	3.13	1,220	4.22	3,138	3.48
Snorkeling from charter/party boat	0	0.00	1,162	4.02	1,162	1.29
Snorkeling from a rental boat	0	0.00	174	0.60	174	0.19
Snorkeling froma private boat	0	0.00	0	0.00	0	0.00
Snorkeling from shore	1,918	3.13	58	0.20	1,976	2.19
All SCUBA Diving	0	0.00	0	0.00	0	0.00
SCUBA Diving from charter/party boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from a rental boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from a private boat	0	0.00	0	0.00	0	0.00
SCUBA Diving from shore	0	0.00	0	0.00	0	0.00
Special Activities while Diving						
Diving for lobsters	0	0.00	116	0.40	116	0.13
Underwater Photography	0	0.00	174	0.60	174	0.19
Spear Fishing	0	0.00	116	0.40	116	0.13
All Reef Fishing	0	0.00	58	0.20	58	0.06
Inshore and light tackle fishing	0	0.00	0	0.00	0	0.00
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Other Fishing	0	0.00	58	0.20	58	0.06
Other Fishing from a charter boat	0	0.00	0	0.00	0	0.00
Other fishing from a party boat	0	0.00	58	0.20	58	0.06
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	290	1.00	290	0.32
Viewing Nature and Wildlife	0	0.00	2,556	8.84	2,556	2.83
Glass bottom boat rides	0	0.00	1,046	3.61	1,046	1.16
Inshore boating excursions	0	0.00	58	0.20	58	0.06
Viewing nature-private/rental boat	0	0.00	116	0.40	116	0.13
Bioluminescent Bays	0	0.00	1,046	3.61	1,046	1.16
Ocean Kayaking	0	0.00	1,336	4.62	1,336	1.48
Whale Watching	0	0.00	0	0.00	0	0.00
Manatee Watching	0	0.00	0	0.00	0	0.00
Other Reef Activities	9,864	16.07	14,582	50.40	24,446	27.07
Surfing	548	0.89	465	1.61	1,013	1.12
Swimming	9,864	16.07	14,466	50.00	24,330	26.94
Paddle boarding, wind surfing or	0	0.00	407	1.41	407	0.45
kite boarding						

Table A11. Region 4 NE Reef Activity Participation Within Region by Season¹

Number of Participants 198,216 194,689 96,639	Participation Rate (%) 27.47 26.98	Number of Participants 52,228	Participation Rate (%)	Number of Participants	Participation Rate (%)
198,216 194,689	27.47		Rate (%)	Participants	Data(0/)
194,689		52.228			Rale (%)
	26.98	,	19.01	250,444	25.14
96,639	1 1 1 1	51,008	18.57	245,697	24.66
	13.39	20,972	7.63	117,611	11.80
7,759	1.08	4,251	1.55	12,010	1.21
4,232	0.59	2,440	0.89	6,672	0.67
100,871	13.98	29,454	10.72	130,326	13.08
7,759	1.08	4,299	1.56	12,058	1.21
7,054	0.98	1,801	0.66	8,855	0.89
705	0.10	1,278	0.47	1,983	0.20
0	0.00	58	0.02	58	0.01
0	0.00	1,162	0.42	1,162	0.12
0	0.00	58	0.02	58	0.01
22,573	3.13	7,669	2.79	30,241	3.04
1,411	0.20	232	0.08	1,643	0.16
7,054	0.98	2,150	0.78	9,204	0.92
7,054	0.98	1,743	0.63	8,797	0.88
7,054	0.98	1,743	0.63	8,797	0.88
0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00
0	0.00	407	0.15	407	0.04
0	0.00	407	0.15	407	0.04
0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00
0	0.00	407	0.15	407	0.04
119,917	16.62	34,393	12.52	154,310	15.49
11,992	1.66	1,336	0.49	13,328	1.34
14,813	2.05	6,274	2.28	21,088	2.12
11,286	1.56	4,531	1.65	15,818	1.59
50,788	7.04	22,076	8.04	72,865	7.31
53,610	7.43	9,586	3.49	63,196	6.34
0	0.00	930	0.34	930	0.09
9,170	1.27	1,510	0.55	10,681	1.07
642,614	89.05	213,966	77.88	856,580	85.97
2,822	0.39	8,598	3.13	11,420	1.15
635,560	88.07	206,472	75.15	842,031	84.51
45,851	6.35	12,432	4.53	58,283	5.85
	100,871 7,759 7,054 705 0 0 0 0 0 0 22,573 1,411 7,054 7,054 7,054 7,054 0,788 53,610 0 9,170 642,614	100,871 13.98 7,759 1.08 7,054 0.98 705 0.10 0 0.00 0 0.00 0 0.00 22,573 3.13 1,411 0.20 7,054 0.98 7,054 0.98 7,054 0.98 7,054 0.98 7,054 0.98 7,054 0.98 7,054 0.98 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 11,992 1.66 14,813 2.05 11,286 1.56 50,788 7.04 53,610 7.43 0 0.00 9,170 1.27 642,614 89.05	100,87113.9829,4547,7591.084,2997,0540.981,8017050.101,27800.005800.001,16200.005822,5733.137,6691,4110.202327,0540.982,1507,0540.981,7437,0540.981,7437,0540.981,74300.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00000.00407119,91716.6234,39311,9921.661,33614,8132.056,27411,2861.564,53150,7887.0422,07653,6107.439,58600.009309,1701.271,510642,61489.05213,9662,8220.398,598635,56088.07206,472 <td>100,871 13.98 29,454 10.72 7,759 1.08 4,299 1.56 7,054 0.98 1,801 0.66 705 0.10 1,278 0.47 0 0.00 58 0.02 0 0.00 58 0.02 0 0.00 58 0.02 2 0 0.00 58 0.02 22,573 3.13 7,669 2.79 1,411 0.20 232 0.08 7,054 0.98 2,150 0.78 7,054 0.98 1,743 0.63 7,054 0.98 1,743 0.63 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0</td> <td>100,871 13.98 29,454 10.72 130,326 7,759 1.08 4,299 1.56 12,058 7,054 0.98 1,801 0.66 8,855 705 0.10 1,278 0.47 1,983 0 0.00 58 0.02 58 0 0.00 1,162 0.42 1,162 0 0.00 58 0.02 58 0 0.00 58 0.02 58 22,573 3.13 7,669 2.79 30,241 1,411 0.20 232 0.08 1,643 7,054 0.98 1,743 0.63 8,797 7,054 0.98 1,743 0.63 8,797 0 0.00 0 0.00 0 0 0 0.00 0 0.00 0 0 0 0.00 0 0.00 0 0 0 0.00 0</td>	100,871 13.98 29,454 10.72 7,759 1.08 4,299 1.56 7,054 0.98 1,801 0.66 705 0.10 1,278 0.47 0 0.00 58 0.02 0 0.00 58 0.02 0 0.00 58 0.02 2 0 0.00 58 0.02 22,573 3.13 7,669 2.79 1,411 0.20 232 0.08 7,054 0.98 2,150 0.78 7,054 0.98 1,743 0.63 7,054 0.98 1,743 0.63 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0	100,871 13.98 29,454 10.72 130,326 7,759 1.08 4,299 1.56 12,058 7,054 0.98 1,801 0.66 8,855 705 0.10 1,278 0.47 1,983 0 0.00 58 0.02 58 0 0.00 1,162 0.42 1,162 0 0.00 58 0.02 58 0 0.00 58 0.02 58 22,573 3.13 7,669 2.79 30,241 1,411 0.20 232 0.08 1,643 7,054 0.98 1,743 0.63 8,797 7,054 0.98 1,743 0.63 8,797 0 0.00 0 0.00 0 0 0 0.00 0 0.00 0 0 0 0.00 0 0.00 0 0 0 0.00 0

Table A12. Region 5 Culebra & Vieques Reef Activity Participation Within Region by Season¹

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	57,137	50.94	28,583	52.68	85,720	51.51
All Snorkeling	56,432	50.31	28,409	52.36	84,840	50.98
Snorkeling from charter/party boat	12,697	11.32	7,901	14.56	20,598	12.38
Snorkeling from a rental boat	2,116	1.89	2,498	4.60	4,614	2.77
Snorkeling froma private boat	0	0.00	2,905	5.35	2,905	1.75
Snorkeling from shore	43,029	38.36	19,520	35.97	62,549	37.59
All SCUBA Diving	2,116	1.89	1,046	1.93	3,162	1.90
SCUBA Diving from charter/party boat	1,411	1.26	813	1.50	2,224	1.34
SCUBA Diving from a rental boat	705	0.63	58	0.11	763	0.46
SCUBA Diving from a private boat	0	0.00	116	0.21	116	0.07
SCUBA Diving from shore	0	0.00	116	0.21	116	0.07
Special Activities while Diving						
Diving for lobsters	0	0.00	232	0.43	232	0.14
Underwater Photography	6,349	5.66	4,241	7.82	10,590	6.36
Spear Fishing	1,411	1.26	349	0.64	1,759	1.06
All Reef Fishing	0	0.00	116	0.21	116	0.07
Inshore and light tackle fishing	0	0.00	0	0.00	0	0.00
Fishing from a charter/party boat	0	0.00	0	0.00	0	0.00
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Other Fishing	0	0.00	116	0.21	116	0.07
Other Fishing from a charter boat	0	0.00	116	0.21	116	0.07
Other fishing from a party boat	0	0.00	0	0.00	0	0.00
Other Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Other fishing from a private boat	0	0.00	0	0.00	0	0.00
Fishing from shore	0	0.00	697	1.28	697	0.42
Viewing Nature and Wildlife	35,975	32.08	18,765	34.58	54,740	32.89
Glass bottom boat rides	5,643	5.03	3,137	5.78	8,780	5.28
Inshore boating excursions	4,232	3.77	4,357	8.03	8,590	5.16
Viewing nature-private/rental boat	2,822	2.52	3,834	7.07	6,656	4.00
Bioluminescent Bays	27,510	24.53	11,793	21.73	39,304	23.62
Ocean Kayaking	16,929	15.09	5,519	10.17	22,449	13.49
Whale Watching	0	0.00	58	0.11	58	0.03
Manatee Watching	0	0.00	174	0.32	174	0.10
Other Reef Activities	105,809	94.34	48,858	90.04	154,667	92.94
Surfing	0	0.00	1,801	3.32	1,801	1.08
Swimming	99,461	88.68	43,862	80.84	143,323	86.12
Paddle boarding, wind surfing or	5,643	5.03	4,531	8.35	10,175	6.11

Activity	Summer	Winter
Snorkeling		
Snorkeling from charter/party boat	1.0	1.0
Snorkeling froma rental boat	0.0	1.0
Snorkeling from a private boat	0.0	1.0
Snorkeling from shore	1.6	1.4
All SCUBA Diving		
SCUBA Diving from charter/party boat	1.0	0.0
SCUBA Diving from a rental boat	0.0	1.0
SCUBA Diving from a private boat	0.0	0.0
SCUBA Diving from shore	0.0	1.0
Inshore and light tackle fishing		
Fishing from a charter/party boat	0.0	1.0
Fishing from a rental boat	0.0	1.0
Fishing from a private boat	0.0	2.0
Other Fishing		
Other Fishing from a charter boat	0.0	0.0
Other fishing from a party boat	0.0	0.0
Other Fishing from a rental boat	0.0	0.0
Other fishing from a private boat	0.0	1.0
Fishing from shore	0.0	0.0
Viewing Nature and Wildlife		
Glass bottom boat rides	0.0	1.0
Inshore boating excursions	0.0	1.0
Viewing nature-private/rental boat	0.0	1.3
Other Reef Activities		
Surfing	1.9	2.6
Swimming	2.5	2.4
Paddle boarding, wind surfing or	1.6	1.6
kite boarding		

 Table A13.
 Average Number of Reef Activity Days by Season: Region 1 NW

Activity	Summer	Winter
Snorkeling		
Snorkeling from charter/party boat	0.0	1.0
Snorkeling from a rental boat	0.0	1.0
Snorkeling from a private boat	0.0	1.0
Snorkeling from shore	1.0	1.0
SCUBA Diving		
SCUBA Diving from charter/party boat	0.0	1.0
SCUBA Diving from a rental boat	1.0	1.0
SCUBA Diving from a private boat	0.0	0.0
SCUBA Diving from shore	0.0	0.0
Inshore and light tackle fishing		
Fishing from a charter/party boat	0.0	0.0
Fishing from a rental boat	1.0	1.0
Fishing from a private boat	1.7	1.0
Other Fishing		
Other Fishing from a charter boat	0.0	0.0
Other fishing from a party boat	0.0	0.0
Other Fishing from a rental boat	1.0	1.0
Other fishing from a private boat	1.0	1.0
Fishing from shore	0.0	0.0
Viewing Nature and Wildlife		
Glass bottom boat rides	0.0	1.0
Inshore boating excursions	1.0	1.0
Viewing nature-private/rental boat	1.0	1.0
Other Reef Activities		
Surfing	0.0	1.7
Swimming	1.4	1.6
Paddle boarding, wind surfing or	1.3	1.9
kite boarding		

 Table A14.
 Average Number of Reef Activity Days by Season: Region 2 SW

Table A15. Average Number of Reef Activity Days by Season: Region 3 SE

Activity	Summer	Winter
Snorkeling		
Snorkeling from charter/party boat	0.0	1.0
Snorkeling froma rental boat	0.0	1.0
Snorkeling from a private boat	0.0	0.0
Snorkeling from shore	2.0	1.0
SCUBA Diving		
SCUBA Diving from charter/party boat	0.0	0.0
SCUBA Diving from a rental boat	0.0	0.0
SCUBA Diving from a private boat	0.0	0.0
SCUBA Diving from shore	0.0	0.0
Inshore and light tackle fishing		
Fishing from a charter/party boat	0.0	0.0
Fishing from a rental boat	0.0	0.0
Fishing from a private boat	0.0	0.0
Other Fishing		
Other Fishing from a charter boat	0.0	0.0
Other fishing from a party boat	0.0	1.0
Other Fishing from a rental boat	0.0	0.0
Other fishing from a private boat	0.0	0.0
Fishing from shore	0.0	1.0
Viewing Nature and Wildlife		
Glass bottom boat rides	0.0	1.0
Inshore boating excursions	0.0	1.0
Viewing nature-private/rental boat	0.0	1.0
Other Reef Activities		
Surfing	2.0	5.3
Swimming	1.0	1.2
Paddle boarding, wind surfing or	0.0	1.0
kite boarding		

