

2012 National Ocean Recreation Expenditure Survey



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2012 National Ocean Recreation Expenditure Survey

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Preface

Summary

Residents from across the United States recreate on, in, and in view of our Nation's oceans and marine coasts. Ocean and coastal areas that include bays, estuaries, coastal wetlands, and saltwater bayous support a wide range of recreation activities from swimming and boating to wildlife viewing and recreational shellfishing. The National Marine Fisheries Service (NOAA Fisheries) has a rich tradition of collecting economic, social, and cultural information related to marine recreational finfishing activities across the U.S. In 2012 – 2013, NOAA Fisheries expanded the scope of its research to include non-fishing marine recreation activities, an acknowledgement that increasing our understanding of the broader context within which fishing activities occur provides a more ecosystem-focused perspective to marine resource management. The National Ocean Recreation Expenditure Survey (NORES) was implemented to collect data for estimating annual participation (number of people) and effort (number of days) levels, and annual spending associated with a wide range of ocean and coastal activities. Nationwide, it is estimated that nearly 49 million people participated in ocean and coastal recreation in 2012. These individuals enjoyed over 1.2 billion full and partial days along our marine coasts and purchased over \$141 billion in ocean recreation-related goods and services. These expenditures supported over 3.1 million full- and part-time jobs, \$409 billion in income to businesses, \$135 billion to household incomes, and \$225 billion to Gross Domestic Product (GDP or the total value of domestic goods and services). This research provides information that supports a more informed ecosystem-based approach to managing our Nation's marine resources and may contribute to ongoing regional marine spatial planning processes.

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Introduction

Since 1994, the National Marine Fisheries Service (NOAA Fisheries) has collected economic information from recreational anglers across the United States through the design and implementation of surveys. These surveys have typically been mail-based questionnaires administered at the region level. The initial survey design for the National Ocean Recreation Expenditure Survey (NORES) was based on the experience gained from these early survey efforts and the ongoing recreational fishing expenditure studies that the agency continues to execute.

Building on these studies, the National Ocean Recreation Expenditure Survey (NORES) is the first national survey undertaken by NOAA Fisheries to estimate participation levels and the number of days (effort) people spent enjoying a broad range of ocean and coastal recreation activities. Eight ocean recreation categories were defined in the survey questionnaire: recreational fishing; recreational shellfishing; hunting waterfowl or other animals; viewing or photographing the ocean; beachcombing, tidepooling, or collecting items; water contact sports; boating and associated activities; and outdoor activities not involving water contact. Households from all 50 states and the District of Columbia were included in the sampling design.

In addition to collecting baseline information on participation and effort, data on spending associated with each ocean recreation category was collected. This included expense data for durable, ocean recreation-related items such as boats, insurance, boat maintenance, fishing rods, binoculars, etc. Data on ocean recreation trip-related items were also collected. These included purchases of food, beverages, lodging, visitor fees, etc. These data were used to estimate total durable and trip expenditures associated with each item.

Input-output models were then used to estimate the total economic contributions attributable to an ocean recreator's expenditures. Contribution effects were estimated for sales, labor income, value-added, employment, and taxes. Sales represents the value of industry production derived from expenditures by ocean recreator's in each region. Labor income includes wages, salaries, benefits, and proprietor's income generated from ocean recreator's expenditures. Value-added is defined as the difference between an industry's total sales and the costs of its intermediate inputs, and is equivalent to gross domestic product (GDP). Employment reflects the impact of ocean recreator's expenditures on labor requirements within a region, and is measured in both full-time and part-time jobs. Finally, taxes denote the income received by federal and state/local governments. It is important to note that the first four categories of economic contributions are not mutually exclusive and that adding them together would result in double counting.

This report continues with an overview of the primary methods used in this study (Methods and Analysis). More detailed information can be found in Appendix B (Detailed Methods and Analysis). Results from this research follow the methods overview and are reported in six sections. The first is focused on the United States. The next five sections are region-focused: the Pacific Region, the New England Region, the Mid-Atlantic Region, the South Atlantic Region, and the Gulf of Mexico Region. These results provide estimates of effort, participation, expenditures, and economic contributions attributable to ocean recreation that occurred in these geographic areas. The report continues with a discussion of modeling assumptions and how these results compare with other ocean recreation studies (Discussion). Finally, supplementary information is provided at the end of this report and includes a glossary (Appendix A), more details about survey methods and analysis (Appendix B), where to find total expenditure tables by region and activity (Appendix C), and the English version of the survey questionnaire (Appendix D).

Methods and Analysis

Survey Design and Data Collection

The National Ocean Recreation Expenditure Survey (NORES) questionnaire was primarily designed to elicit information about participation and effort levels, and expenditure information related to eight ocean recreation activity categories. The NORES questionnaire was administered to a sample of households who participated on a web-enabled research panel maintained by GfK Group, formerly Knowledge Networks. This panel is designed to be statistically representative of the U.S. population and panel members are recruited through probability-based sampling methods (i.e., address-based sampling). To ensure the participation of households of varying income levels and technology fluency, GfK Group provides internet and computer equipment, as well as technical support as needed. Spanish-speaking households are also included on this panel and were sampled for this study. The survey was implemented every two months during the 2012-13 time frame to allow for the collection of season-specific activity information that may be influenced by changes in weather and temperature. The online format for this survey allowed for complex skip patterns that may have been difficult to navigate had it been a paper-based survey. Additional details about the sampling design are available in Appendix B.

The NORES focused on the following eight ocean recreation categories: 1) recreational fishing (i.e., recreational fishing); 2) recreational shellfishing; 3) hunting waterfowl or other animals; 4) viewing or photographing the ocean; 5) beachcombing, tidepooling, or collecting items; 6) water contact sports; 7) boating and associated activities, and 8) outdoor activities not involving water contact. These categories were intended to be inclusive of all activities that might occur on, in, or near the ocean and coast. We defined “ocean recreation” as any activity that occurred “at, in, or in view of oceans, bays, estuaries, coastal wetlands, saltwater bayous, or other seawater areas.” Based on this definition provided in the survey questionnaire, activities that occurred on the Great Lakes and other inland lakes, reservoirs, rivers, and streams were excluded. Each ocean recreation category was defined in the questionnaire to aid respondents in assessing whether their activity (e.g., hiking along the coast) was within the scope of the survey (e.g., outdoor activities not involving water contact). More detail about the wording of questions and definitions provided in the survey are available in Appendix D.

Respondents residing across the U.S. – in all 50 states and the District of Columbia – were included in this study. However, the sampling design was based on the region level not the state level. This was due to sampling cost and online panel membership at the time of this study. Six regions were defined for sampling purposes : Pacific, New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Inland.

Extensive qualitative testing of the survey instrument was completed before the main survey period. A total of six focus groups and 18 cognitive, one-on-one interviews were conducted in support of this project at locations across the U.S. from April through August 2010. The final survey questionnaire, purpose and need for this project, and supporting information were submitted to the Office of Management and Budget (OMB) for approval in May 2011, as required by the Paperwork Reduction Act (PRA). This project was approved with changes in November 2011. The PRA submission for this project is available online (Department of Commerce, OMB Control Number 0648-0637). In February 2012, a pre-test of the online survey instrument was conducted to identify any issues related to the functionality of the survey instrument.

The main survey period began in March 2012. Each survey wave asked respondents about their ocean recreation activities within the last two months. That is, in Wave 1, respondents were asked details about their activities in January and February. In Wave 2, respondents were asked details about activities in March and April, etc. The main

survey period ended in January 2013 but continued for Alaska and Hawaii through September 2013. More detail is available in Appendix B.

Participation and Effort Estimates

Estimating annual participation and effort spent recreating in ocean and coastal areas provides new information about the level of ocean recreation occurring in the U.S. To estimate this, respondents were asked questions about which ocean recreation activities they participated in within the last 2 months, and how many full and partial days were spent engaged in each of those categories. These responses allowed for annual estimates of participants to be calculated. Similarly, an annual estimate of the total number of days spent participating in each ocean activity category was also calculated using these responses. Respondents were also asked where they spent most of their time participating in ocean recreation (recreation region). This information, coupled with information about a respondent's region of residence, allowed for region level estimates of recreation activity by residents and nonresidents. These estimates are reported in the U.S. and region sections of this report (Results). More detail about how these values were estimated is provided in Appendix B.

Durable and Trip Expenditures Estimates

To better understand how ocean recreation-related spending contributes to regional economies across the U.S., respondents were asked detailed questions about various expenses incurred in support of their ocean activities. These questions collected information about how much was spent on a durable or trip-related item, where it was purchased, and how much of the time the item was used for ocean recreation.

Information about durable items purchased within the last 12 months was collected. Durable items included boats, vehicles, and activity-related equipment such as fishing rods and reels, wetsuits, and scuba gear. Only durable items that were used for ocean recreation 50% of the time or more were included in the analysis. Respondents were also asked about their most recent visit (or trip) to the ocean and coast within the last 2 months and the items purchased during that trip. Trip-related items included car fuel, parking, bridge tolls, airfare, lodging, food/beverage, and activity-related items such as fishing bait and whale watching fees. The full suite of items can be seen in the survey questionnaire (Appendix D).

Mean expense values for each durable and trip item were calculated for residents and nonresidents of each recreation region. To calculate mean expense values for each durable item, outliers (e.g., the top 1% of expense values) were excluded. This was done to mediate the influence of one or two very large values on the mean estimate when most purchases were more modest. Similarly, outliers were excluded when estimating mean expense values for trip-related items except in a few cases (see Appendix B).

Total annual expenditures for each durable item associated with each ocean activity, region, and resident/nonresident was calculated by multiplying each mean expense value by the number of participants for that ocean activity, region, and residence status. Total annual expenditures for each durable item were then aggregated to estimate total durable expenditures across all items. Total annual expenditures for trip items associated with each ocean activity, region, and resident/nonresident were also calculated. Trip expenditures were estimated by multiplying each mean expense value by the number of days spent engaged in that particular ocean activity, region, and residence status. Total annual expenditures for each trip-related item were then aggregated to estimate total trip expenditures across all items.



Enjoying the beauty of the ocean and its wildlife. Photo: NOAA's National Ocean Service/Claire Fackler

Economic Contribution Analysis

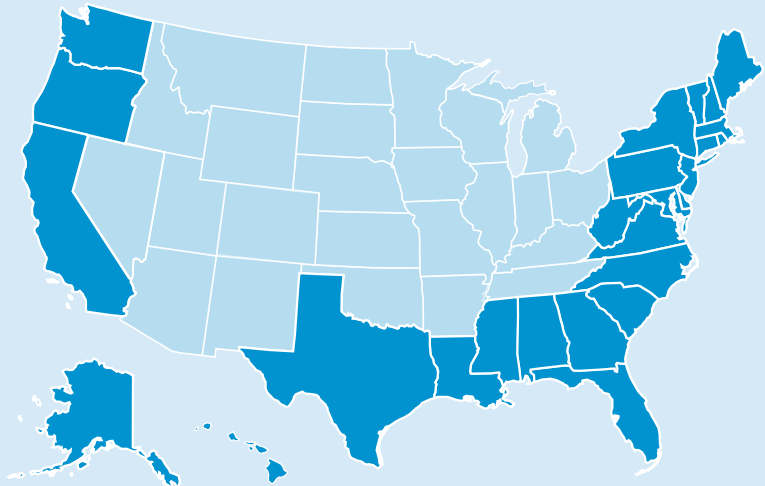
Ocean recreators' expenditures support a wide range of manufacturing, transportation, and service sectors; from retail and service establishments furnishing goods and services to ocean recreators, to manufacturing and transportation firms supplying the affected industries. The effects of these expenditures can be classified as: (1) direct, (2) indirect, or (3) induced. Direct effects occur when ocean recreators spend money at retail and service oriented businesses (e.g., purchases of ice at convenience stores or scuba gear from a dive shop). Indirect effects occur when retail and service sectors purchase supplies from wholesale trade businesses and manufacturers, and pay overhead expenses (e.g., the retailer purchases water skis from the manufacturer or wholesaler and pays utility bills). The secondary suppliers, in turn, purchase products and services from their own suppliers, triggering further indirect multiplier effects that are dependent upon the initial demands of ocean recreators. This cascading series of inter-industry purchasing continues until all indirect effects are sourced from outside the region of interest. Payments for goods and services manufactured outside of the study area are excluded because these effects impact businesses located in other regions. Lastly, induced effects measure the cycle of consumption spending by employees in the direct and indirect sectors (e.g., marina employees spend money on groceries and pay federal and state taxes). The summation of the direct, indirect, and induced multiplier effects represent the total economic contributions or impacts supported by ocean recreators' expenditures.

An analytical framework known as regional input-output analysis was used to measure indirect and induced multiplier effects and thus estimate the total economic contribution of ocean recreators' expenditures. A commercially available input-output software package called IMPLAN (IMPLAN Group LLC, 2015) was selected for the contribution assessment. The IMPLAN software package includes secondary data collected from national, state, and local government reports and a user-friendly media for customizing input-output models to an application. IMPLAN is the most widely recognized input-output tool among practitioners because the software

is flexible in terms of geographic coverage and model formulation, and can incorporate user-supplied data at each stage of the model building process. We employed IMPLAN version 3 software along with IMPLAN 2014 base year data for this assessment. Further explanation can be found in Appendix B.

Results: United States

- Pacific Region
- New England Region
- Mid-Atlantic Region
- South Atlantic Region
- Gulf of Mexico Region



A kayak adventure leads to many smiles and laughs. Photo: NOAA's National Ocean Service/Claire Fackler



A group of young surfers hit the winter swell in Santa Barbara, CA. Photo: NOAA's National Ocean Service/Claire Fackler

National Ocean Recreation Participation, Effort, and Expenditures (Table 1.1)

Nearly 49 million U.S. residents participated in one or more ocean recreation activities in 2012. Most of these ocean recreators, 26 million of them, enjoyed activities included in the Viewing or Photographing the Ocean category which includes viewing seabirds and waves from shore, or photographing the beach and oceanscape. This ocean recreation category was followed in popularity by Beachcombing, Tidepooling, or Collecting Items which had 19 million participants. Hunting Waterfowl or other Animals and Recreational Shellfishing had the fewest participants relative to the other categories with 781 thousand and 2.2 million recreators, respectively.

When considering the number of days¹ spent engaged in a particular activity, there were more days spent Viewing or Photographing the Ocean than any other activity: 377 million days or 31% of total ocean recreation days. Other popular activities included Outdoor Activities not involving Water Contact (212 million days or 17% of total effort), Beachcombing, Tidepooling, or Collecting Items (207 million days or 17% of total effort), and Recreational Fishing (191 million days or 16% of total effort). The fewest number of ocean recreation days were spent Hunting Waterfowl or other Animals which comprised less than 1% of total ocean recreation days (7.4 million days).

Ocean recreators in the United States spent over \$141 billion on durable goods and trip-related expenses when engaging in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses, goods or services purchased during day or multi-day visits to the coast. These types of expenses comprised nearly \$116 billion in sales and included items such as lodging, car fuel, and food and beverage purchases (82% of total durable and trip expenses). Expenses related to Viewing or Photographing the Ocean made up the biggest share of total durable and trip expenses by ocean recreators, \$38 billion or 27% of total spending. This activity was followed by spending related to Recreational Fishing, \$29 billion or 21% of total spending. Hunting Waterfowl or other Animals comprised the smallest share of ocean recreation spending with \$376 million (less than 1%) spent on goods and services related to this activity. When looking at spending on durable items such as boat or vehicle-related purchases that are used at least 50% of the time for ocean recreation, participants in Recreational Fishing spent the greatest share of total durable expenses, \$7.1 billion or 28% of total durable expenses.

¹“Days” includes both full and partial days spent enjoying the ocean and/or coast.

Table 1.1. Ocean recreation participation, effort, and expenditures in the United States, 2012.

	Total participation (number of participants)	Total effort (number of days)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	11,077,547	191,455,522	29,158,399	7,106,063	22,052,337
Recreational shellfishing	2,156,781	28,532,619	2,588,052	705,605	1,882,447
Hunting waterfowl or other animals	780,675	7,356,413	376,417	53,671	322,746
Viewing or photographing the ocean	25,901,787	377,285,313	38,414,336	5,279,994	33,134,342
Beachcombing, tidepooling, or collecting items	18,589,217	206,922,914	23,177,331	2,375,575	20,801,755
Water contact sports	9,369,971	94,811,062	11,060,430	2,295,845	8,764,586
Boating and associated activities	9,931,136	97,531,992	16,096,709	5,039,998	11,056,711
Outdoor activities not involving water contact	16,256,999	212,299,962	20,164,877	2,508,801	17,656,076
All ocean activities combined**	48,541,962	1,216,233,910	141,036,552	25,365,552	115,671,000

* Some individuals participated in more than one ocean recreation activity and they are included in the totals for each of those ocean recreation activities. However, for the “All ocean activities combined” category individuals participating in more than one ocean recreation activity were assigned to the one activity that was most enjoyable to them. Therefore the “All ocean activities combined” participation estimate is smaller than the sum of participants in each ocean recreation activity category.