Table A16. Average Number of Reef Activity Days by Season: Region 4 NE

	_	
Activity	Summer	Winter
Snorkeling		
Snorkeling from charter/party boat	1.1	1.2
Snorkeling froma rental boat	1.0	2.0
Snorkeling from a private boat	1.5	2.0
Snorkeling from shore	1.4	1.6
SCUBA Diving		
SCUBA Diving from charter/party boat	2.0	1.1
SCUBA Diving from a rental boat	1.0	1.0
SCUBA Diving from a private boat	0.0	1.0
SCUBA Diving from shore	0.0	3.0
Inshore and light tackle fishing		
Fishing from a charter/party boat	1.7	1.3
Fishing from a rental boat	0.0	0.0
Fishing from a private boat	0.0	0.0
Other Fishing		
Other Fishing from a charter boat	0.0	1.0
Other fishing from a party boat	0.0	0.0
Other Fishing from a rental boat	0.0	0.0
Other fishing from a private boat	0.0	0.0
Fishing from shore	0.0	1.1
Viewing Nature and Wildlife		
Glass bottom boat rides	1.0	3.0
Inshore boating excursions	1.0	1.1
Viewing nature-private/rental boat	1.2	1.7
Other Reef Activities		
Surfing	1.3	2.2
Swimming	2.7	3.6
Paddle boarding, wind surfing or	1.1	1.5
kite boarding		

Table A17. Average Number of Reef Activity Days by Season: Region 5 Culebra & Vieques

Activity	Summer	Winter
Snorkeling		
Snorkeling from charter/party boat	1.0	3.0
Snorkeling froma rental boat	2.0	1.0
Snorkeling from a private boat	0.0	1.0
Snorkeling from shore	1.4	1.5
SCUBA Diving		
SCUBA Diving from charter/party boat	1.0	1.0
SCUBA Diving from a rental boat	1.0	1.0
SCUBA Diving from a private boat	0.0	2.0
SCUBA Diving from shore	0.0	1.3
Inshore and light tackle fishing		
Fishing from a charter/party boat	0.0	0.0
Fishing from a rental boat	0.0	0.0
Fishing from a private boat	0.0	0.0
Other Fishing		
Other Fishing from a charter boat	0.0	1.0
Other fishing from a party boat	0.0	0.0
Other Fishing from a rental boat	0.0	0.0
Other fishing from a private boat	0.0	0.0
Fishing from shore	0.0	1.0
Viewing Nature and Wildlife		
Glass bottom boat rides	1.0	1.2
Inshore boating excursions	1.3	1.0
Viewing nature-private/rental boat	1.6	1.5
Other Reef Activities		
Surfing	0.0	1.8
Swimming	1.9	2.0
Paddle boarding, wind surfing or	1.0	1.4
kite boarding		

Table A18.	Total Number of Reef Activty Days by Season: All Regions
	Total Namber of Neer Neivey Days by Season. All Neglono

Activity	Summer	Winter	Annual
All Diving	382,932	186,641	569,573
All Snorkeling	361,771	176,086	537,857
Snorkeling from charter/party boat	124,643	88,374	213,017
Snorkeling froma rental boat	124,043	12,084	24,075
v			
Snorkeling from a private boat	6,348	7,843	14,191
Snorkeling from shore	251,289	102,467	353,756
All SCUBA Diving	21,161	10,555	31,716
SCUBA Diving from charter/party boat	19,046	3,898	22,944
SCUBA Diving from a rental boat	2,115	2,207	4,322
SCUBA Diving from a private boat	0	290	290
SCUBA Diving from shore	0	4,160	4,160
All Reef Fishing	17,636	5,854	23,490
Inshore and light tackle fishing	17,636	3,373	21,009
Fishing from a charter/party boat	11,992	2,615	14,607
Fishing from a rental boat	2,822	584	3,406
Fishing from a private boat	2,822	174	2,996
Other Fishing	0	2,481	2,481
Other Fishing from a charter boat	0	872	872
Other fishing from a party boat	0	58	58
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	116	116
Fishing from shore	0	1,435	1,435
Viewing Nature and Wildlife	66,589	40,580	107,169
Glass bottom boat rides	17,635	9,167	26,802
Inshore boating excursions	22,431	15,150	37,581
Viewing nature-private/rental boat	26,523	16,263	42,786
Other Reef Activities	2,303,492	1,037,606	3,341,098
Surfing	18,168	50,422	68,590
Swimming	2,219,723	955,464	3,175,187
Paddle boarding, wind surfing or	65,601	31,720	97,321
kite boarding			

	Summer	Winter	Annual
All Diving	39,644	22,459	62,103
All Snorkeling	36,117	21,181	57,298
Snorkeling from charter/party boat	5,643	813	6,456
Snorkeling froma rental boat	0	465	465
Snorkeling from a private boat	0	58	58
Snorkeling from shore	30,474	19,845	50,319
All SCUBA Diving	3,527	1,278	4,805
SCUBA Diving from charter/party boat	3,527	639	4,166
SCUBA Diving from a rental boat	0	116	116
SCUBA Diving from a private boat	0	0	0
SCUBA Diving from shore	0	523	523
All Reef Fishing	0	930	930
Inshore and light tackle fishing	0	930	930
Fishing from a charter/party boat	0	349	349
Fishing from a rental boat	0	465	465
Fishing from a private boat	0	116	116
Other Fishing	0	0	0
Other Fishing from a charter boat	0	0	0
Other fishing from a party boat	0	0	0
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	0	0
Fishing from shore	0	0	0
Viewing Nature and Wildlife	0	660	660
Glass bottom boat rides	0	349	349
Inshore boating excursions	0	290	290
Viewing nature-private/rental boat	0	21	21
Other Reef Activities	228,264	101,934	330,198
Surfing	13,403	24,318	37,720
Swimming	208,090	73,061	281,151
Paddle boarding, wind surfing or	6,771	4,555	11,326
kite boarding			

Activity	Summer	Winter	Annual
All Diving	20,457	10,690	31,147
All Snorkeling	15,519	9,470	24,989
Snorkeling from charter/party boat	0	2,847	2,847
Snorkeling froma rental boat	0	465	465
Snorkeling from a private boat	0	0	0
Snorkeling from shore	15,519	6,158	21,677
All SCUBA Diving	4,938	1,220	6,158
SCUBA Diving from charter/party boat	0	465	465
SCUBA Diving from a rental boat	4,938	755	5,693
SCUBA Diving from a private boat	0	0	0
SCUBA Diving from shore	0	0	0
All Reef Fishing	5,644	174	5,818
Inshore and light tackle fishing	5,644	174	5,818
Fishing from a charter/party boat	0	0	0
Fishing from a rental boat	2,822	116	2,938
Fishing from a private boat	2,822	58	2,880
Other Fishing	0	0	0
Other Fishing from a charter boat	0	0	0
Other fishing from a party boat	0	0	0
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	0	0
Fishing from shore	0	0	0
Viewing Nature and Wildlife	10,581	6,739	17,320
Glass bottom boat rides	0	523	523
Inshore boating excursions	2,116	3,544	5,660
Viewing nature-private/rental boat	8,465	2,672	11,137
Other Reef Activities	99,531	37,269	136,800
Surfing	0	1,481	1,481
Swimming	96,781	34,021	130,801
Paddle boarding, wind surfing or	2,751	1,767	4,518
kite boarding			

Table A20	Total Number of Reef Activty Days b	y Season: Region 2 SW
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Activity	Summer	Winter	Annual
All Diving	3,836	1,394	5,230
All Snorkeling	3,836	1,394	5,230
Snorkeling from charter/party boat	0	1,162	1,162
Snorkeling froma rental boat	0	174	174
Snorkeling from a private boat	0	0	0
Snorkeling from shore	3,836	58	3,894
All SCUBA Diving	0	0	0
SCUBA Diving from charter/party boat	0	0	0
SCUBA Diving from a rental boat	0	0	0
SCUBA Diving from a private boat	0	0	0
SCUBA Diving from shore	0	0	0
All Reef Fishing	0	348	348
Inshore and light tackle fishing	0	0	0
Fishing from a charter/party boat	0	0	0
Fishing from a rental boat	0	0	0
Fishing from a private boat	0	0	0
Other Fishing	0	348	348
Other Fishing from a charter boat	0	0	0
Other fishing from a party boat	0	58	58
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	0	0
Fishing from shore	0	290	290
Viewing Nature and Wildlife	0	1,220	1,220
Glass bottom boat rides	0	1,046	1,046
Inshore boating excursions	0	58	58
Viewing nature-private/rental boat	0	116	116
Other Reef Activities	10,960	20,231	31,191
Surfing	1,096	2,465	3,561
Swimming	9,864	17,359	27,223
Paddle boarding, wind surfing or	0	407	407
kite boarding			

 Table A21.
 Total Number of Reef Activity Days by Season: Region 3 SE

Activity	Summer	Winter	Annual
All Diving	276,442	92,458	368,900
All Snorkeling	261,629	85,655	347,284
Snorkeling from charter/party boat	106,303	25,166	131,469
Snorkeling froma rental boat	7,759	8,482	16,241
Snorkeling from a private boat	6,348	4,880	11,228
Snorkeling from shore	141,219	47,126	188,346
All SCUBA Diving	14,813	6,803	21,616
SCUBA Diving from charter/party boat	14,108	1,981	16,089
SCUBA Diving from a rental boat	705	1,278	1,983
SCUBA Diving from a private boat	0	58	58
SCUBA Diving from shore	0	3,486	3,486
All Reef Fishing	11,992	3,121	15,112
Inshore and light tackle fishing	11,992	2,266	14,258
Fishing from a charter/party boat	11,992	2,266	14,258
Fishing from a rental boat	0	0	0
Fishing from a private boat	0	0	0
Other Fishing	0	855	855
Other Fishing from a charter boat	0	407	407
Other fishing from a party boat	0	0	0
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	0	0
Fishing from shore	0	448	448
Viewing Nature and Wildlife	40,348	18,612	58,960
Glass bottom boat rides	11,992	4,008	16,000
Inshore boating excursions	14,813	6,901	21,714
Viewing nature-private/rental boat	13,543	7,703	21,246
Other Reef Activities	1,770,117	780,863	2,550,980
Surfing	3,669	18,916	22,584
Swimming	1,716,012	743,299	2,459,311
Paddle boarding, wind surfing or	50,436	18,648	69,084
kite boarding			

 Table A22.
 Total Number of Reef Activity Days by Season: Region 4 NE

Activity	Summer	Winter	Annual
All Diving	79,286	59,640	138,925
All Snorkeling	77,170	58,386	135,556
Snorkeling from charter/party boat	12,697	23,703	36,400
Snorkeling froma rental boat	4,232	2,498	6,730
Snorkeling from a private boat	0	2,905	2,905
Snorkeling from shore	60,241	29,280	89,521
All SCUBA Diving	2,116	1,254	3,370
SCUBA Diving from charter/party boat	1,411	813	2,224
SCUBA Diving from a rental boat	705	58	763
SCUBA Diving from a private boat	0	232	232
SCUBA Diving from shore	0	151	151
All Reef Fishing	0	813	813
Inshore and light tackle fishing	0	0	0
Fishing from a charter/party boat	0	0	0
Fishing from a rental boat	0	0	0
Fishing from a private boat	0	0	0
Other Fishing	0	813	813
Other Fishing from a charter boat	0	116	116
Other fishing from a party boat	0	0	0
Other Fishing from a rental boat	0	0	0
Other fishing from a private boat	0	0	0
Fishing from shore	0	697	697
Viewing Nature and Wildlife	15,660	13,872	29,532
Glass bottom boat rides	5,643	3,764	9,407
Inshore boating excursions	5,502	4,357	9,859
Viewing nature-private/rental boat	4,515	5,751	10,266
Other Reef Activities	194,619	97,309	291,928
Surfing	0	3,242	3,242
Swimming	188,976	87,724	276,700
Paddle boarding, wind surfing or	5,643	6,343	11,986
kite boarding			

 Table A23.
 Total Number of Reef Activity Days by Season: Region 5 Culebra & Vieques

	Summer		Winter		Annual
Region/Activity	Average Num-	Total Num-	Average	Total Num-	Total Num-
	ber	ber	Number	ber	ber
	of Dives	of Dives	of Dives	of Dives	of Dives
Region 1 - Northwest					
Snorekling					
Charter/party boat	1.67	9,424	5.50	4,472	13,895
Rental boat	0.00	0	1.00	465	465
Private boat	0.00	0	2.00	116	116
Shore	2.00	38,092	2.27	32,177	70,269
SCUBA Diving					
Charter/party boat	1.50	5,291	0.00	0	5,291
Rental boat	0.00	0	2.67	310	310
Private boat	0.00	0	0.00	0	0
Shore	0.00	0	2.00	1,046	1,046
Region 2 - Southwest					
Snorekling					
Charter/party boat	0.00	0	2.50	7,118	7,118
Rental boat	0.00	0	1.00	697	697
Private boat	0.00	0	0.00	0	0
Shore	1.00	15,519	0.00	0	15,519
SCUBA Diving					0
Charter/party boat	0.00	0	1.00	465	465
Rental boat	2.00	9,876	1.00	290	10,166
Private boat	0.00	0	0.00	0	0
Shore	0.00	0	0.00	0	0
Region 3 - Southeast					
Snorekling					
Charter/party boat	0.00	0	1.00	1,162	1,162
Rental boat	0.00	0	1.00	174	174
Private boat	0.00	0	0.00	0	0
Shore	2.00	3,836	2.00	116	3,952
SCUBA Diving					0
Charter/party boat	0.00	0	0.00	0	0
Rental boat	0.00	0	0.00	0	0
Private boat	0.00	0	0.00	0	0
Shore	0.00	0	0.00	0	0

Table A24. Number of Dives for Reef Using Activities by Region and Season

				1	1
	Summer		Winter		Annual
Region/Activity	Average Num-	Total Num-	Average Num-	Total Num-	Total
	ber	ber	ber	ber	Number
	of Dives	of Dives	of Dives	of Dives	of Dives
Region 4 - Northeast					
Snorekling					
Charter/party boat	2.17	209,707	1.63	34,184	243,891
Rental boat	1.50	11,639	2.00	8,482	20,121
Private boat	2.00	8,464	1.67	4,075	12,539
Shore	2.71	273,360	1.57	46,243	319,603
SCUBA Diving					
Charter/party boat	1.00	7,054	3.33	5,997	13,051
Rental boat	1.00	705	1.00	1,278	1,983
Private boat	0.00	0	1.00	58	58
Shore	0.00	0	2.00	2,324	2,324
Region 5 - Culebra & Vieques					
Snorekling					
Charter/party boat	1.00	12,697	3.33	26,310	39,007
Rental boat	2.00	4,232	1.00	2,498	6,730
Private boat	0.00	0	1.00	2,905	2,905
Shore	1.82	78,313	2.00	39,040	117,353
SCUBA Diving					0
Charter/party boat	1.00	1,411	2.50	2,033	3,444
Rental boat	1.00	705	1.00	58	763
Private boat	0.00	0	1.00	116	116
Shore	0.00	0	2.80	325	325

Table A24. Number of Dives for Reef Using Activities by Region and Season (continued)