Ocean Recreation Participation, Effort, and Expenditures by Region of the United States (Table 1.2)

For this study, the United States coastal states with ocean coastline were aggregated into five regions: the Pacific, New England, Mid-Atlantic, South Atlantic, and Gulf of Mexico.² The largest proportion of ocean recreation participants and days (effort), and ocean recreation-related spending occurred in the Pacific Region: 13.9 million participants (28% of the US total), 382 million days spent engaged in an ocean activity (31% of the US total), and over \$39 billion spent on durable and trip-related goods and services (28% of the US total). The Mid-Atlantic Region followed in terms of ocean recreation participants with over 10 million people recreating along the Mid-Atlantic coast. When looking at the number of days spent engaged in an ocean activity, 263 million days were spent in the South Atlantic Region, representing 22% of total U.S. ocean recreation effort. In terms of spending on durable and trip expenses (total expenses), recreators spent \$34 million and \$32 million in the Gulf of Mexico and South Atlantic Regions, respectively, representing the second and third highest spending on ocean recreation goods and services after the Pacific Region. Participation, effort, and total expenses in the New England Region made up the smallest regional share with 5.6 million ocean recreators spending 135 million days and \$11 billion along New England’s coast.

The shoreline of the United States spans roughly **88,633 miles** (excluding the Great Lakes) and is made up of **five coastal regions**:

Pacific	42,819 miles	48%
New England	6,130 miles	7%
Mid-Atlantic	11,443 miles	12%
South Atlantic	11,965 miles	14%
Gulf of Mexico	16,495 miles	19%

Source: Table 364, Coastline and Shoreline of the United States by State, U.S. Census Bureau, 2012.

² Coastal states were aggregated as follows: Pacific Region = AK, CA, HI, OR, WA; New England Region = CT, MA, ME, NH, RI, VT; Mid-Atlantic Region = DE, MD, NJ, NY, PA, VA, WV; South Atlantic Region = East FL, GA, NC, SC; and Gulf of Mexico Region = AL, West FL, LA, MS, TX. Great Lakes states were not included as part of the ocean coastline.

Table 1.2. Ocean recreation participation, effort, and expenditures by Region, 2012.

	Total participation	Total effort	Total durable and trip expenses (\$ thousands)
Pacific	13,930,474	381,862,113	38,683,463
New England	5,583,677	135,277,301	10,558,956
Mid-Atlantic	10,523,448	200,509,556	23,803,610
South Atlantic	9,699,505	263,317,305	35,116,663
Gulf of Mexico	8,804,858	235,267,636	33,303,396
United States	48,541,962^{*,**}	1,216,233,910^{**}	141,036,552^{**}

* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities the participated in, Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

** The U.S. totals reported in this table are not the sum of the Region totals that are shown. The U.S. totals include Recreational Shellfishing and Hunting Waterfowl or Other Animals. However, the Region totals exclude these two categories.

Ocean Recreation’s Contribution to the National Economy (Figure 1.1)

Over \$141 billion in ocean recreation spending resulted in nearly \$409 billion in sales revenue to businesses, over 3.1 million full- and part-time jobs, \$135 billion in labor income, and \$225 billion in Gross Domestic Product (GDP). Ocean recreation activities varied in their economic impacts. Viewing or Photographing the Ocean generated the largest share of sales revenue to businesses, jobs, labor income, and value-added (GDP) impacts. Recreational Fishing comprised the second largest share in all economic impact categories. Recreational Shellfishing and Hunting Waterfowl or other Animals contributed the smallest share of economic impacts associated with ocean recreation yet still contributed millions to billions in sales revenue, labor income, and GDP impacts, and thousands to tens of thousands of jobs. When considering the contribution of ocean recreation activities in the U.S. relative to all other industry sectors that generate economic activity such as agriculture and energy development, All Ocean Activities combined comprised 1.3% of total sales revenue to businesses, 1.7% of total full- and part-time jobs, 1.3% of total labor income in the U.S., and 1.3% of the GDP.

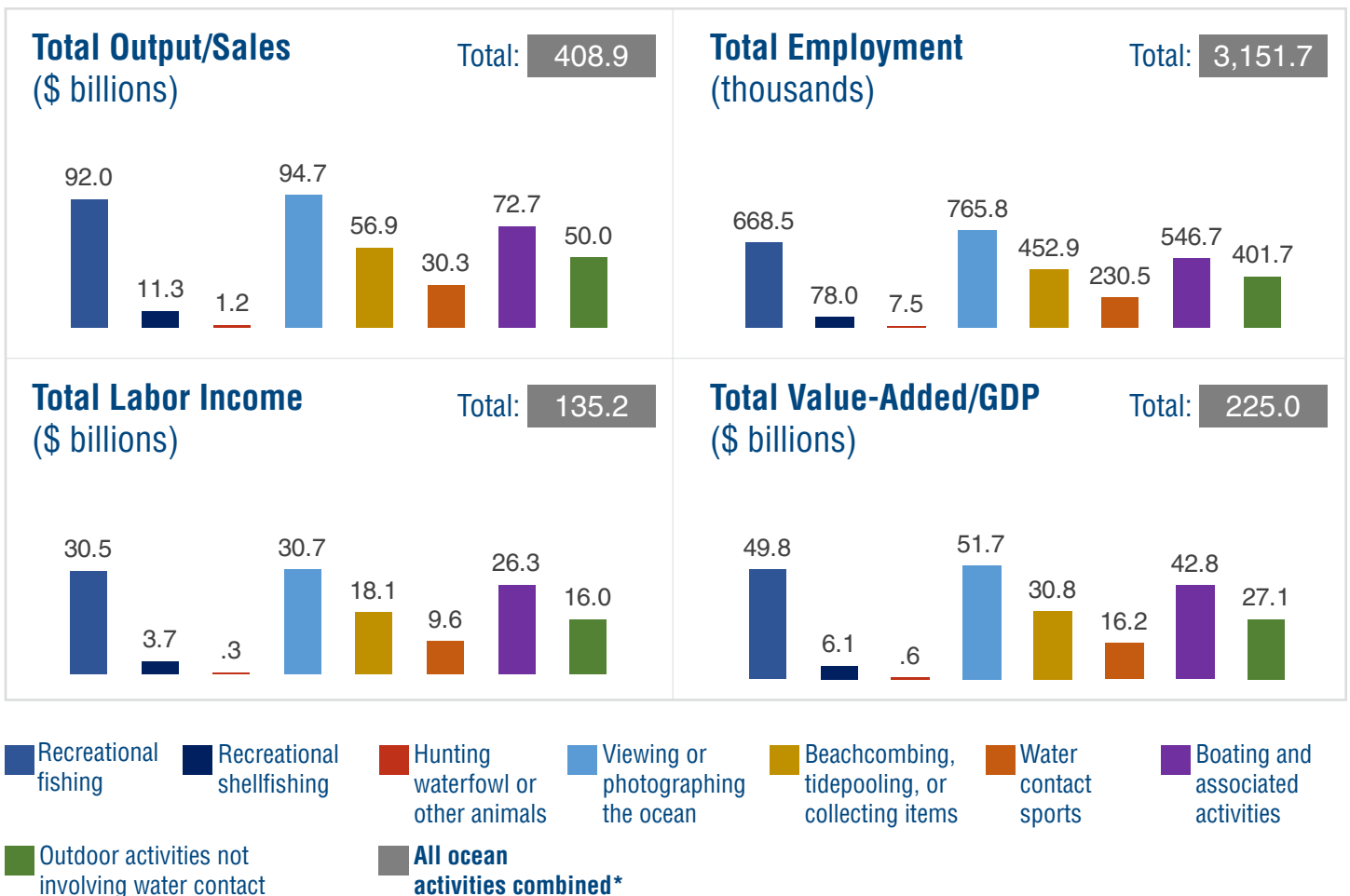


Striped bass (*Morone saxatilis*) caught off of Cape Cod, Massachusetts. Photo: NOAA Fisheries/Scott Steinback



Taking in the rush of salty sea air. Photo: NOAA Education

Figure 1.1. National economic contribution by ocean recreation category, 2012.

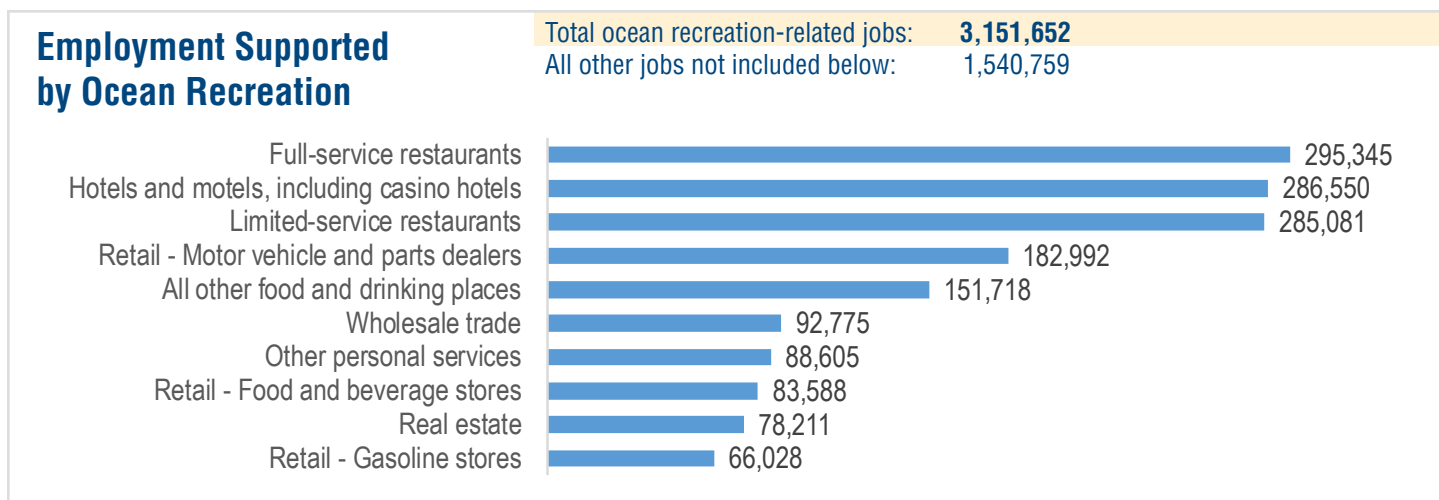


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the "All ocean activities combined" total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus on Employment Resulting from Ocean Recreation Spending (Figure 1.2)

Nearly 3.2 million full- and part-time jobs resulted from spending associated with ocean recreation in the United States (all activities combined). Most of these jobs, 23%, were related to restaurants (full- and limited-service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food/drinking places). An additional 9% of jobs (287 thousand) were in the hotel and motel industry. The real estate sector and retail stores selling gasoline ranked 9th and 10th, respectively, with 78 thousand and 66 thousand jobs. All other industry sectors outside of the top 10 comprised 49% of full- and part-time jobs nationally, over 1.5 million jobs.

Figure 1.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012.



Tax Revenue Associated with Ocean Recreation Activities (Table 1.3)³

Over \$58 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with ocean recreation-related expenditures in the United States. The majority of this revenue, 41%, came from goods and services related to Production and Imports, followed by Household spending (24%) and Employee Compensation (23%). Proprietor income generated the smallest share of total tax revenue, 2%.

State and Local tax revenue comprised 44% of total taxes (Federal, State and Local combined) generated from ocean recreation activities in the U.S. Over \$21 billion of State and Local taxes came from Production and Imports (82%). The smallest share of State and Local tax revenue came from Employee Compensation (\$232 billion or 1%). No taxes were generated from Proprietor Income at the State and Local levels. The majority of Federal tax revenue came from Employee Compensation (\$13.2 billion or 40%) and Household spending (\$10.8 billion or 33%). Proprietor Income comprised the smallest share of Federal tax revenue (\$955 million or 3%).

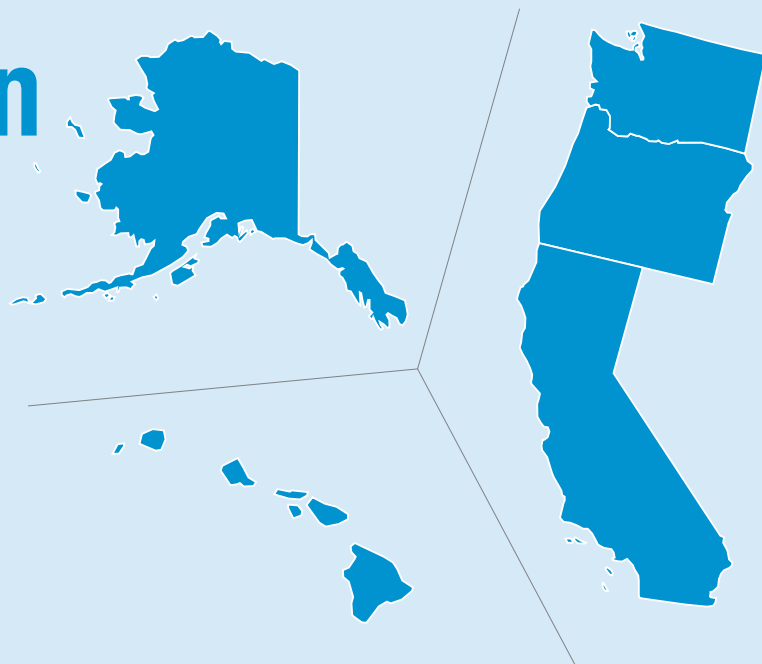
Table 1.3. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012.

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	232,056	0	21,097,868	3,512,855	731,201	25,573,980
Federal tax	13,232,104	955,098	2,910,051	10,758,841	4,920,592	32,776,686
Total tax revenue	13,464,160	955,098	24,007,919	14,271,696	5,651,793	58,350,666

³ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>.

Results: Pacific Region

- Alaska
- California
- Hawaii
- Oregon
- Washington



Digging for razor clams in Washington State. Photo: NOAA Fisheries/Vera Trainer



Kitesurfers at Kailua Beach Park, Oahu, Hawaii. Photo: NOAA Fisheries/Rosemary Kosaka

Ocean Recreation Participation and Effort (Table 2.1)

Approximately 14 million people participated in one or more ocean recreation activities in the Pacific Region in 2012. Seventy-one percent of these ocean recreators were residents of this region. Most resident and nonresident participants, 8.1 million of them, enjoyed Viewing or Photographing the Ocean more than any other ocean activity. This activity was followed by Outdoor Activities not involving Water Contact (5.4 million), and Beachcombing, Tidepooling, or Collecting Items (5.3 million). Hunting Waterfowl or other Animals comprised over 245,000 participants in the region, the smallest share of ocean recreation participants.

When considering the number of days⁴ spent engaged in a particular activity, most of the ocean recreation effort in the Pacific Region was spent Viewing or Photographing the Ocean: almost 135 million full and partial days in 2012 or 35% of total effort. This activity was followed by Outdoor Activities not involving Water Contact which comprised 20% of total effort, followed by the number of days ocean recreators participated in Beachcombing, Tidepooling, or Collecting Items, 15% of total effort. Hunting Waterfowl or other Animals comprised the smallest share of total ocean recreation effort, less than 1%.

Ocean Recreation-Related Expenditures (Table 2.1)

Ocean recreators in the Pacific Region spent close to \$39 billion on durable goods and trip-related expenses combined (total expenses) when participating in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses such as lodging, car fuel, and food expenses (79% of total expenses). Expenses related to Viewing or Photographing the Ocean made up the biggest share of total expenditures by ocean recreators: \$12 billion or 31% of total spending. Ocean recreators spent over \$6.0 billion (15% of total spending) when participating in Outdoor Activities not Involving Water Contact, nearly \$5.9 billion (15% of total spending) on Beachcombing, Tidepooling, or Collecting Items, nearly \$5.9 billion (15% of total spending) on marine Recreational Fishing, \$4.5 billion (11% of total spending) to engage in Boating and associated Activities, and \$4.2 billion (11% of total spending) on Water Contact Sports.

⁴ "Days" includes both full and partial days spent enjoying the ocean and/or coast.

Table 2.1. Ocean recreation participation, effort, and expenditures in the Pacific Region, 2012.

	Total participation (number of participants)	Resident participants (percent residents)	Total effort (number of days)	Resident effort (percent residents)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	2,782,963	67	40,118,498	83	5,857,815	1,730,188	4,127,627
Recreational shellfishing	754,276	80	14,291,346	89	*	*	*
Hunting waterfowl or other animals	245,326	56	2,057,477	80	*	*	*
Viewing or photographing the ocean	8,100,987	71	134,825,414	80	12,268,455	1,818,241	10,450,214
Beachcombing, tidepooling, or collecting items	5,291,808	70	56,817,945	76	5,862,304	653,446	5,208,858
Water contact sports	2,716,092	69	34,251,584	78	4,156,300	1,055,226	3,101,074
Boating and associated activities	2,873,745	63	24,050,354	75	4,532,126	1,864,706	2,667,420
Outdoor activities not involving water contact	5,416,012	73	75,411,381	87	6,006,463	785,248	5,221,216
All ocean activities combined**	13,930,474	71	381,862,113	81	38,683,463	7,907,085	30,776,409

* Not enough observations to estimate this value at the Region level.

** Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.



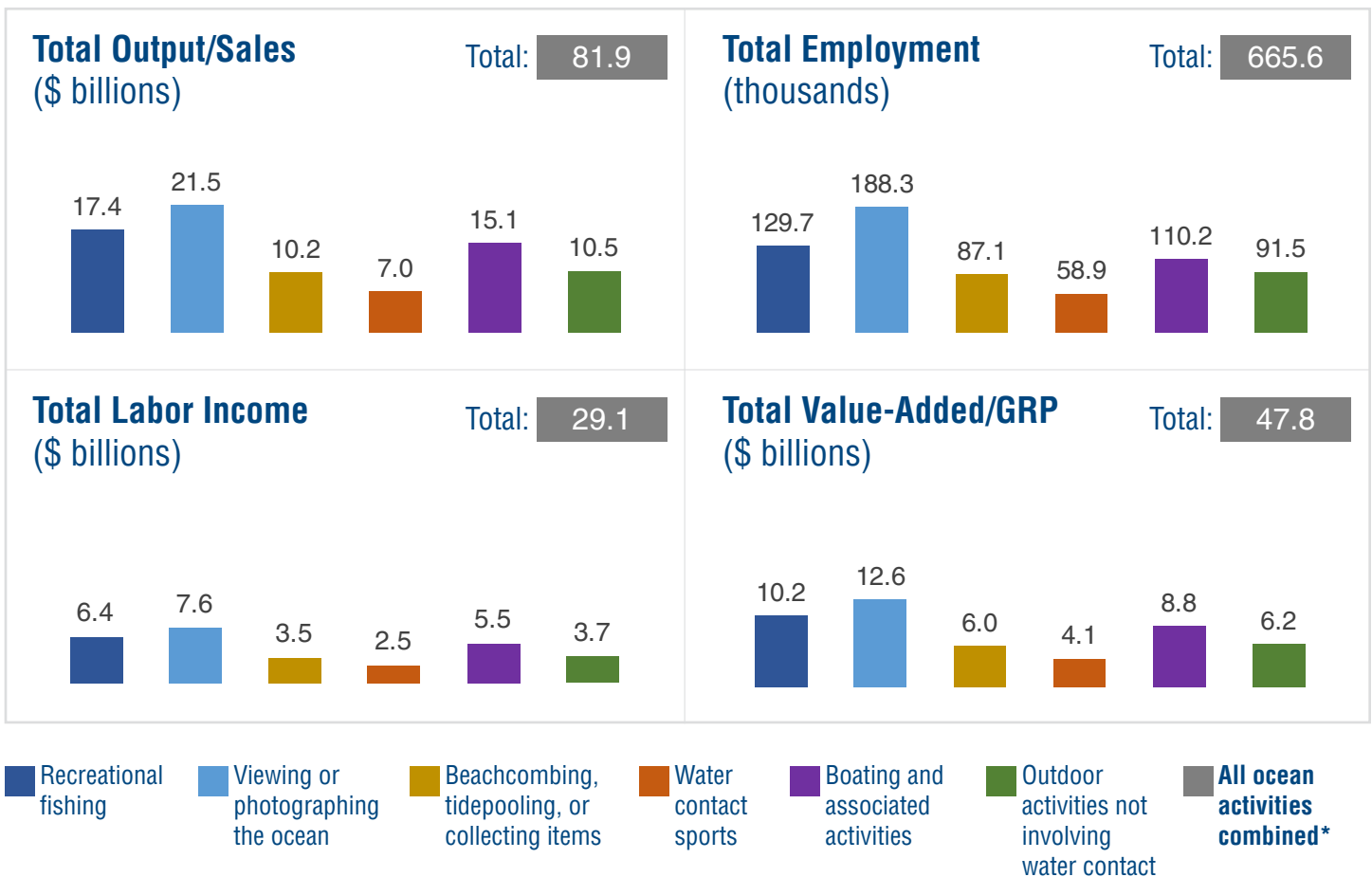
Scuba diver and sea otter (*Enhydra lutris*) meet in a kelp forest in the Point Lobos State Reserve, California. Photo: NOAA Corps/Lieutenant John Crofts

Economic Contribution to the Pacific Region (Figure 2.1)

The \$40 billion spent by ocean recreators cycled through the Pacific Region’s economy and generated a total of \$82 billion in output (sales) to Pacific Region businesses, \$29 billion in labor income (employee compensation and proprietor’s income), \$48 billion in value-added (gross regional product), and supported over 665,000 full- and part-time jobs (Figure 2.1). When considering the economic contributions associated with each ocean recreation category, spending on Viewing or Photographing the Ocean generated the largest share of sales, labor income, value-added, and employment in the Pacific. Ocean recreation expenditures on Recreational Fishing contributed the second most to the Pacific’s economy, followed by Boating and associated Activities. Spending on Outdoor Activities not involving Water Contact and Beachcombing, Tidepooling, or Collecting Items generated similar contributions, and spending to participate in Water Contact Sports resulted in the smallest share of total economic effects.

When considering how much ocean recreation contributes to the Pacific Region relative to all other types of economic activities within the region such as manufacturing, agriculture, and energy development, All Ocean Activities combined comprised approximately 1.6% of total regional sales, 2.2% of total regional jobs, 1.6% of total labor income in the region, and 1.5% of the Gross Regional Product.

Figure 2.1. Regional economic contribution by ocean recreation category, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

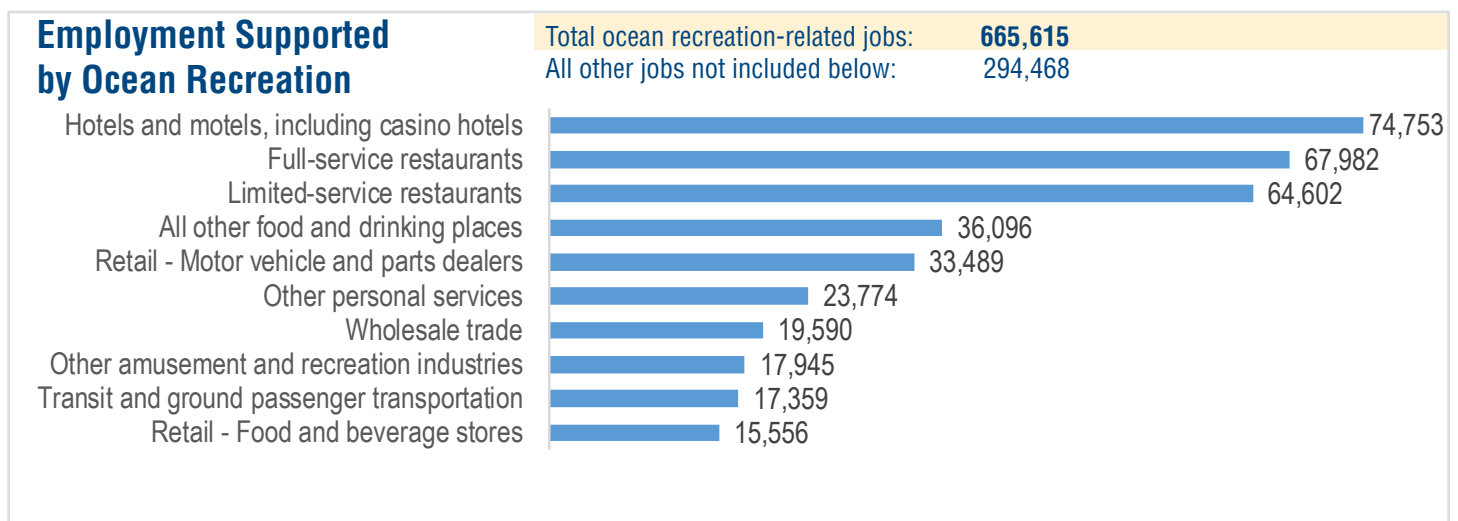


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus On Employment Resulting From Ocean Recreation Spending (Figure 2.2)

Approximately 666,000 full- and part-time jobs resulted from spending associated with ocean recreation activities in the Pacific Region (All Ocean Activities combined). Many of these jobs, 25%, were related to restaurants (full- and limited-service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food/drinking places). Almost 75,000 full- and part-time jobs were in the hotel and motel industry, comprising 11% of total jobs in the region that resulted from ocean recreation spending. Jobs in the motor vehicle and parts retail industry which includes outboard motor dealers comprised 5% of jobs. Five other industry sectors each made up between 2% and 4% of ocean recreation-related jobs. For example, other amusement and recreation industries, which includes guide services for hunting and fishing, and marinas, supported 3% of ocean recreation-related jobs, and retail establishments specializing in food and beverages supported 2% of jobs. An additional 44% of ocean recreation-related jobs in the Pacific Region were in other industries outside of the top 10 industries shown in Figure 2.2.

Figure 2.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).



Kayaking in Channel Islands National Marine Sanctuary and National Park. Photo: NOAA's National Ocean Service/Claire Fackler

Tax Revenue Associated with Ocean Recreation Activities (Table 2.2)⁵

Over \$13.2 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with ocean recreation activities in the Pacific Region. The majority of this revenue, 42%, came from goods and services related to Production and Imports, followed by Household spending (26%). Proprietor Income generated the smallest share of total tax revenue, 2%.

State and Local tax revenue comprised 46% of the total tax (Federal, State, and Local) generated from ocean recreation activities in the region, with over \$4.9 billion coming from Production and Imports (81% of State and Local tax revenue). Employee Compensation comprised the smallest share of State and Local tax revenue (1%). No taxes were generated from Proprietor Income. Federal tax revenue was largely made up of Employee Compensation (\$2.8 billion, 39% of Federal tax revenue) and Household spending (\$2.4 billion, 34% of Federal tax revenue). Three percent of Federal taxes came from Proprietor Income (\$214 million), the smallest share.