Table A25. Non-Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Partici- pants	Rate (%)	Partici- pants	Rate (%)	Partici- pants	Rate (%)
Offshore Fishing	9,170	1.09	6,042	1.84	15,212	1.30
Fishing from a charter boat	4,232	0.50	4,648	1.42	8,880	0.76
Fishing from a rental boat	1,411	0.17	639	0.20	2,050	0.17
Fishing from a private boat	6,349	0.75	930	0.28	7,278	0.62
Personal Watercraft Use	39,502	4.68	15,686	4.79	55,188	4.71
Personal Watercraft-rental boat	33,859	4.01	12,432	3.79	46,291	3.95
Personal Watercraft-private boat	7,054	0.84	3,428	1.05	10,482	0.89
Sailing	40,913	4.85	14,756	4.50	55,669	4.75
Sailing from charter boat	32,448	3.85	10,573	3.23	43,022	3.67
Sailing from rental boat	4,232	0.50	3,079	0.94	7,311	0.62
Sailing from private boat	4,232	0.50	1,162	0.35	5,394	0.46
Other Boating	110,747	13.13	32,301	9.86	143,048	12.21
Other Boating from charter boat	67,718	8.03	17,661	5.39	85,379	7.29
Other boating from rental boat	36,680	4.35	9,528	2.91	46,208	3.94
Other boating from private boat	7,759	0.92	6,623	2.02	14,382	1.23
Viewing Nature and Wild- life-land	244,066	28.93	69,424	21.18	313,490	26.76
Wildlife Observation or Pho- tography	225,021	26.67	63,150	19.27	288,170	24.60
Other nature study and obser- vation	71,950	8.53	19,230	5.87	91,180	7.78
Photography of Natural Land- scapes	705	0.08	465	0.14	1,170	0.10
Beach Activities-not water- based	670,830	79.52	268,053	90.47	938,883	80.15
Sunbathing	649,668	77.01	239,993	73.23	889,660	75.95
Collection shells or seaglass	166,473	19.73	66,171	20.19	232,644	19.86
Camping-Backpacking- Hiking-Picnicking	341,411	40.47	90,571	27.64	431,982	36.88
Backpacking	14,813	1.76	4,938	1.51	19,751	1.69
Camping in developed camp- grounds	5,643	0.67	1,569	0.48	7,212	0.62
Camping in primitive camp- grounds	705	0.08	988	0.30	1,693	0.14
Day Hiking	217,967	25.84	67,275	20.53	285,241	24.35
Attending guided walk	68,423	8.11	15,628	4.77	84,051	7.18
Self-guided nature or historic trail	153,070	18.14	40,086	12.23	193,156	16.49

 Table A25.
 Non-Reef Activity Participation by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Partici- pants	Rate (%)
Cultural, Historical & Tourist Attractions	665,186	78.85	187,474	57.21	852,661	72.79
Visiting historic areas, sites, memorials	507,178	60.12	141,172	43.08	648,350	55.35
Attending special events (fairs, festivals)	57,137	6.77	18,242	5.57	75,379	6.44
Attending outdoor concerts, plays	33,859	4.01	14,582	4.45	48,441	4.14
Attending indoor concerts, plays	18,340	2.17	7,611	2.32	25,951	2.22
Sightsseing tours & attractions (paid)	184,108	21.82	46,651	14.24	230,759	19.70
Sightseeing (not paid)	244,066	28.93	79,707	24.32	323,773	27.64
Reading roadside exhibits or markers	98,050	11.62	22,832	6.97	120,881	10.32
Visiting museum, education facility	159,419	18.90	39,214	11.97	198,633	16.96
Attending outdoor sports events	6,349	0.75	6,507	1.99	12,855	1.10
Attending indoor sports events	18,340	2.17	2,208	0.67	20,548	1.75
Agricultural tourism	29,627	3.51	6,855	2.09	36,482	3.11
Visiting forest or nature pre- serves	336,473	39.88	75,640	23.08	412,113	35.18
Visiting caves	90,290	10.70	14,524	4.43	104,814	8.95
Outdoor Sports	138,963	16.47	32,185	9.82	171,148	14.61
Golf	6,349	0.75	5,287	1.61	11,635	0.99
Tennis	3,527	0.42	4,299	1.31	7,826	0.67
Zip Lining	95,228	11.29	13,013	3.97	108,242	9.24
Mountain climbing, rock climbing or	46,556	5.52	6,216	1.90	52,772	4.51
Rappeling						
Other outdoor sports or games	22,573	2.68	8,366	2.55	30,938	2.64
Bicycling-Horseback riding- Driving for	102,282	12.12	25,330	7.73	127,612	10.89
Pleasure						
Bicycling	13,402	1.59	5,112	1.56	18,515	1.58
Horseback riding	27,510	3.26	7,901	2.41	35,411	3.02
Driving for Pleasure (mopeds, motorcycles)	75,477	8.95	13,885	4.24	89,362	7.63
Other Activities	128,382	15.22	39,389	12.02	167,771	14.32
Attended Wedding	23,278	2.76	5,461	1.67	28,739	2.45
Visited Casino	128,382	15.22	39,389	12.02	167,770	14.32

Table A26.	Region 1 NW Non-Reef Activity	y Participation by Season
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	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Partici-	Rate (%)	Partici-	Rate (%)	Partici-	Rate (%)
	pants		pants		pants	
Offshore Fishing	3,527	0.42	3,428	1.05	6,955	0.59
Fishing from a charter boat	0	0.00	2,905	0.89	2,905	0.25
Fishing from a rental boat	0	0.00	523	0.16	523	0.04
Fishing from a private boat	3,527	0.42	116	0.04	3,643	0.31
Personal Watercraft Use	3,527	0.42	349	0.11	3,876	0.33
Personal Watercraft-rental boat	3,527	0.42	349	0.11	3,876	0.33
Personal Watercraft-private boat	0	0.00	0	0.00	0	0.00
Sailing	0	0.00	2,847	0.87	2,847	0.24
Sailing from charter boat	0	0.00	2,324	0.71	2,324	0.20
Sailing from rental boat	0	0.00	407	0.12	407	0.03
Sailing from private boat	0	0.00	116	0.04	116	0.01
Other Boating	6,349	0.75	2,672	0.82	9,021	0.77
Other Boating from charter boat	3,527	0.42	1,685	0.51	5,212	0.44
Other boating from rental boat	0	0.00	988	0.30	988	0.08
Other boating from private boat	2,822	0.33	349	0.11	3,170	0.27
Viewing Nature and Wildlife-	55,021	6.52	12,723	3.88	67,744	5.78
land						
Wildlife Observation or Photog-	33,154	3.93	5,403	1.65	38,556	3.29
raphy						
Other nature study and obser- vation	12,697	1.51	2,324	0.71	15,021	1.28
Photography of Natural Land- scapes	35,270	4.18	10,341	3.16	45,611	3.89
Beach Activities-not water-	80,415	9.53	29,106	8.88	109,521	9.35
based						
Sunbathing	79,710	9.45	26,259	8.01	105,969	9.05
Collection shells or seaglass	19,751	2.34	11,387	3.47	31,138	2.66
Camping-Backpacking-Hik- ing-Picnicking	32,448	3.85	11,387	3.47	43,835	3.74
Backpacking	0	0.00	349	0.11	349	0.03
Camping in developed camp- grounds	0	0.00	232	0.07	232	0.02
Camping in primitive camp- grounds	705	0.08	0	0.00	705	0.06
Day Hiking	23,278	2.76	7,552	2.30	30,830	2.63
Attending guided walk	5,643	0.67	1,046	0.32	6,689	0.57
Self-guided nature or historic trail	14,108	1.67	4,764	1.45	18,872	1.61
Picnicking	0	0.00	1,975	0.60	1,975	0.17

Table A26. Region 1 NW Non-Reef Activity Participation by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Participants	Rate (%)	Partici- pants	Rate (%)	Partici- pants	Rate (%)
Cultural, Historical & Tourist At- tractions	66,307	7.86	20,914	6.38	87,221	7.45
Visiting historic areas, sites, me- morials	13,402	1.59	8,772	2.68	22,175	1.89
Attending special events (fairs, festivals)	19,751	2.34	3,660	1.12	23,411	2.00
Attending outdoor concerts, plays	3,527	0.42	930	0.28	4,456	0.38
Attending indoor concerts, plays	1,411	0.17	290	0.09	1,701	0.15
Sightsseing tours & attractions (paid)	6,349	0.75	2,905	0.89	9,253	0.79
Sightseeing (not paid)	17,635	2.09	10,109	3.08	27,743	2.37
Reading roadside exhibits or mark- ers	6,349	0.75	2,266	0.69	8,614	0.74
Visiting museum, education facility	2,822	0.33	3,079	0.94	5,901	0.50
Attending outdoor sports events	0	0.00	523	0.16	523	0.04
Attending indoor sports events	0	0.00	523	0.16	523	0.04
Agricultural tourism	0	0.00	697	0.21	697	0.06
Visiting forest or nature preserves	11,992	1.42	2,672	0.82	14,664	1.25
Visiting caves	26,100	3.09	6,216	1.90	32,316	2.76
Outdoor Sports	4,232	0.50	2,150	0.66	6,382	0.54
Golf	0	0.00	349	0.11	349	0.03
Tennis	0	0.00	755	0.23	755	0.06
Zip Lining	1,411	0.17	349	0.11	1,759	0.15
Mountain climbing, rock climbing or	1,411	0.17	0	0.00	1,411	0.12
Rappeling					0	0.00
Other outdoor sports or games	1,411	0.17	697	0.21	2,108	0.18
Bicycling-Horseback riding- Driving for	10,581	1.25	2,440	0.74	13,021	1.11
Pleasure						
Bicycling	0	0.00	174	0.05	174	0.01
Horseback riding	2,822	0.33	1,394	0.43	4,216	0.36
Driving for Pleasure (mopeds, motorcycles)	7,759	0.92	1,336	0.41	9,096	0.78
Other Activities	4,938	0.59	1,801	0.55	6,739	0.58
Attended Wedding	4,938	0.59	174	0.05	5,112	0.44
Visited Casino	0	0.00	1,627	0.50	1,627	0.14

Table A27. Region 2 SW Non-Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	0	0.00	2,382	0.73	2,382	0.20
Fishing from a charter boat	0	0.00	2,324	0.71	2,324	0.20
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	58	0.02	58	0.00
Personal Watercraft Use	2,116	0.25	523	0.16	2,639	0.23
Personal Watercraft-rental boat	0	0.00	58	0.02	58	0.00
Personal Watercraft-private boat	2,116	0.25	465	0.14	2,581	0.22
Sailing	0	0.00	3,137	0.96	3,137	0.27
Sailing from charter boat	0	0.00	2,324	0.71	2,324	0.20
Sailing from rental boat	0	0.00	581	0.18	581	0.05
Sailing from private boat	0	0.00	232	0.07	232	0.02
Other Boating	9,170	1.09	3,137	0.96	12,307	1.05
Other Boating from charter boat	3,527	0.42	1,394	0.43	4,921	0.42
Other boating from rental boat	3,527	0.42	1,394	0.43	4,921	0.42
Other boating from private boat	2,116	0.25	349	0.11	2,465	0.21
Viewing Nature and Wildlife- land	33,154	3.93	9,179	2.80	42,333	3.61
Wildlife Observation or Pho- tography	4,938	0.59	3,660	1.12	8,598	0.73
Other nature study and obser- vation	11,992	1.42	755	0.23	12,747	1.09
Photography of Natural Land- scapes	22,573	2.68	8,075	2.46	30,648	2.62
Beach Activities-not water- based	61,369	7.27	19,869	6.06	81,238	6.94
Sunbathing	51,494	6.10	18,707	5.71	70,201	5.99
Collection shells or seaglass	17,635	2.09	4,996	1.52	22,631	1.93
Camping-Backpacking-Hik- ing-Picnicking	25,394	3.01	5,693	1.74	31,088	2.65
Backpacking	2,822	0.33	232	0.07	3,054	0.26
Camping in developed camp- grounds	0	0.00	349	0.11	349	0.03
Camping in primitive camp- grounds	0	0.00	232	0.07	232	0.02
Day Hiking	19,046	2.26	3,137	0.96	22,183	1.89
Attending guided walk	2,116	0.25	581	0.18	2,697	0.23
Self-guided nature or historic trail	0	0.00	2,905	0.89	2,905	0.25
Picnicking	4,232	0.50	1,336	0.41	5,569	0.48

Table A27. Region 2 SW Non-Reef Activity Participation by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	60,664	7.19	15,628	4.77	76,292	6.51
Visiting historic areas, sites, memorials	37,386	4.43	6,565	2.00	43,951	3.75
Attending special events (fairs, festivals)	7,759	0.92	1,336	0.41	9,096	0.78
Attending outdoor concerts, plays	0	0.00	349	0.11	349	0.03
Attending indoor concerts, plays	0	0.00	407	0.12	407	0.03
Sightsseing tours & attractions (paid)	4,232	0.50	2,324	0.71	6,556	0.56
Sightseeing (not paid)	18,340	2.17	6,855	2.09	25,196	2.15
Reading roadside exhibits or markers	0	0.00	2,033	0.62	2,033	0.17
Visiting museum, education facility	9,170	1.09	3,253	0.99	12,423	1.06
Attending outdoor sports events	0	0.00	581	0.18	581	0.05
Attending indoor sports events	0	0.00	116	0.04	116	0.01
Agricultural tourism	7,054	0.84	1,220	0.37	8,274	0.71
Visiting forest or nature pre- serves	14,813	1.76	2,789	0.85	17,602	1.50
Visiting caves	7,759	0.92	697	0.21	8,456	0.72
Outdoor Sports	9,876	1.17	755	0.23	10,631	0.91
Golf	0	0.00	349	0.11	349	0.03
Tennis	0	0.00	407	0.12	407	0.03
Zip Lining	5,643	0.67	0	0.00	5,643	0.48
Mountain climbing, rock climb- ing or	4,232	0.50	116	0.04	4,349	0.37
Rappeling					0	0.00
Other outdoor sports or games	0	0.00	0	0.00	0	0.00
Bicycling-Horseback riding- Driving for	7,054	0.84	2,033	0.62	9,087	0.78
Pleasure						
Bicycling	0	0.00	174	0.05	174	0.01
Horseback riding	0	0.00	116	0.04	116	0.01
Driving for Pleasure (mopeds, motorcycles)	7,054	0.84	1,743	0.53	8,797	0.75
Other Activities	3,527	0.42	1,569	0.48	5,096	0.44
Attended Wedding	2,116	0.25	116	0.04	2,232	0.19
Visited Casino	1,411	0.17	1,452	0.44	2,863	0.24

Table A28.Region 3 SE	Non-Reef Activity	Participation by	/ Season
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	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	2,116	0.25	0	0.00	2,116	0.18
Fishing from a charter boat	2,116	0.25	0	0.00	2,116	0.18
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Personal Watercraft Use	0	0.00	1,394	0.43	1,394	0.12
Personal Watercraft-rental boat	0	0.00	1,278	0.39	1,278	0.11
Personal Watercraft-private	0	0.00	116	0.04	116	0.01
boat						
Sailing	1,411	0.17	290	0.09	1,701	0.15
Sailing from charter boat	0	0.00	0	0.00	0	0.00
Sailing from rental boat	0	0.00	58	0.02	58	0.00
Sailing from private boat	1,411	0.17	232	0.07	1,643	0.14
Other Boating	0	0.00	523	0.16	523	0.04
Other Boating from charter boat	0	0.00	0	0.00	0	0.00
Other boating from rental boat	0	0.00	174	0.05	174	0.01
Other boating from private boat	0	0.00	349	0.11	349	0.03
Viewing Nature and Wildlife- land	7,759	0.92	3,660	1.12	11,419	0.97
Wildlife Observation or Photog- raphy	4,232	0.50	2,382	0.73	6,614	0.56
Other nature study and obser- vation	1,411	0.17	1,278	0.39	2,689	0.23
Photography of Natural Land- scapes	4,938	0.59	2,266	0.69	7,203	0.61
Beach Activities-not water- based	27,510	3.26	14,117	4.31	41,627	3.55
Sunbathing	26,805	3.18	13,711	4.18	40,516	3.46
Collection shells or seaglass	5,643	0.67	1,394	0.43	7,037	0.60
Camping-Backpacking-Hik- ing-Picnicking	4,232	0.50	2,266	0.69	6,498	0.55
Backpacking	0	0.00	116	0.04	116	0.01
Camping in developed camp- grounds	0	0.00	0	0.00	0	0.00
Camping in primitive camp-	0	0.00	0	0.00	0	0.00
Day Hiking	1,411	0.17	1,220	0.37	2,631	0.22
Attending guided walk	0	0.00	581	0.18	581	0.05
Self-guided nature or historic trail	1,411	0.17	1,278	0.39	2,689	0.23
Picnicking	2,822	0.33	465	0.14	3,286	0.28

Table A28. Region 3 SE Non-Reef Activity Participation by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	21,867	2.59	7,494	2.29	29,362	2.51
Visiting historic areas, sites, memorials	14,108	1.67	2,963	0.90	17,071	1.46
Attending special events (fairs, festivals)	4,938	0.59	465	0.14	5,403	0.46
Attending outdoor concerts, plays	2,116	0.25	116	0.04	2,232	0.19
Attending indoor concerts, plays	6,349	0.75	0	0.00	6,349	0.54
Sightsseing tours & attractions (paid)	2,822	0.33	1,220	0.37	4,042	0.35
Sightseeing (not paid)	10,581	1.25	3,776	1.15	14,357	1.23
Reading roadside exhibits or markers	2,822	0.33	1,859	0.57	4,681	0.40
Visiting museum, education facility	7,759	0.92	523	0.16	8,282	0.71
Attending outdoor sports events	0	0.00	0	0.00	0	0.00
Attending indoor sports events	0	0.00	0	0.00	0	0.00
Agricultural tourism	0	0.00	0	0.00	0	0.00
Visiting forest or nature pre- serves	5,643	0.67	1,569	0.48	7,212	0.62
Visiting caves	1,411	0.17	0	0.00	1,411	0.12
Outdoor Sports	8,465	1.00	3,021	0.92	11,486	0.98
Golf	0	0.00	0	0.00	0	0.00
Tennis	0	0.00	58	0.02	58	0.00
Zip Lining	5,643	0.67	2,963	0.90	8,606	0.73
Mountain climbing, rock climb- ing or	2,822	0.33	1,278	0.39	4,100	0.35
Rappeling					0	0.00
Other outdoor sports or games	0	0.00	0	0.00	0	0.00
Bicycling-Horseback riding- Driving for	4,232	0.50	465	0.14	4,697	0.40
Pleasure						
Bicycling	0	0.00	0	0.00	0	0.00
Horseback riding	0	0.00	0	0.00	0	0.00
Driving for Pleasure (mopeds, motorcycles)	4,232	0.50	465	0.14	4,697	0.40
Other Activities	3,527	0.42	407	0.12	3,934	0.34
Attended Wedding	3,527	0.42	174	0.05	3,701	0.32
Visited Casino	0	0.00	290	0.09	290	0.02

ble A29. Region 4 NE Non-Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Partici-	Rate (%)	Partici-	Rate (%)	Partici-	Rate (%)
	pants		pants		pants	
Offshore Fishing	3,527	0.42	1,801	0.55	5,328	0.45
Fishing from a charter boat	2,116	0.25	1,162	0.35	3,278	0.28
Fishing from a rental boat	1,411	0.17	58	0.02	1,469	0.13
Fishing from a private boat	2,822	0.33	581	0.18	3,403	0.29
Personal Watercraft Use	32,448	3.85	12,955	3.95	45,403	3.88
Personal Watercraft-rental boat	30,332	3.60	10,399	3.17	40,731	3.48
Personal Watercraft-private boat	3,527	0.42	2,730	0.83	6,257	0.53
Sailing	38,091	4.52	9,528	2.91	47,619	4.07
Sailing from charter boat	31,037	3.68	7,320	2.23	38,357	3.27
Sailing from rental boat	4,232	0.50	2,091	0.64	6,324	0.54
Sailing from private boat	2,822	0.33	116	0.04	2,938	0.25
Other Boating	84,647	10.03	20,856	6.36	105,504	9.01
Other Boating from charter boat	50,083	5.94	12,723	3.88	62,806	5.36
Other boating from rental boat	31,743	3.76	6,797	2.07	38,540	3.29
Other boating from private boat	2,822	0.33	2,498	0.76	5,320	0.45
Viewing Nature and Wildlife-	297,676	35.28	87,782	26.79	385,459	32.91
land						
Wildlife Observation or Photog-	195,394	23.16	50,195	15.32	245,589	20.97
raphy						
Other nature study and obser- vation	55,021	6.52	14,233	4.34	69,254	5.91
Photography of Natural Land- scapes	217,261	25.75	62,917	19.20	280,179	23.92
Beach Activities-not water- based	556,556	65.97	196,189	59.87	752,745	64.26
Sunbathing	541,742	64.21	190,379	58.09	732,122	62.50
Collection shells or seaglass	122,033	14.46	44,443	13.56	166,476	14.21
Camping-Backpacking-Hik- ing-Picnicking	295,560	35.03	71,980	21.96	367,540	31.38
Backpacking	11,992	1.42	4,183	1.28	16,175	1.38
Camping in developed camp- grounds	2,822	0.33	407	0.12	3,228	0.28
Camping in primitive camp- grounds	705	0.08	755	0.23	1,461	0.12
Day Hiking	193,983	22.99	53,971	16.47	247,954	21.17
Attending guided walk	62,075	7.36	13,013	3.97	75,088	6.41
Self-guided nature or historic	130,498	15.47	31,488	9.61	161,986	13.83
trail						

Table A29.	Region 4 NE N	on-Reef Activity	Participation by	y Season (continued)

	Summer	Summer Winter				
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical &	584,771	69.31	163,248	49.81	748,020	63.86
Tourist Attractions						
Visiting historic areas, sites, memorials	462,738	54.85	123,802	37.78	586,540	50.07
Attending special events (fairs, festivals)	32,448	3.85	13,652	4.17	46,101	3.94
Attending outdoor con- certs, plays	26,805	3.18	12,200	3.72	39,005	3.33
Attending indoor concerts, plays	13,402	1.59	6,507	1.99	19,909	1.70
Sightsseing tours & attrac- tions (paid)	172,821	20.48	39,854	12.16	212,675	18.16
Sightseeing (not paid)	216,556	25.67	66,461	20.28	283,017	24.16
Reading roadside exhibits or markers	88,174	10.45	19,055	5.81	107,230	9.15
Visiting museum, education facility	136,846	16.22	31,430	9.59	168,276	14.37
Attending outdoor sports events	4,938	0.59	5,345	1.63	10,283	0.88
Attending indoor sports events	15,519	1.84	1,569	0.48	17,087	1.46
Agricultural tourism	22,573	2.68	4,880	1.49	27,453	2.34
Visiting forest or nature preserves	318,838	37.79	66,694	20.35	385,532	32.91
Visiting caves	61,369	7.27	6,681	2.04	68,050	5.81
Outdoor Sports	122,739	14.55	25,794	7.87	148,533	12.68
Golf	6,349	0.75	4,590	1.40	10,938	0.93
Tennis	3,527	0.42	2,789	0.85	6,316	0.54
Zip Lining	81,826	9.70	9,702	2.96	91,528	7.81
Mountain climbing, rock climbing or	40,913	4.85	4,648	1.42	45,560	3.89
Rappeling						
Other outdoor sports or games	19,046	2.26	7,436	2.27	26,482	2.26
Bicycling-Horseback riding-Driving for	90,290	10.70	18,881	5.76	109,171	9.32
Pleasure						
Bicycling	11,992	1.42	4,299	1.31	16,291	1.39
Horseback riding	23,278	2.76	4,183	1.28	27,461	2.34
Driving for Pleasure (mo- peds, motorcycles)	66,307	7.86	10,922	3.33	77,229	6.59
Other Activities	138,257	16.39	38,053	11.61	176,310	15.05
Attended Wedding	14,108	1.67	4,067	1.24	18,175	1.55
Visited Casino	125,560	14.88	35,148	10.73	160,708	13.72

Table A30. Region 5 Culebra & Vieques Non-Reef Activity Participation by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Partici- pants	Rate (%)
Offshore Fishing	0	0.00	813	0.25	813	0.07
Fishing from a charter boat	0	0.00	581	0.18	581	0.05
Fishing from a rental boat	0	0.00	58	0.02	58	0.00
Fishing from a private boat	0	0.00	232	0.07	232	0.02
Personal Watercraft Use	1,411	0.17	930	0.28	2,340	0.20
Personal Watercraft-rental boat	0	0.00	349	0.11	349	0.03
Personal Watercraft-private boat	1,411	0.17	581	0.18	1,992	0.17
Sailing	1,411	0.17	2,847	0.87	4,257	0.36
Sailing from charter boat	1,411	0.17	1,336	0.41	2,747	0.23
Sailing from rental boat	0	0.00	1,104	0.34	1,104	0.09
Sailing from private boat	0	0.00	465	0.14	465	0.04
Other Boating	14,108	1.67	7,262	2.22	21,370	1.82
Other Boating from charter boat	14,108	1.67	1,975	0.60	16,083	1.37
Other boating from rental boat	1,411	0.17	1,859	0.57	3,270	0.28
Other boating from private boat	0	0.00	3,428	1.05	3,428	0.29
Viewing Nature and Wildlife-	44,440	5.27	17,312	5.28	61,752	5.27
land						
Wildlife Observation or Pho- tography	24,689	2.93	10,690	3.26	35,378	3.02
Other nature study and obser- vation	4,232	0.50	3,079	0.94	7,311	0.62
Photography of Natural Land- scapes	37,386	4.43	13,304	4.06	50,690	4.33
Beach Activities-not water- based	95,934	11.37	37,878	11.56	133,812	11.42
Sunbathing	91,701	10.87	36,077	11.01	127,779	10.91
Collection shells or seaglass	26,100	3.09	13,130	4.01	39,229	3.35
Camping-Backpacking-Hik- ing-Picnicking	23,278	2.76	11,561	3.53	34,839	2.97
Backpacking	2,116	0.25	1,220	0.37	3,336	0.28
Camping in developed camp- grounds	2,822	0.33	755	0.23	3,577	0.31
Camping in primitive camp- grounds	0	0.00	116	0.04	116	0.01
Day Hiking	11,286	1.34	8,191	2.50	19,478	1.66
Attending guided walk	1,411	0.17	930	0.28	2,340	0.20
Self-guided nature or historic trail	9,876	1.17	5,345	1.63	15,220	1.30
Picnicking	8,465	1.00	3,544	1.08	12,009	1.03

Table A30. Region 5 Culebra & Vieques Non-Reef Activity Participation by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tour- ist Attractions	59,958	7.11	24,400	7.45	84,359	7.20
Visiting historic areas, sites, memorials	26,100	3.09	9,702	2.96	35,802	3.06
Attending special events (fairs, festivals)	4,232	0.50	1,452	0.44	5,685	0.49
Attending outdoor concerts, plays	1,411	0.17	2,091	0.64	3,502	0.30
Attending indoor concerts, plays	0	0.00	523	0.16	523	0.04
Sightsseing tours & attrac- tions (paid)	9,170	1.09	5,112	1.56	14,283	1.22
Sightseeing (not paid)	19,751	2.34	11,735	3.58	31,486	2.69
Reading roadside exhibits or markers	9,876	1.17	3,370	1.03	13,245	1.13
Visiting museum, education facility	7,054	0.84	5,112	1.56	12,166	1.04
Attending outdoor sports events	3,527	0.42	232	0.07	3,759	0.32
Attending indoor sports events	2,822	0.33	0	0.00	2,822	0.24
Agricultural tourism	0	0.00	407	0.12	407	0.03
Visiting forest or nature pre- serves	8,465	1.00	4,415	1.35	12,880	1.10
Visiting caves	2,116	0.25	1,452	0.44	3,569	0.30
Outdoor Sports	5,643	0.67	930	0.28	6,573	0.56
Golf	0	0.00	0	0.00	0	0.00
Tennis	0	0.00	407	0.12	407	0.03
Zip Lining	5,643	0.67	0	0.00	5,643	0.48
Mountain climbing, rock climbing or	0	0.00	407	0.12	407	0.03
Rappeling Other outdoor sports or games	2,116	0.25	232	0.07	0 2,349	0.00
Bicycling-Horseback riding-Driving for	8,465	1.00	5,112	1.56	13,577	1.16
Pleasure						
Bicycling	1,411	0.17	523	0.16	1,934	0.17
Horseback riding	2,822	0.33	2,382	0.73	5,203	0.44
Driving for Pleasure (mopeds, motorcycles)	7,054	0.84	2,672	0.82	9,726	0.83
Other Activities	2,822	0.33	2,556	0.78	5,378	0.46
Attended Wedding	1,411	0.17	930	0.28	2,340	0.20
Visited Casino	1,411	0.17	1,627	0.50	3,037	0.26

Table A31. Region	1 NW Non-Reef Activity	Within Region	Participation	Rates by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participa- tion
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	3,527	2.82	3,428	7.06	6,955	4.01
Fishing from a charter boat	0	0.00	2,905	5.98	2,905	1.67
Fishing from a rental boat	0	0.00	523	1.08	523	0.30
Fishing from a private boat	3,527	2.82	116	0.24	3,643	2.10
Personal Watercraft Use	3,527	2.82	349	0.72	3,876	2.23
Personal Watercraft-rental boat	3,527	2.82	349	0.72	3,876	2.23
Personal Watercraft-private boat	0	0.00	0	0.00	0	0.00
Sailing	0	0.00	2,847	5.86	2,847	1.64
Sailing from charter boat	0	0.00	2,324	4.78	2,324	1.34
Sailing from rental boat	0	0.00	407	0.84	407	0.23
Sailing from private boat	0	0.00	116	0.24	116	0.07
Other Boating	6,349	5.08	2,672	5.50	9,021	5.20
Other Boating from charter boat	3,527	2.82	1,685	3.47	5,212	3.01
Other boating from rental boat	0	0.00	988	2.03	988	0.57
Other boating from private boat	2,822	2.26	349	0.72	3,170	1.83
Viewing Nature and Wildlife- land	55,021	44.07	12,723	26.20	67,744	39.06
Wildlife Observation or Pho- tography	33,154	26.55	5,403	11.12	38,556	22.23
Other nature study and observation	12,697	10.17	2,324	4.78	15,021	8.66
Photography of Natural Land- scapes	35,270	28.25	10,341	21.29	45,611	26.30
Beach Activities-not water- based	80,415	64.41	29,106	59.93	109,521	63.15
Sunbathing	79,710	63.84	26,259	54.07	105,969	61.10
Collection shells or seaglass	19,751	15.82	11,387	23.44	31,138	17.95
Camping-Backpacking-Hiking- Picnicking	32,448	25.99	11,387	23.44	43,835	25.28
Backpacking	0	0.00	349	0.72	349	0.20
Camping in developed camp- grounds	0	0.00	232	0.48	232	0.13
Camping in primitive camp- grounds	705	0.56	0	0.00	705	0.41
Day Hiking	23,278	18.64	7,552	15.55	30,830	17.78
Attending guided walk	5,643	4.52	1,046	2.15	6,689	3.86
Self-guided nature or historic trail	14,108	11.30	4,764	9.81	18,872	10.88
Picnicking	0	0.00	1,975	4.07	1,975	1.14