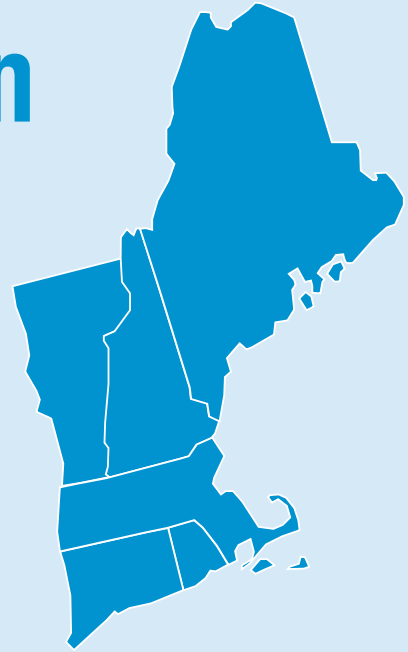
Table 2.2. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	63,244	0	4,909,843	959,054	146,870	6,079,011
Federal tax	2,825,169	213,862	713,467	2,443,203	974,759	7,170,460
Total tax revenue	2,888,413	213,862	5,623,310	3,402,257	1,121,629	13,249,471

⁵ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>.

Results: New England Region

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont



Black sea bass (*Centropomus striata*) caught off of Falmouth, Massachusetts. Photo: NOAA Fisheries/Scott Steinback



A group of kayakers ply the waters of Cape Cod, Massachusetts. Photo: NOAA Fisheries/Scott Steinback

Ocean Recreation Participation and Effort (Table 3.1)

In 2012, there were approximately 5.6 million people who participated in one or more ocean recreation activities in the New England Region. Most of these ocean recreators, 3.2 million of them, enjoyed Viewing or Photographing the Ocean more than any other ocean activity, followed by Beachcombing, Tidepooling, or Collecting Items (2.2 million), and Outdoor Activities not involving Water Contact (1.7 million). Hunting Waterfowl or other Animals comprised approximately 143,000 ocean recreation participants in the region, the smallest share of ocean recreation participants.

When considering the number of days⁶ spent engaged in a particular activity, most of the ocean recreation effort in New England was spent Viewing or Photographing the Ocean: nearly 49 million days in 2012 or 36% of total effort. This activity was closely followed by Outdoor Activities not involving Water Contact (19% of total effort) and Beachcombing, Tidepooling, or Collecting Items (18% of total effort). Hunting Waterfowl or other Animals comprised the smallest share of total ocean recreation effort (1.4%).

Ocean Recreation-Related Expenditures (Table 3.1)

Ocean recreators in the New England Region spent more than \$10 billion on durable goods and trip-related expenses combined (total expenses) when participating in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses such as lodging, car fuel, and food expenses (75% of total expenses). Expenses related to Viewing or Photographing the Ocean made up the biggest share of total expenditures by ocean recreators: \$3.5 billion or 32% of total spending. Ocean recreators spent nearly \$2.0 billion (18% of total spending) when participating in Beachcombing, Tidepooling, or Collecting Items, \$1.9 billion (17% of total spending) on Outdoor Activities not involving Water Contact, \$1.5 billion (13% of total spending) on Boating and associated Activities, \$1.3 billion (12% of total spending) to engage in marine Recreational Fishing, and \$458 million (4.1% of total spending) on Water Contact Sports.

⁶ "Days" includes both full and partial days spent enjoying the ocean and/or coast.

Table 3.1. Ocean recreation participation, effort, and expenditures in the New England Region, 2012.

	Total participation (number of participants)	Resident participants (percent residents)	Total effort (number of days)	Resident effort (percent residents)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	994,972	89	11,832,408	89	1,292,272	483,487	808,785
Recreational shellfishing	396,508	84	4,580,876	52	*	*	*
Hunting waterfowl or other animals	142,982	19	1,864,976	6	*	*	*
Viewing or photographing the ocean	3,222,268	80	49,023,515	86	3,538,466	875,688	2,662,778
Beachcombing, tidepooling, or collecting items	2,212,072	81	25,000,950	91	1,964,409	229,938	1,734,471
Water contact sports	978,494	86	6,533,358	86	458,327	121,472	336,855
Boating and associated activities	1,300,192	79	10,593,708	81	1,454,101	576,664	877,437
Outdoor activities not involving water contact	1,687,542	83	25,847,511	88	1,851,381	285,098	1,566,282
All ocean activities combined**	5,583,677	81	135,277,301	85	10,558,956	2,572,347	7,986,608

* Not enough observations to estimate this value at the Region level.

** Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.



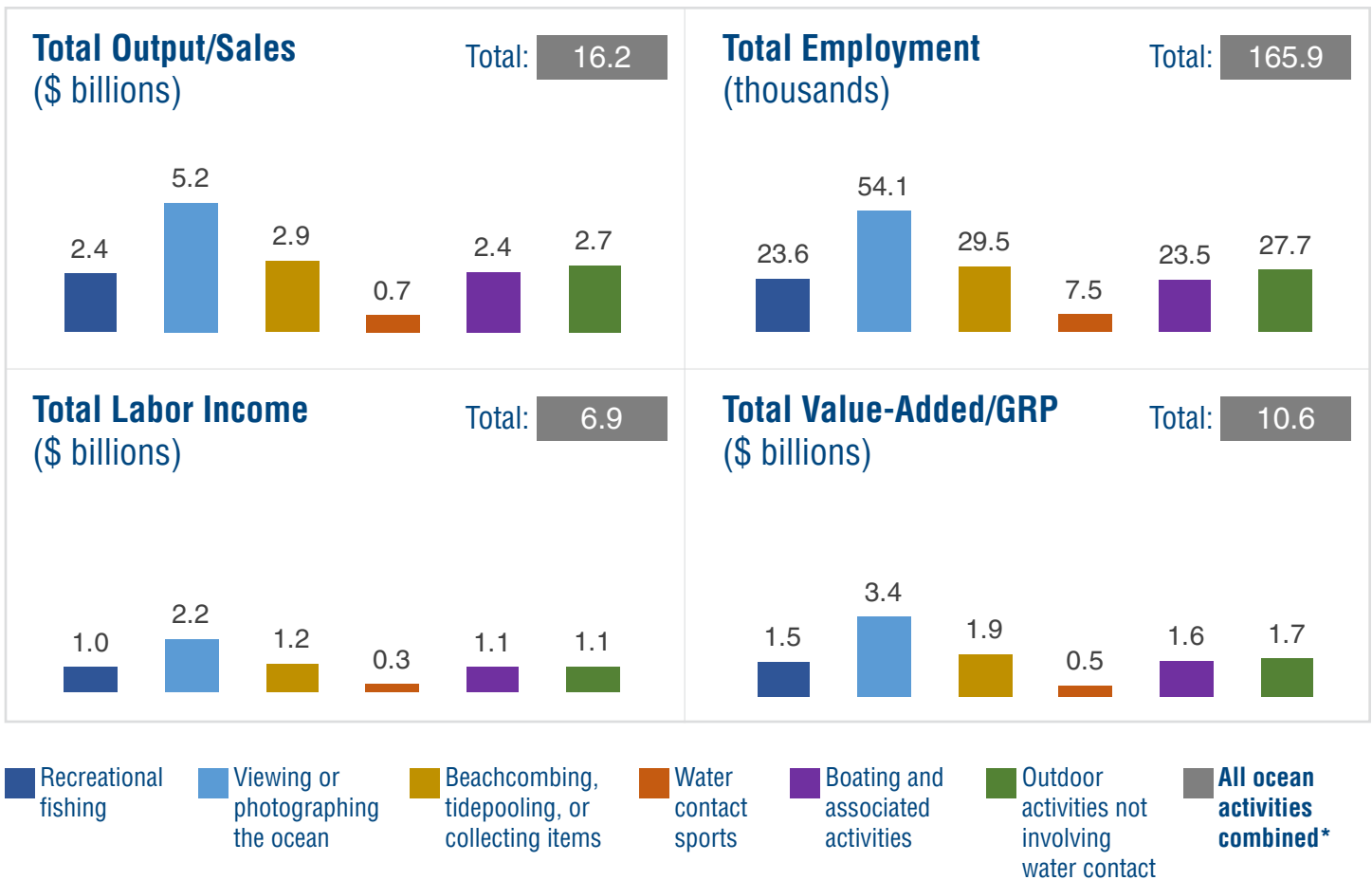
Great white shark (*Carcharodon carcharias*) swims past a private boat near Woods Hole, Massachusetts. Photo: NOAA Fisheries/Scott Steinback

Economic Contribution to the New England Region (Figure 3.1)

The \$11 billion spent by ocean recreators cycled through New England’s economy and generated a total of \$16 billion in output (sales) to New England businesses, \$6.9 billion in labor income (employee compensation and proprietor’s income), \$11 billion in value-added (gross regional product), and supported nearly 166,000 full- and part-time jobs (Figure 3.1). When considering the economic contributions associated with each ocean recreation category, spending on Viewing or Photographing the Ocean generated the largest share of sales, labor income, value-added, and employment in New England. Ocean recreation expenditures on Beachcombing, Tidepooling, or Collecting Items contributed the second most to New England’s economy, followed by Outdoor Activities not involving Water Contact. Boating and associated Activities and Recreational Fishing spending generated similar contributions, and spending to participate in Water Contact Sports resulted in the smallest share of total economic effects.