Table A31. Region 1 NW Non-Reef Activity Within Region Participation Rates by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	66,307	53.11	20,914.398	43.06	87,221	50.29
Visiting historic areas, sites, me- morials	13,402	10.73	8,772.428	18.06	22,175	12.79
Attending special events (fairs, festivals)	19,751	15.82	3,660.020	7.54	23,411	13.50
Attending outdoor concerts, plays	3,527	2.82	929.529	1.91	4,456	2.57
Attending indoor concerts, plays	1,411	1.13	290.478	0.60	1,701	0.98
Sightsseing tours & attractions (paid)	6,349	5.08	2,904.778	5.98	9,253	5.34
Sightseeing (not paid)	17,635	14.12	10,108.626	20.81	27,743	16.00
Reading roadside exhibits or markers	6,349	5.08	2,265.726	4.67	8,614	4.97
Visiting museum, education facil- ity	2,822	2.26	3,079.064	6.34	5,901	3.40
Attending outdoor sports events	0	0.00	522.860	1.08	523	0.30
Attending indoor sports events	0	0.00	522.860	1.08	523	0.30
Agricultural tourism	0	0.00	697.147	1.44	697	0.40
Visiting forest or nature preserves	11,992	9.60	2,672.395	5.50	14,664	8.46
Visiting caves	26,100	20.90	6,216.224	12.80	32,316	18.63
Outdoor Sports	4,232	3.39	2,149.535	4.43	6,382	3.68
Golf	0	0.00	348.573	0.72	349	0.20
Tennis	0	0.00	755.242	1.56	755	0.44
Zip Lining	1,411	1.13	348.573	0.72	1,759	1.01
Mountain climbing, rock climbing or	1,411	1.13	0.000	0.00	1,411	0.81
Rappeling						
Other outdoor sports or games	1,411	1.13	697.147	1.44	2,108	1.22
Bicycling-Horseback riding- Driving for	10,581	8.47	2,440.013	5.02	13,021	7.51
Pleasure						
Bicycling	0	0.00	174.287	0.36	174	0.10
Horseback riding	2,822	2.26	1,394.293	2.87	4,216	2.43
Driving for Pleasure (mopeds, motorcycles)	7,759	6.21	1,336.198	2.75	9,096	5.24
Other Activities	4,938	3.95	1,800.962	3.71	6,739	3.89
Attended Wedding	4,938	3.95	174.287	0.36	5,112	2.95
Visited Casino	0	0.00	1,626.675	3.35	1,627	0.94

Table A32. Region 2 SW Non-Reef Activity	Within Region Participation Rates by Season

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	0	0.00	2,382	7.03	2,382	1.57
Fishing from a charter boat	0	0.00	2,324	6.86	2,324	1.53
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	58	0.17	58	0.04
Personal Watercraft Use	2,116	1.80	523	1.54	2,639	1.74
Personal Watercraft-rental boat	0	0.00	58	0.17	58	0.04
Personal Watercraft-private boat	2,116	1.80	465	1.37	2,581	1.70
Sailing	0	0.00	3,137	9.26	3,137	2.07
Sailing from charter boat	0	0.00	2,324	6.86	2,324	1.53
Sailing from rental boat	0	0.00	581	1.72	581	0.38
Sailing from private boat	0	0.00	232	0.69	232	0.15
Other Boating	9,170	7.78	3,137	9.26	12,307	8.11
Other Boating from charter boat	3,527	2.99	1,394	4.12	4,921	3.24
Other boating from rental boat	3,527	2.99	1,394	4.12	4,921	3.24
Other boating from private boat	2,116	1.80	349	1.03	2,465	1.63
Viewing Nature and Wildlife- land	33,154	28.14	9,179	27.10	42,333	27.91
Wildlife Observation or Pho- tography	4,938	4.19	3,660	10.81	8,598	5.67
Other nature study and obser- vation	11,992	10.18	755	2.23	12,747	8.40
Photography of Natural Land- scapes	22,573	19.16	8,075	23.84	30,648	20.21
Beach Activities-not water- based	61,369	52.10	19,869	58.66	81,238	53.56
Sunbathing	51,494	43.71	18,707	55.23	70,201	46.29
Collection shells or seaglass	17,635	14.97	4,996	14.75	22,631	14.92
Camping-Backpacking-Hik- ing-Picnicking	25,394	21.56	5,693	16.81	31,088	20.50
Backpacking	2,822	2.40	232	0.69	3,054	2.01
Camping in developed camp- grounds	0	0.00	349	1.03	349	0.23
Camping in primitive camp- grounds	0	0.00	232	0.69	232	0.15
Day Hiking	19,046	16.17	3,137	9.26	22,183	14.63
Attending guided walk	2,116	1.80	581	1.72	2,697	1.78
Self-guided nature or historic trail	0	0.00	2,905	8.58	2,905	1.92
Picnicking	4,232	3.59	1,336	3.95	5,569	3.67

Table A32. Region 2 SW Non-Reef Activity Within Region Participation Rates by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	60,664	51.50	15,628	46.14	76,292	50.30
Visiting historic areas, sites, memorials	37,386	31.74	6,565	19.38	43,951	28.98
Attending special events (fairs, festivals)	7,759	6.59	1,336	3.95	9,096	6.00
Attending outdoor concerts, plays	0	0.00	349	1.03	349	0.23
Attending indoor concerts, plays	0	0.00	407	1.20	407	0.27
Sightsseing tours & attractions (paid)	4,232	3.59	2,324	6.86	6,556	4.32
Sightseeing (not paid)	18,340	15.57	6,855	20.24	25,196	16.61
Reading roadside exhibits or markers	0	0.00	2,033	6.00	2,033	1.34
Visiting museum, education facility	9,170	7.78	3,253	9.61	12,423	8.19
Attending outdoor sports events	0	0.00	581	1.72	581	0.38
Attending indoor sports events	0	0.00	116	0.34	116	0.08
Agricultural tourism	7,054	5.99	1,220	3.60	8,274	5.46
Visiting forest or nature pre- serves	14,813	12.57	2,789	8.23	17,602	11.61
Visiting caves	7,759	6.59	697	2.06	8,456	5.58
Outdoor Sports	9,876	8.38	755	2.23	10,631	7.01
Golf	0	0.00	349	1.03	349	0.23
Tennis	0	0.00	407	1.20	407	0.27
Zip Lining	5,643	4.79	0	0.00	5,643	3.72
Mountain climbing, rock climb- ing or	4,232	3.59	116	0.34	4,349	2.87
Rappeling						
Other outdoor sports or games	0	0.00	0	0.00	0	0.00
Bicycling-Horseback riding- Driving for	7,054	5.99	2,033	6.00	9,087	5.99
Pleasure						
Bicycling	0	0.00	174	0.51	174	0.11
Horseback riding	0	0.00	116	0.34	116	0.08
Driving for Pleasure (mopeds, motorcycles)	7,054	5.99	1,743	5.15	8,797	5.80
Other Activities	3,527	2.99	1,569	4.63	5,096	3.36
Attended Wedding	2,116	1.80	116	0.34	2,232	1.47
Visited Casino	1,411	1.20	1,452	4.29	2,863	1.89

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	2,116	3.45	0	0.00	2,116	2.34
Fishing from a charter boat	2,116	3.45	0	0.00	2,116	2.34
Fishing from a rental boat	0	0.00	0	0.00	0	0.00
Fishing from a private boat	0	0.00	0	0.00	0	0.00
Personal Watercraft Use	0	0.00	1,394	4.82	1,394	1.54
Personal Watercraft-rental boat	0	0.00	1,278	4.42	1,278	1.42
Personal Watercraft-private boat	0	0.00	116	0.40	116	0.13
Sailing	1,411	2.30	290	1.00	1,701	1.88
Sailing from charter boat	0	0.00	0	0.00	0	0.00
Sailing from rental boat	0	0.00	58	0.20	58	0.06
Sailing from private boat	1,411	2.30	232	0.80	1,643	1.82
Other Boating	0	0.00	523	1.81	523	0.58
Other Boating from charter boat	0	0.00	0	0.00	0	0.00
Other boating from rental boat	0	0.00	174	0.60	174	0.19
Other boating from private boat	0	0.00	349	1.20	349	0.39
Viewing Nature and Wild- life-land	7,759	12.64	3,660	12.65	11,419	12.65
Wildlife Observation or Pho- tography	4,232	6.90	2,382	8.23	6,614	7.32
Other nature study and obser- vation	1,411	2.30	1,278	4.42	2,689	2.98
Photography of Natural Land- scapes	4,938	8.05	2,266	7.83	7,203	7.98
Beach Activities-not water- based	27,510	44.83	14,117	48.79	41,627	46.10
Sunbathing	26,805	43.68	13,711	47.39	40,516	44.87
Collection shells or seaglass	5,643	9.20	1,394	4.82	7,037	7.79
Camping-Backpacking- Hiking-Picnicking	4,232	6.90	2,266	7.83	6,498	7.20
Backpacking	0	0.00	116	0.40	116	0.13
Camping in developed camp- grounds	0	0.00	0	0.00	0	0.00
Camping in primitive camp- grounds	0	0.00	0	0.00	0	0.00
Day Hiking	1,411	2.30	1,220	4.22	2,631	2.91
Attending guided walk	0	0.00	581	2.01	581	0.64
Self-guided nature or historic	1,411	2.30	1,278	4.42	2,689	2.98
trail						

Table A33.	Region 3 SE Non-Reef	f Activity Within Re	egion Participation	Rates by Season
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Table A33.	Region 3 SE Non-Reef A	Activity Within Region P	articipation Rates by	Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participatior
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	21,867	35.63	7,494	25.90	29,362	32.52
Visiting historic areas, sites, memorials	14,108	22.99	2,963	10.24	17,071	18.90
Attending special events (fairs, festivals)	4,938	8.05	465	1.61	5,403	5.98
Attending outdoor concerts, plays	2,116	3.45	116	0.40	2,232	2.47
Attending indoor concerts, plays	6,349	10.34	0	0.00	6,349	7.03
Sightsseing tours & attractions (paid)	2,822	4.60	1,220	4.22	4,042	4.48
Sightseeing (not paid)	10,581	17.24	3,776	13.05	14,357	15.90
Reading roadside exhibits or markers	2,822	4.60	1,859	6.43	4,681	5.18
Visiting museum, education facil- ity	7,759	12.64	523	1.81	8,282	9.17
Attending outdoor sports events	0	0.00	0	0.00	0	0.00
Attending indoor sports events	0	0.00	0	0.00	0	0.00
Agricultural tourism	0	0.00	0	0.00	0	0.00
Visiting forest or nature preserves	5,643	9.20	1,569	5.42	7,212	7.99
Visiting caves	1,411	2.30	0	0.00	1,411	1.56
Outdoor Sports	8,465	13.79	3,021	10.44	11,486	12.72
Golf	0	0.00	0	0.00	0	0.00
Tennis	0	0.00	58	0.20	58	0.06
Zip Lining	5,643	9.20	2,963	10.24	8,606	9.53
Mountain climbing, rock climbing or	2,822	4.60	1,278	4.42	4,100	4.54
Rappeling		0.00		0.00	0	0.00
Other outdoor sports or games	0	0.00	0	0.00	0	0.00
Bicycling-Horseback riding- Driving for	4,232	6.90	465	1.61	4,697	5.20
Pleasure						
Bicycling	0	0.00	0	0.00	0	0.00
Horseback riding	0	0.00	0	0.00	0	0.00
Driving for Pleasure (mopeds, motorcycles)	4,232	6.90	465	1.61	4,697	5.20
Other Activities	3,527	5.75	407	1.41	3,934	4.36
Attended Wedding	3,527	5.75	174	0.60	3,701	4.10
Visited Casino	0	0.00	290	1.00	290	0.32

Table A34.	Region 4 NE Non-Reef A	ctivity Within F	Region Participatio	n Rates by Season
		Ouvicy vvicinit i	tegion i unioipullo	In rated by occoon

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	3,527	0.49	1,801	0.66	5,328	0.53
Fishing from a charter boat	2,116	0.29	1,162	0.42	3,278	0.33
Fishing from a rental boat	1,411	0.20	58	0.02	1,469	0.15
Fishing from a private boat	2,822	0.39	581	0.21	3,403	0.34
Personal Watercraft Use	32,448	4.50	12,955	4.72	45,403	4.56
Personal Watercraft-rental boat	30,332	4.20	10,399	3.79	40,731	4.09
Personal Watercraft-private boat	3,527	0.49	2,730	0.99	6,257	0.63
Sailing	38,091	5.28	9,528	3.47	47,619	4.78
Sailing from charter boat	31,037	4.30	7,320	2.66	38,357	3.85
Sailing from rental boat	4,232	0.59	2,091	0.76	6,324	0.63
Sailing from private boat	2,822	0.39	116	0.04	2,938	0.29
Other Boating	84,647	11.73	20,856	7.59	105,504	10.59
Other Boating from charter boat	50,083	6.94	12,723	4.63	62,806	6.30
Other boating from rental boat	31,743	4.40	6,797	2.47	38,540	3.87
Other boating from private boat	2,822	0.39	2,498	0.91	5,320	0.53
Viewing Nature and Wild- life-land	297,676	41.25	87,782	31.95	385,459	38.69
Wildlife Observation or Pho- tography	195,394	27.08	50,195	18.27	245,589	24.65
Other nature study and obser- vation	55,021	7.62	14,233	5.18	69,254	6.95
Photography of Natural Land- scapes	217,261	30.11	62,917	22.90	280,179	28.12
Beach Activities-not water- based	556,556	77.13	196,189	71.41	752,745	75.55
Sunbathing	541,742	75.07	190,379	69.30	732,122	73.48
Collection shells or seaglass	122,033	16.91	44,443	16.18	166,476	16.71
Camping-Backpacking- Hiking-Picnicking	295,560	40.96	71,980	26.20	367,540	36.89
Backpacking	11,992	1.66	4,183	1.52	16,175	1.62
Camping in developed camp- grounds	2,822	0.39	407	0.15	3,228	0.32
Camping in primitive camp- grounds	705	0.10	755	0.27	1,461	0.15
Day Hiking	193,983	26.88	53,971	19.64	247,954	24.89
Attending guided walk	62,075	8.60	13,013	4.74	75,088	7.54
Self-guided nature or historic trail	130,498	18.08	31,488	11.46	161,986	16.26
Picnicking	57,137	7.92	9,934	3.62	67,071	6.73

 Table A34.
 Region 4 NE Non-Reef Activity Within Region Participation Rates by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist Attractions	584,771	81.04	163,248	59.42	748,020	75.08
Visiting historic areas, sites, memorials	462,738	64.13	123,802	45.06	586,540	58.87
Attending special events (fairs, festivals)	32,448	4.50	13,652	4.97	46,101	4.63
Attending outdoor concerts, plays	26,805	3.71	12,200	4.44	39,005	3.91
Attending indoor concerts, plays	13,402	1.86	6,507	2.37	19,909	2.00
Sightsseing tours & attractions (paid)	172,821	23.95	39,854	14.51	212,675	21.35
Sightseeing (not paid)	216,556	30.01	66,461	24.19	283,017	28.41
Reading roadside exhibits or markers	88,174	12.22	19,055	6.94	107,230	10.76
Visiting museum, education facil- ity	136,846	18.96	31,430	11.44	168,276	16.89
Attending outdoor sports events	4,938	0.68	5,345	1.95	10,283	1.03
Attending indoor sports events	15,519	2.15	1,569	0.57	17,087	1.71
Agricultural tourism	22,573	3.13	4,880	1.78	27,453	2.76
Visiting forest or nature pre- serves	318,838	44.18	66,694	24.28	385,532	38.69
Visiting caves	61,369	8.50	6,681	2.43	68,050	6.83
Outdoor Sports	122,739	17.01	25,794	9.39	148,533	14.91
Golf	6,349	0.88	4,590	1.67	10,938	1.10
Tennis	3,527	0.49	2,789	1.02	6,316	0.63
Zip Lining	81,826	11.34	9,702	3.53	91,528	9.19
Mountain climbing, rock climbing or	40,913	5.67	4,648	1.69	45,560	4.57
Rappeling						
Other outdoor sports or games	19,046	2.64	7,436	2.71	26,482	2.66
Bicycling-Horseback riding- Driving for	90,290	12.51	18,881	6.87	109,171	10.96
Pleasure						
Bicycling	11,992	1.66	4,299	1.56	16,291	1.64
Horseback riding	23,278	3.23	4,183	1.52	27,461	2.76
Driving for Pleasure (mopeds, motorcycles)	66,307	9.19	10,922	3.98	77,229	7.75
Other Activities	138,257	19.16	38,053	13.85	176,310	17.70
Attended Wedding	14,108	1.96	4,067	1.48	18,175	1.82
Visited Casino	125,560	17.40	35,148	12.79	160,708	16.13

Table A35.	Region 5 Culebra	& Viegues Non-Re	eef Activity Within	Region Participation	on Rates by Season
	5		,	U	,

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Offshore Fishing	0	0.00	813	1.50	813	0.49
Fishing from a charter boat	0	0.00	581	1.07	581	0.35
Fishing from a rental boat	0	0.00	58	0.11	58	0.03
Fishing from a private boat	0	0.00	232	0.43	232	0.14
Personal Watercraft Use	1,411	1.26	930	1.71	2,340	1.41
Personal Watercraft-rental boat	0	0.00	349	0.64	349	0.21
Personal Watercraft-private boat	1,411	1.26	581	1.07	1,992	1.20
Sailing	1,411	1.26	2,847	5.25	4,257	2.56
Sailing from charter boat	1,411	1.26	1,336	2.46	2,747	1.65
Sailing from rental boat	0	0.00	1,104	2.03	1,104	0.66
Sailing from private boat	0	0.00	465	0.86	465	0.28
Other Boating	14,108	12.58	7,262	13.38	21,370	12.84
Other Boating from charter boat	14,108	12.58	1,975	3.64	16,083	9.66
Other boating from rental boat	1,411	1.26	1,859	3.43	3,270	1.96
Other boating from private boat	0	0.00	3,428	6.32	3,428	2.06
Viewing Nature and Wild- life-land	44,440	39.62	17,312	31.91	61,752	37.11
Wildlife Observation or Pho- tography	24,689	22.01	10,690	19.70	35,378	21.26
Other nature study and observation	4,232	3.77	3,079	5.67	7,311	4.39
Photography of Natural Land- scapes	37,386	33.33	13,304	24.52	50,690	30.46
Beach Activities-not water- based	95,934	85.53	37,878	69.81	133,812	80.41
Sunbathing	91,701	81.76	36,077	66.49	127,779	76.78
Collection shells or seaglass	26,100	23.27	13,130	24.20	39,229	23.57
Camping-Backpacking- Hiking-Picnicking	23,278	20.75	11,561	21.31	34,839	20.93
Backpacking	2,116	1.89	1,220	2.25	3,336	2.00
Camping in developed camp- grounds	2,822	2.52	755	1.39	3,577	2.15
Camping in primitive camp- grounds	0	0.00	116	0.21	116	0.07
Day Hiking	11,286	10.06	8,191	15.10	19,478	11.70
Attending guided walk	1,411	1.26	930	1.71	2,340	1.41
Self-guided nature or historic trail	9,876	8.81	5,345	9.85	15,220	9.15
Picnicking	8,465	7.55	3,544	6.53	12,009	7.22

 Table A35.
 Region 5 Culebra & Vieques Non-Reef Activity Within Region Participation Rates by Season (continued)

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
Cultural, Historical & Tourist At- tractions	59,958	53.46	24,400	44.97	84,359	50.69
Visiting historic areas, sites, memorials	26,100	23.27	9,702	17.88	35,802	21.51
Attending special events (fairs, festivals)	4,232	3.77	1,452	2.68	5,685	3.42
Attending outdoor concerts, plays	1,411	1.26	2,091	3.85	3,502	2.10
Attending indoor concerts, plays	0	0.00	523	0.96	523	0.31
Sightsseing tours & attractions (paid)	9,170	8.18	5,112	9.42	14,283	8.58
Sightseeing (not paid)	19,751	17.61	11,735	21.63	31,486	18.92
Reading roadside exhibits or markers	9,876	8.81	3,370	6.21	13,245	7.96
Visiting museum, education facility	7,054	6.29	5,112	9.42	12,166	7.31
Attending outdoor sports events	3,527	3.14	232	0.43	3,759	2.26
Attending indoor sports events	2,822	2.52	0	0.00	2,822	1.70
Agricultural tourism	0	0.00	407	0.75	407	0.24
Visiting forest or nature pre- serves	8,465	7.55	4,415	8.14	12,880	7.74
Visiting caves	2,116	1.89	1,452	2.68	3,569	2.14
Outdoor Sports	5,643	5.03	930	1.71	6,573	3.95
Golf	0	0.00	0	0.00	0	0.00
Tennis	0	0.00	407	0.75	407	0.24
Zip Lining	5,643	5.03	0	0.00	5,643	3.39
Mountain climbing, rock climbing or	0	0.00	407	0.75	407	0.24
Rappeling		0.00		0.00	0	0.00
Other outdoor sports or games	2,116	1.89	232	0.43	2,349	1.41
Bicycling-Horseback riding- Driving for	8,465	7.55	5,112	9.42	13,577	8.16
Pleasure						
Bicycling	1,411	1.26	523	0.96	1,934	1.16
Horseback riding	2,822	2.52	2,382	4.39	5,203	3.13
Driving for Pleasure (mopeds, motorcycles)	7,054	6.29	2,672	4.93	9,726	5.84
Other Activities	2,822	2.52	2,556	4.71	5,378	3.23
Attended Wedding	1,411	1.26	930	1.71	2,340	1.41
Visited Casino	1,411	1.26	1,627	3.00	3,037	1.83

Tuble Add. Opeolar Aggregate Activity Full topation by Ocason	Table A36.	Special Aggregate Acitivity Participation by Season
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	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	277,925	32.94	91,559	27.94	369,484	31.54
All Snorkeling	270,871	32.11	89,874	27.42	360,745	30.80
All Snorkeling from a boat	119,212	14.13	41,364	12.62	160,576	13.71
All SCUBA Diving	16,224	1.92	6,449	1.97	22,673	1.94
All SCUBA Diving from a boat	16,224	1.92	4,706	1.44	20,930	1.79
All Diving from a boat	131,203	15.55	43,630	13.31	174,833	14.93
All Diving from a Charter boat	116,390	13.80	33,405	10.19	149,795	12.79
All Diving from a Rental boat	13,402	1.59	7,262	2.22	20,664	1.76
All Diving from a Private boat	4,232	0.50	5,751	1.76	9,984	0.85
All Diving from shore	163,651	19.40	59,780	18.24	223,431	19.07
All Fishing	17,635	2.09	9,992	3.05	27,627	2.36
All Fishing from a boat	17,635	2.09	8,656	2.64	26,291	2.24
All Charter Boat fishing	9,876	1.17	6,623	2.02	16,498	1.41
All Party Boat fishing	0	0.00	58	0.02	58	0.00
All Private Boat fishing	9,170	1.09	988	0.30	10,158	0.87
All Nature & Wildlife Ob- servation	329,419	39.05	112,415	34.30	441,834	37.72
All Nature Observation from a boat	116,390	13.80	39,912	12.18	156,302	13.34
All Nature Observation on water	147,427	17.47	62,743	19.15	210,171	17.94
All Nature Observation on land	244,066	28.93	69,424	21.18	313,490	26.76
All Boating	237,012	28.09	78,894	24.07	315,906	26.97
All Charter Boat Use	152,365	18.06	53,855	16.43	206,220	17.61
All Rental Boat use	16,224	1.92	7,959	2.43	24,183	2.06
All Private Boat use	67,012	7.94	28,467	8.69	95,479	8.15
All Beach use	798,506	94.65	292,569	89.27	1,091,075	93.15
Any Land-based Activities	710,332	84.20	212,281	64.78	922,613	78.76
Only Water-based Activi- ties	97,344	11.54	87,376	26.66	184,720	15.77
Visiting Special Coral Reef Areas	83,942	9.95	18,939	5.78	102,881	8.78

1. See Tables A.xx and A.xx for more detailed activities.

				Annual	
Number of	Participation	Number of	Participation	Number of	Participation
Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
26,805	3.18	14,931	4.56	41,736	3.56
23,278	2.76	14,582	4.45	37,860	3.23
5,643	0.67	1,104	0.34	6,747	0.58
3,527	0.42	639	0.20	4,166	0.36
3,527	0.42	116	0.04	3,643	0.31
9,170	1.09	1,220	0.37	10,390	0.89
9,170	1.09	813	0.25	9,983	0.85
0	0.00	581	0.18	581	0.05
0	0.00	58	0.02	58	0.00
19,046	2.26	14,408	4.40	33,454	2.86
0	0.00	930	0.28	930	0.08
0	0.00	930	0.28	930	0.08
0	0.00	2,905	0.89	2,905	0.25
0	0.00	0	0.00	0	0.00
3,527	0.42	116	0.04	3,643	0.31
57,842	6.86	13,711	4.18	71,553	6.11
0	0.00	755	0.23	755	0.06
2,822	0.33	2,963	0.90	5,784	0.49
55,021	6.52	12,723	3.88	67,744	5.78
14,108	1.67	6,913	2.11	21,021	1.79
9,170	1.09	4,357	1.33	13,527	1.15
0	0.00	1,510	0.46	1,510	0.13
3,527	0.42	930	0.28	4,456	0.38
88,880	10.54	36,891	11.26	125,770	10.74
92,407	10.95	26,724	8.15	119,131	10.17
26,100	3.09	15,221	4.64	41,321	3.53
5,643	0.67	2,033	0.62	7,676	0.66
	Participants 26,805 23,278 5,643 3,527 3,527 9,170 9,170 9,170 0 19,046 0 0 3,527 57,842 0 2,822 55,021 14,108 9,170 0 3,527 88,880 92,407 26,100	ParticipantsRate (%) $26,805$ 3.18 $23,278$ 2.76 $5,643$ 0.67 $3,527$ 0.42 $3,527$ 0.42 $3,527$ 0.42 $9,170$ 1.09 $9,170$ 1.09 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 $3,527$ 0.42 $57,842$ 6.86 0 0.00 $3,527$ 0.42 $57,842$ 6.86 0 0.00 $2,822$ 0.33 $55,021$ 6.52 $14,108$ 1.67 $9,170$ 1.09 0 0.00 $3,527$ 0.42 $88,880$ 10.54 $92,407$ 10.95 $26,100$ 3.09	ParticipantsRate (%)Participants $26,805$ 3.18 $14,931$ $23,278$ 2.76 $14,582$ $5,643$ 0.67 $1,104$ $3,527$ 0.42 639 $3,527$ 0.42 116 $9,170$ 1.09 $1,220$ $9,170$ 1.09 813 0 0.00 581 0 0.00 581 0 0.00 58 $19,046$ 2.26 $14,408$ 0 0.00 930 0 0.00 930 0 0.00 930 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 $2,905$ 0 0.00 755 $2,822$ 0.33 $2,963$ $55,021$ 6.52 $12,723$ $14,108$ 1.67 $6,913$ $9,170$ 1.09 $4,357$ 0 0.00 $1,510$ $3,527$ 0.42 930 $88,880$ 10.54 $36,891$ $92,407$ 10.95 $26,724$ $26,100$ 3.09 $15,221$	ParticipantsRate (%)ParticipantsRate (%)26,8053.1814,9314.5623,2782.7614,5824.455,6430.671,1040.343,5270.426390.203,5270.421160.049,1701.091,2200.379,1701.098130.2500.005810.1800.00580.0219,0462.2614,4084.4000.009300.2800.009300.2800.009300.2800.002,9050.8900.0000.003,5270.421160.0457,8426.8613,7114.1800.007550.232,8220.332,9630.9055,0216.5212,7233.8814,1081.676,9132.119,1701.094,3571.3300.001,5100.463,5270.429300.2888,88010.5436,89111.2692,40710.9526,7248.1526,1003.0915,2214.64	ParticipantsRate (%)ParticipantsRate (%)Participants26,8053.1814,9314.5641,73623,2782.7614,5824.4537,8605,6430.671,1040.346,7473,5270.426390.204,1663,5270.421160.043,6439,1701.091,2200.3710,3909,1701.098130.259,98300.005810.1858100.00580.025819,0462.2614,4084.4033,45400.009300.2893000.009300.2893000.002,9050.892,90500.0000.0003,5270.421160.043,64357,8426.8613,7114.1871,55300.007550.237552,8220.332,9630.905,78455,0216.5212,7233.8867,74414,1081.676,9132.1121,0219,1701.094,3571.3313,52700.001,5100.461,5103,5270.429300.284,45688,88010.5436,89111.26125,77092,40710.9526,7248.15119,13126,1003.0915,221 <t< td=""></t<>

 Table A37.
 Region 1 NW Special Aggregate Acitivity Participation by Season

1. See Tables A.3 and A.26 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	15,519	1.84	10,167	3.10	25,685	2.19
All Snorkeling	15,519	1.84	9,876	3.01	25,395	2.17
All Snorkeling from a boat	0	0.00	3,892	1.19	3,892	0.33
All SCUBA Diving	4,938	0.59	755	0.23	5,693	0.49
All SCUBA Diving from a boat	4,938	0.59	755	0.23	5,693	0.49
All Diving from a boat	4,938	0.59	4,299	1.31	9,237	0.79
All Diving from a Charter boat	0	0.00	3,079	0.94	3,079	0.26
All Diving from a Rental boat	4,938	0.59	988	0.30	5,925	0.51
All Diving from a Private boat	0	0.00	465	0.14	465	0.04
All Diving from shore	15,519	1.84	6,158	1.88	21,677	1.85
All Fishing	2,822	0.33	174	0.05	2,996	0.26
All Fishing from a boat	2,822	0.33	174	0.05	2,996	0.26
All Charter Boat fishing	0	0.00	2,324	0.71	2,324	0.20
All Party Boat fishing	0	0.00	0	0.00	0	0.00
All Private Boat fishing	2,822	0.33	116	0.04	2,938	0.25
All Nature & Wildlife Ob- servation	45,145	5.35	16,209	4.95	61,354	5.24
All Nature Observation from a boat	8,465	1.00	5,229	1.60	13,693	1.17
All Nature Observation on water	11,992	1.42	9,179	2.80	21,171	1.81
All Nature Observation on land	33,154	3.93	9,179	2.80	42,333	3.61
All Boating	24,689	2.93	13,304	4.06	37,993	3.24
All Charter Boat Use	2,116	0.25	8,947	2.73	11,063	0.94
All Rental Boat use	7,759	0.92	988	0.30	8,747	0.75
All Private Boat use	11,286	1.34	5,519	1.68	16,805	1.43
All Beach use	87,469	10.37	24,284	7.41	111,753	9.54
Any Land-based Activities	81,120	9.62	19,462	5.94	100,582	8.59
Only Water-based Activi- ties	29,627	3.51	12,316	3.76	41,943	3.58
Visiting Special Coral Reef Areas	11,286	1.34	3,137	0.96	14,423	1.23

 Table A38.
 Region 2 SW Special Aggregate Acitivity Participation by Season

1. See Tables A.4 and A.27 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	4,938	0.59	1,220	0.37	6,158	0.53
All Snorkeling	4,938	0.59	1,220	0.37	6,158	0.53
All Snorkeling from a boat	0	0.00	1,220	0.37	1,220	0.10
All SCUBA Diving	0	0.00	0	0.00	0	0.00
All SCUBA Diving from a boat	0	0.00	0	0.00	0	0.00
All Diving from a boat	0	0.00	1,220	0.37	1,220	0.10
All Diving from a Charter boat	0	0.00	1,162	0.35	1,162	0.10
All Diving from a Rental boat	0	0.00	174	0.05	174	0.01
All Diving from a Private boat	0	0.00	0	0.00	0	0.00
All Diving from shore	4,938	0.59	58	0.02	4,996	0.43
All Fishing	0	0.00	349	0.11	349	0.03
All Fishing from a boat	0	0.00	58	0.02	58	0.00
All Charter Boat fishing	2,116	0.25	0	0.00	2,116	0.18
All Party Boat fishing	0	0.00	58	0.02	58	0.00
All Private Boat fishing	0	0.00	0	0.00	0	0.00
All Nature & Wildlife Observation	7,759	0.92	5,984	1.83	13,743	1.17
All Nature Observation from a boat	0	0.00	1,220	0.37	1,220	0.10
All Nature Observation on water	0	0.00	2,556	0.78	2,556	0.22
All Nature Observation on land	7,759	0.92	3,660	1.12	11,419	0.97
All Boating	1,411	0.17	3,253	0.99	4,664	0.40
All Charter Boat Use	2,116	0.25	1,278	0.39	3,394	0.29
All Rental Boat use	0	0.00	174	0.05	174	0.01
All Private Boat use	0	0.00	1,220	0.37	1,220	0.10
All Beach use	33,154	3.93	15,918	4.86	49,072	4.19
Any Land-based Activi- ties	30,332	3.60	11,677	3.56	42,009	3.59
Only Water-based Activi- ties	13,402	1.59	10,457	3.19	23,860	2.04
Visiting Special Coral Reef Areas	4,232	0.50	58	0.02	4,290	0.37

 Table A39.
 Region 3 SE Special Aggregate Acitivity Participation by Season

1. See Tables A.5 and A.28 for more detailed activities.

1	Summer		Winter		Annual		
	Number of	Participation	Number of	Participation	Number of	Participation	
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)	_
All Diving	198,216	23.49	52,228	15.94	250,444	21.38	_
All Snorkeling	194,689	23.08	51,008	15.56	245,697	20.98	
All Snorkeling from a boat	105,809	12.54	26,259	8.01	132,068	11.27	_
All SCUBA Diving	7,759	0.92	4,299	1.31	12,058	1.03	_
All SCUBA Diving from a boat	7,759	0.92	3,137	0.96	10,896	0.93	
All Diving from a boat	109,336	12.96	27,421	8.37	136,757	11.67	_
All Diving from a Charter boat	99,461	11.79	21,844	6.67	121,304	10.36	_
All Diving from a Rental boat	8,465	1.00	4,996	1.52	13,461	1.15	_
All Diving from a Private boat	4,232	0.50	2,498	0.76	6,730	0.57	_
All Diving from shore	100,871	11.56	29,803	9.09	130,674	11.16	
All Fishing	7,054	0.84	2,556	0.78	9,610	0.82	_
All Fishing from a boat	7,054	0.84	2,150	0.66	9,203	0.79	_
All Charter Boat fishing	7,759	0.92	3,021	0.92	10,780	0.92	_
All Party Boat fishing	0	0.00	0	0.00	0	0.00	
All Private Boat fishing	2,822	0.33	581	0.18	3,403	0.29	_
All Nature & Wildlife Ob- servation	356,224	42.22	104,746	31.96	460,970	39.35	-
All Nature Observation from a boat	38,091	4.52	10,690	3.26	48,781	4.16	_
All Nature Observation on water	119,917	14.21	34,393	10.49	154,310	13.17	_
All Nature Observation on land	297,676	35.28	87,782	26.79	385,459	32.91	_
All Boating	196,099	23.24	55,191	16.84	251,290	21.45	_
All Charter Boat Use	124,149	14.72	30,500	9.31	154,649	13.20	_
All Rental Boat use	8,465	1.00	5,054	1.54	13,519	1.15	_
All Private Boat use	45,145	5.35	13,652	4.17	58,798	5.02	_
All Beach use	655,311	77.68	230,581	70.36	885,892	75.63	_
Any Land-based Activities	636,971	75.50	190,553	58.15	827,524	70.65	_
Only Water-based Activi- ties	62,780	7.44	60,536	18.47	123,316	10.53	-
Visiting Special Coral Reef Areas	53,610	6.35	9,237	2.82	62,847	5.37	_

Table A40. Region 4 NE Special Aggregate Acitivity Participation by Season

1. See Tables A.6 and A.29 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	57,137	6.77	28,583	8.72	85,720	7.32
All Snorkeling	56,432	6.69	28,409	8.67	84,840	7.24
All Snorkeling from a boat	14,813	1.76	12,839	3.92	27,652	2.36
All SCUBA Diving	2,116	0.25	1,046	0.32	3,162	0.27
All SCUBA Diving from a	2,116	0.25	988	0.30	3,104	0.26
boat						
All Diving from a boat	15,519	1.84	13,711	4.18	29,230	2.50
All Diving from a Charter boat	12,697	1.51	8,656	2.64	21,353	1.82
All Diving from a Rental boat	2,822	0.33	2,556	0.78	5,378	0.46
All Diving from a Private boat	0	0.00	3,021	0.92	3,021	0.26
All Diving from shore	43,029	5.10	19,520	5.96	62,549	5.34
All Fishing	0	0.00	813	0.25	813	0.07
All Fishing from a boat	0	0.00	116	0.04	116	0.01
All Charter Boat fishing	0	0.00	697	0.21	697	0.06
All Party Boat fishing	0	0.00	0	0.00	0	0.00
All Private Boat fishing	0	0.00	232	0.07	232	0.02
All Nature & Wildlife Ob- servation	64,896	7.69	29,396	8.97	94,293	8.05
All Nature Observation from a boat	7,054	0.84	9,470	2.89	16,524	1.41
All Nature Observation on water	35,975	4.26	18,765	5.73	54,740	4.67
All Nature Observation on land	44,440	5.27	17,312	5.28	61,752	5.27
All Boating	32,448	3.85	20,333	6.20	52,782	4.51
All Charter Boat Use	19,751	2.34	14,872	4.54	34,623	2.96
All Rental Boat use	2,822	0.33	2,614	0.80	5,436	0.46
All Private Boat use	7,054	0.84	10,109	3.08	17,163	1.47
All Beach use	108,631	12.88	48,452	14.78	157,082	13.41
Any Land-based Activities	73,361	8.70	31,139	9.50	104,500	8.92
Only Water-based Activi- ties	37,386	4.43	18,532	5.66	55,918	4.77
Visiting Special Coral Reef Areas	20,456	2.42	6,274	1.91	26,731	2.28

 Table A41.
 Region 5 Culebra & Vieques Special Aggregate Acitivity Participation by Season

1. See Tables A.7 and A.30 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	26,805	2.36	14,931	\$30.74	41,736	24.07
All Snorkeling	23,278	2.05	14,582	\$30.02	37,860	21.83
All Snorkeling from a boat	5,643	0.50	1,104	\$2.27	6,747	3.89
All SCUBA Diving	3,527	0.31	639	\$1.32	4,166	2.40
All SCUBA Diving from a boat	3,527	0.31	116	\$0.24	3,643	2.10
All Diving from a boat	9,170	0.81	1,220	\$2.51	10,390	5.99
All Diving from a Charter boat	9,170	0.81	813	\$1.67	9,983	5.76
All Diving from a Rental boat	0	0.00	581	\$1.20	581	0.33
All Diving from a Private boat	0	0.00	58	\$0.12	58	0.03
All Diving from shore	19,046	1.68	14,408	\$29.67	33,454	19.29
All Fishing	0	0.00	930	\$1.91	930	0.54
All Fishing from a boat	0	0.00	930	\$1.91	930	0.54
All Charter Boat fishing	0	0.00	2,905	\$5.98	2,905	1.67
All Party Boat fishing	0	0.00	0	\$0.00	0	0.00
All Private Boat fishing	3,527	0.31	116	\$0.24	3,643	2.10
All Nature & Wildlife Ob- servation	57,842	5.10	13,711	\$28.23	71,553	41.26
All Nature Observation from a boat	0	0.00	755	\$1.56	755	0.44
All Nature Observation on water	2,822	0.25	2,963	\$6.10	5,784	3.34
All Nature Observation on land	55,021	4.85	12,723	\$26.20	67,744	39.06
All Boating	14,108	1.24	6,913	\$14.23	21,021	12.12
All Charter Boat Use	9,170	0.81	4,357	\$8.97	13,527	7.80
All Rental Boat use	0	0.00	1,510	\$3.11	1,510	0.87
All Private Boat use	3,527	0.31	930	\$1.91	4,456	2.57
All Beach use	88,880	7.83	36,891	\$75.96	125,770	72.52
Any Land-based Activities	92,407	8.14	26,724	\$55.02	119,131	68.69
Only Water-based Activi- ties	26,100	2.30	15,221	\$31.34	41,321	23.83
Visiting Special Coral Reef Areas	5,643	0.50	2,033	\$4.19	7,676	4.43

Table A42. Region 1 NW Special Aggregate Acitivity Within Region Participation Rates by Season

1. See Tables A.8 and A.31 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	15,519	13.17	10,167	30.02	25,685	16.94
All Snorkeling	15,519	13.17	9,876	29.16	25,395	16.74
All Snorkeling from a boat	0	0.00	3,892	11.49	3,892	2.57
All SCUBA Diving	4,938	4.19	755	2.23	5,693	3.75
All SCUBA Diving from a boat	4,938	4.19	755	2.23	5,693	3.75
All Diving from a boat	4,938	4.19	4,299	12.69	9,237	6.09
All Diving from a Charter	0	0.00	3,079	9.09	3,079	2.03
All Diving from a Rental boat	4,938	4.19	988	2.92	5,925	3.91
All Diving from a Private	0	0.00	465	1.37	465	0.31
All Diving from shore	15,519	13.17	6,158	18.18	21,677	14.29
All Fishing	2,822	2.40	174	0.51	2,996	1.98
All Fishing from a boat	2,822	2.40	174	0.51	2,996	1.98
All Charter Boat fishing	0	0.00	2,324	6.86	2,324	1.53
All Party Boat fishing	0	0.00	0	0.00	0	0.00
All Private Boat fishing	2,822	2.40	116	0.34	2,938	1.94
All Nature & Wildlife Ob- servation	45,145	38.32	16,209	47.86	61,354	40.45
All Nature Observation from a boat	8,465	7.19	5,229	15.44	13,693	9.03
All Nature Observation on water	11,992	10.18	9,179	27.10	21,171	13.96
All Nature Observation on land	33,154	28.14	9,179	27.10	42,333	27.91
All Boating	24,689	20.96	13,304	39.28	37,993	25.05
All Charter Boat Use	2,116	1.80	8,947	26.41	11,063	7.29
All Rental Boat use	7,759	6.59	988	2.92	8,747	5.77
All Private Boat use	11,286	9.58	5,519	16.29	16,805	11.08
All Beach use	87,469	74.25	24,284	71.70	111,753	73.68
Any Land-based Activities	81,120	68.86	19,462	57.46	100,582	66.32
Only Water-based Activi- ties	29,627	25.15	12,316	36.36	41,943	27.65
Visiting Special Coral Reef Areas	11,286	9.58	3,137	9.26	14,423	9.51

Table A43. Region 2 SW Special Aggregate Acitivity Wintin Region Participation Rates by Season

1. See Tables A.9 and A.32 for more detailed activities.

	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	4,938	8.05	1,220	4.22	6,158	6.82
All Snorkeling	4,938	8.05	1,220	4.22	6,158	6.82
All Snorkeling from a boat	0	0.00	1,220	4.22	1,220	1.35
All SCUBA Diving	0	0.00	0	0.00	0	0.00
All SCUBA Diving from a boat	0	0.00	0	0.00	0	0.00
All Diving from a boat	0	0.00	1,220	4.22	1,220	1.35
All Diving from a Charter boat	0	0.00	1,162	4.02	1,162	1.29
All Diving from a Rental boat	0	0.00	174	0.60	174	0.19
All Diving from a Private boat	0	0.00	0	0.00	0	0.00
All Diving from shore	4,938	8.05	58	0.20	4,996	5.53
All Fishing	0	0.00	349	1.20	349	0.39
All Fishing from a boat	0	0.00	58	0.20	58	0.06
All Charter Boat fishing	2,116	3.45	0	0.00	2,116	2.34
All Party Boat fishing	0	0.00	58	0.20	58	0.06
All Private Boat fishing	0	0.00	0	0.00	0	0.00
All Nature & Wildlife Obser- vation	7,759	12.64	5,984	20.68	13,743	15.22
All Nature Observation from a boat	0	0.00	1,220	4.22	1,220	1.35
All Nature Observation on water	0	0.00	2,556	8.84	2,556	2.83
All Nature Observation on land	7,759	12.64	3,660	12.65	11,419	12.65
All Boating	1,411	2.30	3,253	11.24	4,664	5.17
All Charter Boat Use	2,116	3.45	1,278	4.42	3,394	3.76
All Rental Boat use	0	0.00	174	0.60	174	0.19
All Private Boat use	0	0.00	1,220	4.22	1,220	1.35
All Beach use	33,154	54.02	15,918	55.02	49,072	54.34
Any Land-based Activities	30,332	49.43	11,677	40.36	42,009	46.52
Only Water-based Activities	13,402	21.84	10,457	36.14	23,860	26.42
Visiting Special Coral Reef Areas	4,232	6.90	58	0.20	4,290	4.75

Table A44. Region 3 SE Special Aggregate Acitivity Within Region Participation Rates by Season

1. See Tables A.10 and A.33 for more detailed activities.

Table A45. Region 4 NES	Summer		Winter		Annual	
		Derticipation		Derticipation		Derticipation
Doof Activity	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	198,216	27.47	52,228	19.01	250,444	25.14
All Snorkeling	194,689	26.98	51,008	18.57	245,697	24.66
All Snorkeling from a boat	105,809	14.66	26,259	9.56	132,068	13.26
All SCUBA Diving	7,759	1.08	4,299	1.56	12,058	1.21
All SCUBA Diving from a boat	7,759	1.08	3,137	1.14	10,896	1.09
All Diving from a boat	109,336	15.15	27,421	9.98	136,757	13.73
All Diving from a Charter boat	99,461	13.78	21,844	7.95	121,304	12.17
All Diving from a Rental boat	8,465	1.17	4,996	1.82	13,461	1.35
All Diving from a Private boat	4,232	0.59	2,498	0.91	6,730	0.68
All Diving from shore	100,871	13.98	29,803	10.85	130,674	13.12
All Fishing	7,054	0.98	2,556	0.93	9,610	0.96
All Fishing from a boat	7,054	0.98	2,150	0.78	9,203	0.92
All Charter Boat fishing	7,759	1.08	3,021	1.10	10,780	1.08
All Party Boat fishing	0	0.00	0	0.00	0	0.00
All Private Boat fishing	2,822	0.39	581	0.21	3,403	0.34
All Nature & Wildlife Ob- servation	356,224	49.36	104,746	38.13	460,970	46.27
All Nature Observation from a boat	38,091	5.28	10,690	3.89	48,781	4.90
All Nature Observation on water	119,917	16.62	34,393	12.52	154,310	15.49
All Nature Observation on land	297,676	41.25	87,782	31.95	385,459	38.69
All Boating	196,099	27.17	55,191	20.09	251,290	25.22
All Charter Boat Use	124,149	17.20	30,500	11.10	154,649	15.52
All Rental Boat use	8,465	1.17	5,054	1.84	13,519	1.36
All Private Boat use	45,145	6.26	13,652	4.97	58,798	5.90
All Beach use	655,311	90.81	230,581	83.93	885,892	88.91
Any Land-based Activities	636,971	88.27	190,553	69.36	827,524	83.06
Only Water-based Activi- ties	62,780	8.70	60,536	22.03	123,316	12.38
Visiting Special Coral Reef Areas	53,610	7.43	9,237	3.36	62,847	6.31

 Table A45.
 Region 4 NE Special Aggregate Acitivity Witin Region Participation Rates by Season

1. See Tables A.11 and A.34 for more detailed activities.

Season	1					1
	Summer		Winter		Annual	
	Number of	Participation	Number of	Participation	Number of	Participation
Reef Activity	Participants	Rate (%)	Participants	Rate (%)	Participants	Rate (%)
All Diving	57,137	50.94	28,583	52.68	85,720	51.51
All Snorkeling	56,432	50.31	28,409	52.36	84,840	50.98
All Snorkeling from a boat	14,813	13.21	12,839	23.66	27,652	16.62
All SCUBA Diving	2,116	1.89	1,046	1.93	3,162	1.90
All SCUBA Diving from a boat	2,116	1.89	988	1.82	3,104	1.87
All Diving from a boat	15,519	13.84	13,711	25.27	29,230	17.56
All Diving from a Charter boat	12,697	11.32	8,656	15.95	21,353	12.83
All Diving from a Rental boat	2,822	2.52	2,556	4.71	5,378	3.23
All Diving from a Private boat	0	0.00	3,021	5.57	3,021	1.82
All Diving from shore	43,029	38.36	19,520	35.97	62,549	37.59
All Fishing	0	0.00	813	1.50	813	0.49
All Fishing from a boat	0	0.00	116	0.21	116	0.07
All Charter Boat fishing	0	0.00	697	1.28	697	0.42
All Party Boat fishing	0	0.00	0	0.00	0	0.00
All Private Boat fishing	0	0.00	232	0.43	232	0.14
All Nature & Wildlife Ob- servation	64,896	57.86	29,396	54.18	94,293	56.66
All Nature Observation from a boat	7,054	6.29	9,470	17.45	16,524	9.93
All Nature Observation on water	35,975	32.08	18,765	34.58	54,740	32.89
All Nature Observation on land	44,440	39.62	17,312	31.91	61,752	37.11
All Boating	32,448	28.93	20,333	37.47	52,782	31.72
All Charter Boat Use	19,751	17.61	14,872	27.41	34,623	20.81
All Rental Boat use	2,822	2.52	2,614	4.82	5,436	3.27
All Private Boat use	7,054	6.29	10,109	18.63	17,163	10.31
All Beach use	108,631	96.86	48,452	89.29	157,082	94.39
Any Land-based Activities	73,361	65.41	31,139	57.39	104,500	62.79
Only Water-based Activi- ties	37,386	33.33	18,532	34.15	55,918	33.60
Visiting Special Coral Reef Areas	20,456	18.24	6,274	11.56	26,731	16.06

Table A46. Region 5 Culebra & Vieques Special Aggregate Acitivity Within Region Participation Rates by

 Season

1. See Tables A.12 and A.35 for more detailed activities.

	Summer		Winter		Weighted Annual Average	
	% of All	% of For- eign	% of All	% of For- eign	% of All	% of Foreign
Country	Reef Users ¹	Reef Us- ers ²	Reef Users ¹	Reef Users ²	Reef Users ¹	Reef Users ²
Argentina	0.00	0.00	0.12	1.64	0.03	0.93
Australia	0.27	12.50	0.06	0.82	0.21	5.90
Austria	0.00	0.00	0.12	1.64	0.03	0.93
Brazil	0.00	0.00	0.06	0.82	0.02	0.46
Canada	0.27	12.50	1.81	24.39	0.70	19.33
Chile	0.00	0.00	0.18	2.46	0.05	1.39
China	0.00	0.00	0.30	4.10	0.08	2.32
Columbia	0.00	0.00	0.24	3.28	0.07	1.85
Costa Rica	0.00	0.00	0.06	0.82	0.02	0.46
Dominican Re- public	0.27	12.50	0.36	4.92	0.30	8.21
Ecuador	0.00	0.00	0.06	0.82	0.02	0.46
England	0.27	12.50	0.54	7.38	0.35	9.60
Finland	0.00	0.00	0.24	3.28	0.07	1.85
France	0.00	0.00	0.06	0.82	0.02	0.46
Germany	0.00	0.00	0.60	8.20	0.17	4.63
Guatemala	0.00	0.00	0.06	0.82	0.02	0.46
Ireland	0.00	0.00	0.06	0.82	0.02	0.46
Italy	0.00	0.00	0.30	4.10	0.08	2.32
Mexico	0.55	25.00	0.36	4.92	0.50	13.65
Netherlands	0.00	0.00	0.12	1.64	0.03	0.93
Nicaragua	0.00	0.00	0.06	0.82	0.02	0.46
Norway	0.00	0.00	0.30	4.10	0.08	2.32
Panama	0.00	0.00	0.12	1.64	0.03	0.93
Poland	0.00	0.00	0.06	0.82	0.02	0.46
Russia	0.00	0.00	0.06	0.82	0.02	0.46
Scotland	0.00	0.00	0.06	0.82	0.02	0.46
Spain	0.55	25.00	0.24	3.28	0.46	12.72
Sweden	0.00	0.00	0.30	4.10	0.08	2.32
Taiwan	0.00	0.00	0.06	0.82	0.02	0.46
U.S.A.	97.80	N/A	92.64	N/A	96.36	N/A
United Arab Emirates	0.00	0.00	0.06	0.82	0.02	0.46
Uruguay	0.00	0.00	0.06	0.82	0.02	0.46
Venzuela	0.00	0.00	0.24	3.28	0.07	1.85

 Table A47.
 Countrues of Primary Residence of Reef Using Visitors by Season

1. Percent of all reef using visitors, including U.S. reef using visitors.

2. Percent of all foreign reef using visitors, excluding U.S. reef using visitors.

	Summer		Winter		Weighted	
					Annual Average	
	% of Reef	% of Domes- tic	% of Reef	% of Domestic	% of Reef	% of Domestic
Census Regions/ Divisions	Users ¹	Reef Users ²	Users ¹	Reef Users ²	Users ¹	Reef Users ²
East	22.53	23.03	31.28	33.79	24.98	25.93
New England	6.59	6.74	11.03	11.91	7.83	8.13
Middle Atlantic	15.93	16.29	20.25	21.88	17.14	17.79
Midwest	10.44	10.67	13.50	14.58	11.30	11.73
East North Cen- tral	7.69	7.87	9.52	10.29	8.20	8.52
West North Central	2.75	2.81	3.98	4.30	3.09	3.21
South	54.95	56.18	37.85	40.89	50.16	52.07
South Atlantic	42.03	42.98	29.78	32.16	38.60	40.07
East South Cen- tral	1.37	1.40	2.11	2.28	1.58	1.64
West South Central	11.54	11.80	5.97	6.45	9.98	10.36
West	9.34	9.55	9.34	10.09	9.34	9.70
Pacific	4.95	5.06	6.09	6.58	5.26	5.46
Mountain	4.40	4.49	3.25	3.52	4.08	4.23
U.S. Territories	0.55	0.56	0.60	0.65	0.56	0.59

Table A48. Census Regions and Divisions of Primary Residence of Reef Using Visitors by Season

Percent of all reef using visitors.
 Percent of all domestic (U.S.) reef using visitors, excluding foreign visitors.

	Summer		Winter		Weighted Annual Average	
	% of Reef	% of Domestic	% of Reef	% of Domestic	% of Reef	% of Domestic
State/Territo- ries	Users ¹	Reef Users ²	Users ¹	Reef Users ²	Users ¹	Reef Users ²
American Samoa	0.00	0.00	0.12	0.13	0.03	0.04
Alaska	0.27	0.28	0.06	0.07	0.21	0.22
Alabama	0.55	0.56	0.54	0.59	0.55	0.57
Arkansas	0.00	0.00	0.18	0.20	0.05	0.05
Arizona	1.37	1.40	0.66	0.72	1.17	1.22
California	4.12	4.21	3.68	3.97	4.00	4.15
Colorado	2.47	2.53	1.27	1.37	2.13	2.22
Connecticut	2.20	2.25	3.25	3.52	2.49	2.59
District of Columbia	0.55	0.56	1.39	1.50	0.78	0.81
Delaware	0.27	0.28	0.18	0.20	0.25	0.26
Florida	26.65	27.25	15.91	17.19	23.64	24.54
Georgia	3.02	3.09	2.53	2.73	2.88	2.99
Hawaii	0.00	0.00	0.24	0.26	0.07	0.07
lowa	0.27	0.28	0.54	0.59	0.35	0.36
Idaho	0.00	0.00	0.24	0.26	0.07	0.07
Illinois	3.30	3.37	3.19	3.45	3.27	3.39
Indiana	0.82	0.84	0.84	0.91	0.83	0.86
Kansas	0.00	0.00	0.54	0.59	0.15	0.16
Kentucky	0.00	0.00	0.54	0.59	0.15	0.16
Louisiana	0.55	0.56	0.48	0.52	0.53	0.55
Massachu- setts	2.75	2.81	6.09	6.58	3.68	3.82
Maryland	5.77	5.90	3.80	4.10	5.22	5.42
Maine	0.82	0.84	0.48	0.52	0.73	0.76
Michigan	1.65	1.69	2.11	2.28	1.78	1.84
Minnesota	1.10	1.12	1.69	1.82	1.26	1.31
Missouri	0.55	0.56	0.60	0.65	0.56	0.59
Mississippi	0.00	0.00	0.06	0.07	0.02	0.02
Montana	0.00	0.00	0.06	0.07	0.02	0.02
North Caro- lina	1.92	1.97	2.35	2.54	2.04	2.12
North Dakota	0.27	0.28	0.06	0.07	0.21	0.22
Nebraska	0.27	0.28	0.30	0.33	0.28	0.29
New Hamp- shire	0.00	0.00	0.66	0.72	0.19	0.19
New Jersey	3.85	3.93	3.92	4.23	3.87	4.01
New Mexico	0.00	0.00	0.12	0.13	0.03	0.04
Nevada	0.27	0.28	0.12	0.13	0.23	0.24

Table A49. States and Territories of Primary Residence of Reef Using Visitors by Season

Percent of all reef using visitors, including foregin visitors.
 Percent of all domestic (U.S.) reef using visitors, excluding foreign visitors.

	Summer		Winter		Weighted Annual Average	
	% of Reef	% of Domestic	% of Reef	% of Domestic	% of Reef	% of Domestic
State/Territo- ries	Users ¹	Reef Users ²	Users ¹	Reef Users ²	Users ¹	Reef Users ²
New York	9.89	10.11	12.54	13.54	10.63	11.03
Ohio	0.82	0.84	1.99	2.15	1.15	1.19
Oklahoma	0.00	0.00	0.24	0.26	0.07	0.07
Oregon	0.27	0.28	0.30	0.33	0.28	0.29
Pennsylvania	2.20	2.25	3.80	4.10	2.65	2.75
Rhode Island	0.55	0.56	0.42	0.46	0.51	0.53
South Carolina	0.82	0.84	0.78	0.85	0.81	0.84
South Dakota	0.27	0.28	0.24	0.26	0.27	0.28
Tennessee	0.82	0.84	0.78	0.85	0.81	0.84
Texas	10.99	11.24	5.06	5.47	9.33	9.69
Utah	0.27	0.28	0.66	0.72	0.38	0.40
Virginia	3.02	3.09	2.83	3.06	2.97	3.08
Virgin Islands	0.55	0.56	0.48	0.52	0.53	0.55
Vermont	0.27	0.28	0.12	0.13	0.23	0.24
Washington	0.27	0.28	1.81	1.95	0.70	0.73
Wisconsin	1.10	1.12	1.39	1.50	1.18	1.22
West Virginia	0.00	0.00	0.18	0.20	0.05	0.05
Wyoming	0.00	0.00	0.12	0.13	0.03	0.04

Table A49. States and Territories of Primary Residence of Reef Using Visitors by Season (Continued)

Percent of all reef using visitors, including foregin visitors.
 Percent of all domestic (U.S.) reef using visitors, excluding foreign visitors.