When considering how much ocean recreation contributes to New England relative to all other types of economic activities within the region such as manufacturing, agriculture, and energy development, All Ocean Activities combined comprised approximately 1.0% of total regional sales, 1.8% of total regional jobs, 1.1% of total labor income in the region, and 1.1% of the Gross Regional Product.

Figure 3.1. Regional economic contribution by ocean recreation category, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

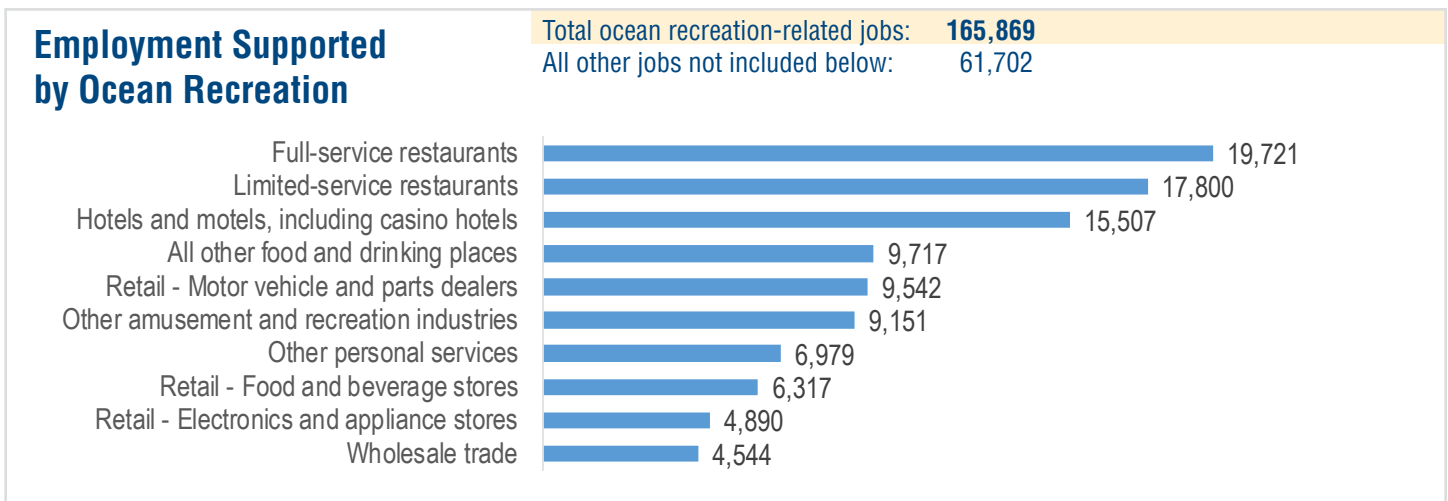


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus on Employment resulting from Ocean Recreation spending (Figure 3.2)

Approximately 166,000 full- and part-time jobs resulted from spending associated with ocean recreation activities in the New England Region (all activities combined). Most of these jobs, 29%, were related to restaurants (full- and limited-service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food/drinking places). Over 15,000 full- and part-time jobs were in the hotel and motel industry, comprising 9% of total jobs in the region that resulted from ocean recreation spending. Jobs in the motor vehicle and parts industry comprised 6% of jobs; another 6% of jobs were in other amusement and recreation industry which includes recreational fishing –related businesses such as charter and for-hire operators. The industry sectors that include retail establishments specializing in food and beverages, electronics and appliances, and wholesale, ranked 8th, 9th, and 10th, respectively, in terms of jobs resulting from ocean recreation expenditures. Thirty-seven percent of ocean recreation-related jobs in New England were in other industries outside of the top 10 industries shown in Figure 3.2.

Figure 3.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).



Fishing off a charter boat out of Bar Harbor, Mount Desert Island, Maine. Photo: NOAA Fisheries/Tammy Murphy

Tax revenue associated with Ocean Recreation Activities (Table 3.2)⁷

Over \$2.9 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with Ocean Recreation Activities in New England. The majority of this revenue, 38%, came from goods and services related to Production and Imports, followed by Household spending (30%). Proprietor Income generated the smallest share of total tax revenue, 2%.

State and Local tax revenue comprised 43% of the total tax (Federal, State, and Local) generated from ocean recreation activities in the region, with over \$1 billion of State and Local taxes coming from Production and Imports (80%). Employee Compensation comprised the smallest share of State and Local tax revenue (1%). No taxes were generated from Proprietor Income. Federal tax revenue was largely made up of Household spending (\$666 billion, 40%) and Employee Compensation (\$648 billion, 39%). Three percent of Federal taxes came from Proprietor Income (\$46 billion).

Table 3.2. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	9,271	0	1,002,894	203,425	42,571	1,258,161
Federal tax	647,954	46,067	113,518	665,869	193,171	1,666,579
Total tax revenue	657,225	46,067	1,116,412	869,294	235,742	2,924,740

⁷ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>

Results: Mid-Atlantic Region

- Delaware
- Maryland
- New Jersey
- New York
- Pennsylvania
- Virginia
- West Virginia



Sharing discoveries like this blue crab (*Callinectes sapidus*) at Flag Pond Beach, Maryland. Photo: NOAA Fisheries/Kristy Wallmo



Parasailing over the Delaware Bay, Dewey Beach, Delaware. Photo: NOAA's National Ocean Service/Jerry Hovis

Ocean Recreation Participation and Effort (Table 4.1)

In 2012, there were approximately 11 million people who participated in one or more ocean recreation activities in the Mid-Atlantic Region. Eighty-nine percent of these ocean recreators were residents of this region. Most resident and nonresident participants, 5.3 million of them, enjoyed Viewing or Photographing the Ocean more than any other ocean activity, followed by Outdoor Activities not involving Water Contact (3.7 million) and Beachcombing, Tidepooling, or Collecting Items (3.6 million). Hunting Waterfowl or other Animals comprised approximately 134,000 participants in the region, the smallest share of ocean recreation participants.

When considering the number of days⁸ spent engaged in a particular activity, most of the ocean recreation effort in the Mid-Atlantic was spent Viewing or Photographing the Ocean: nearly 56 million full and partial days in 2012 or 28% of total effort. This activity was followed by marine Recreational Fishing which comprised 19% of total effort, closely followed by the number of days ocean recreators participated in Outdoor Activities not involving Water Contact, 18% of total effort. Hunting Waterfowl or other Animals comprised the smallest share of total ocean recreation effort, less than 1%.

Ocean Recreation-Related Expenditures (Table 4.1)

Ocean recreators in the Mid-Atlantic Region spent nearly \$24 billion on durable goods and trip-related expenses combined (total expenses) when participating in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses such as lodging, car fuel, and food expenses (77% of total expenses). Expenses related to Viewing or Photographing the Ocean made up the biggest share of total expenditures by ocean recreators: \$6.3 billion or 26% of total spending. Ocean recreators spent nearly \$6.2 billion (26% of total spending) when participating in marine Recreational Fishing, \$3.4 billion (14% of total spending) on Beachcombing, Tidepooling, or Collecting Items, \$3.3 billion (14% of total spending) on Outdoor Activities not involving Water Contact, nearly \$2.9 billion (12% of total spending) to engage in Boating and associated Activities, and \$1.8 billion (7.4% of total spending) on Water Contact Sports.

¹ "Days" includes both full and partial days spent enjoying the ocean and/or coast.

Table 4.1. Ocean recreation participation, effort, and expenditures in the Mid-Atlantic Region, 2012.

	Total participation (number of participants)	Resident participants (percent residents)	Total effort (number of days)	Resident effort (percent residents)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	2,154,447	87	38,000,381	90	6,187,429	1,651,834	4,535,595
Recreational shellfishing	481,711	90	3,942,849	68	*	*	*
Hunting waterfowl or other animals	133,835	31	1,511,635	91	*	*	*
Viewing or photographing the ocean	5,282,300	88	55,688,376	90	6,312,449	1,174,703	5,137,746
Beachcombing, tidepooling, or collecting items	3,607,287	93	30,805,887	93	3,379,041	628,200	2,750,841
Water contact sports	2,111,390	88	15,836,403	87	1,789,914	577,516	1,212,398
Boating and associated activities	1,932,402	83	17,817,040	78	2,856,698	857,697	1,999,001
Outdoor activities not involving water contact	3,716,149	91	36,906,984	90	3,278,079	502,482	2,775,597
All ocean activities combined**	10,523,448	89	200,509,556	89	23,803,610	5,392,432	18,411,178

* Not enough observations to estimate this value at the Region level.

** Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.



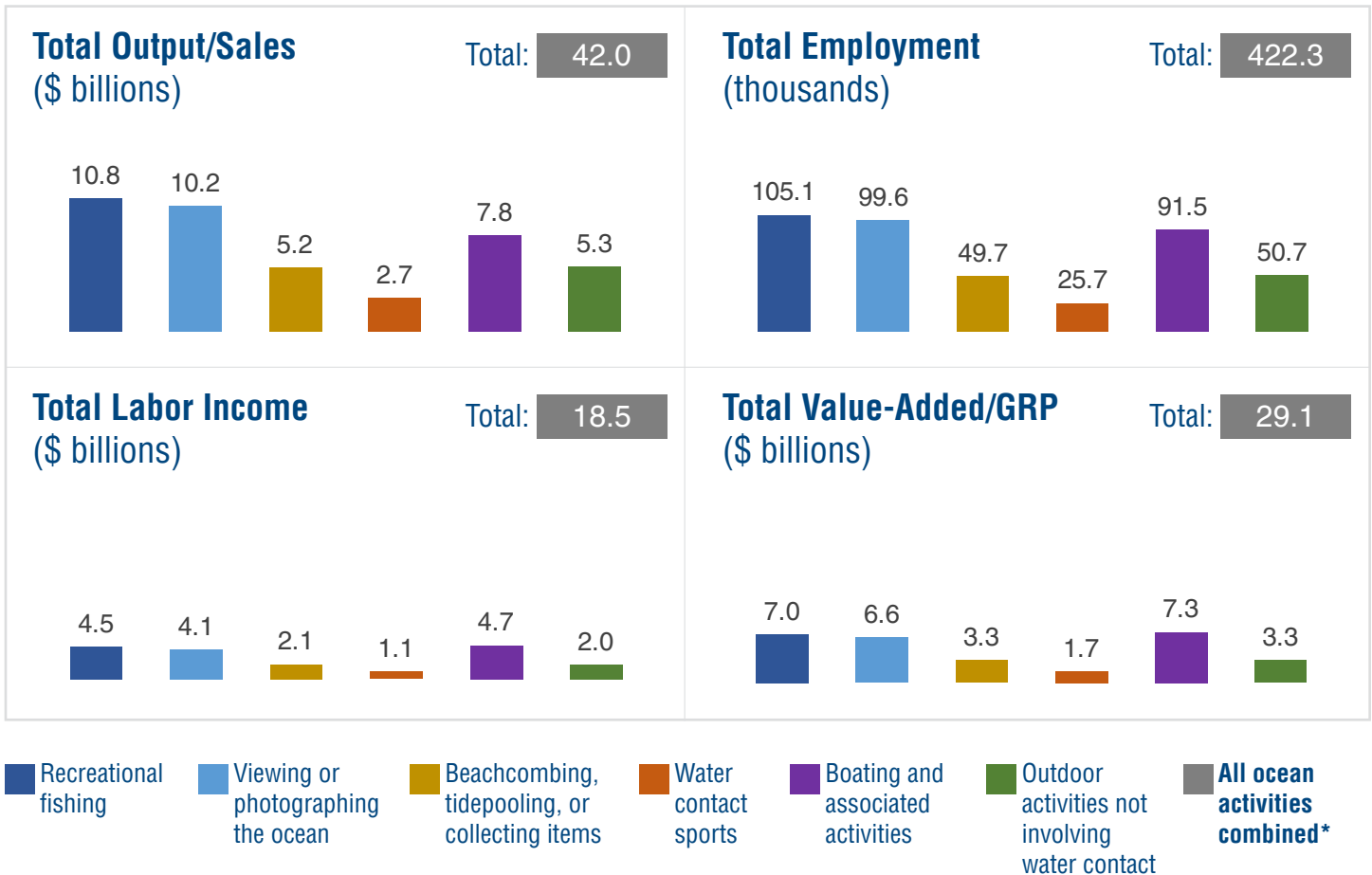
Striped bass (*Morone saxatilis*) caught from Virginia Beach, Virginia. Photo: NOAA Corps/Captain Albert E. Theberge (ret.)

Economic Contribution to the Mid-Atlantic Region (Figure 4.1)

The \$24 billion spent by ocean recreators cycled through the Mid-Atlantic’s economy and generated a total of \$42 billion in output (sales) to Mid-Atlantic businesses, over \$18 billion in labor income (employee compensation and proprietor’s income), over \$29 billion in value-added impacts (gross regional product), and supported over 422,000 full- and part-time jobs (Figure 4.1). When considering the economic contributions associated with each ocean recreation category, spending on marine Recreational Fishing generated the largest share of sales and employment in the Mid-Atlantic, followed by Viewing or Photographing the Ocean and Boating and associated Activities. When considering labor income and value-added impacts, Boating and associated Activities contributed the largest share, closely followed by Recreational Fishing and Viewing or Photographing the Ocean. Ocean recreation expenditures on activities associated with Beachcombing, Tidepooling, or Collecting Items, and Outdoor Activities not involving Water Contact, generated similar contributions to the Mid-Atlantic economy. Spending to participate in Water Contact Sports resulted in the smallest share of total economic effects.

When considering how much ocean recreation contributes to the Mid-Atlantic Region relative to all other types of economic activities within the region such as manufacturing, agriculture, and energy development, All Ocean Activities combined comprised approximately 0.7% of total regional sales, 1.2% of total regional jobs, 0.8% of total labor income in the region, and 0.8% of the Gross Regional Product.

Figure 4.1. Regional economic contribution by ocean recreation category, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

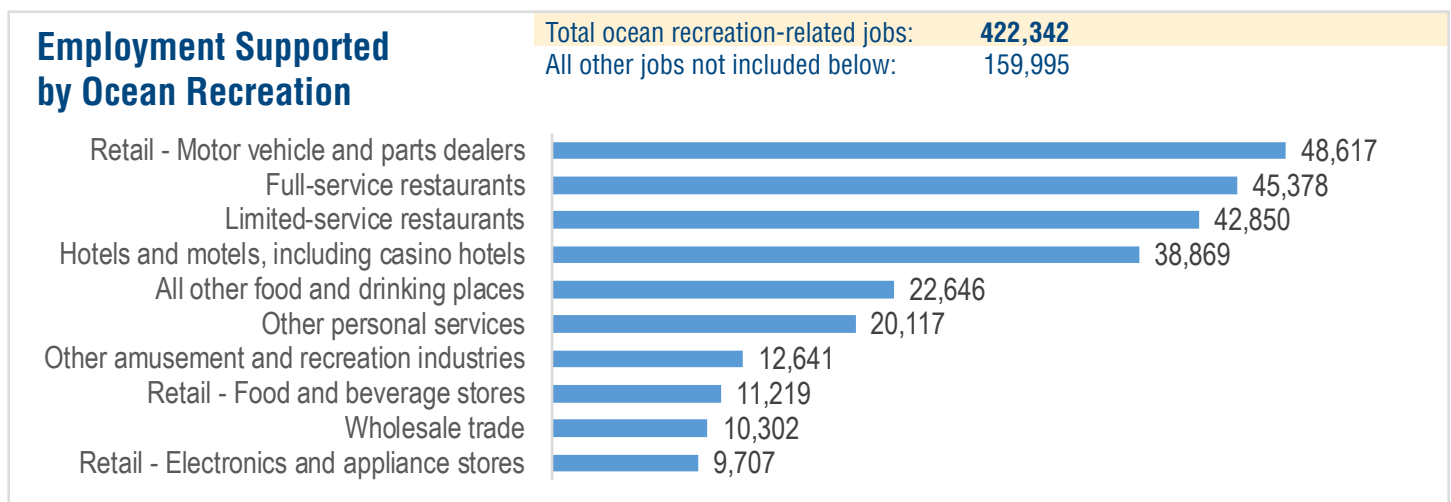


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus On Employment Resulting From Ocean Recreation Spending (Figure 4.2)

Over 422,000 full- and part-time jobs resulted from spending associated with ocean recreation activities in the Mid-Atlantic Region (All Ocean Activities combined). Most of these jobs, 26%, were related to restaurants (full- and limited-service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food/drinking places). Nearly 49,000 full- and part-time jobs were in the motor vehicle and parts retail industry which includes outboard motor dealers, comprising 12% of total jobs in the region. Jobs in the other personal services industry which includes parking garages and concierge services, comprised 5% of jobs. The remaining four industry sectors in the top ten which includes recreational fishing-related businesses such as guide services for hunting and fishing (other amusement and recreational industries) and electronics stores (retail establishments specializing in electronics and appliances), each contributed 2% to 3% of full- and part-time jobs in the region. Thirty-eight percent of ocean recreation-related jobs in the Mid-Atlantic were in other industries outside of the top ten industries shown in Figure 4.2.

Figure 4.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).



Surfcasting on the Chesapeake Bay, Maryland. Photo: NOAA Fisheries/Kristy Wallmo

Tax Revenue Associated with Ocean Recreation Activities (Table 4.2)⁹

Over \$8.3 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with ocean recreation activities in the Mid-Atlantic. The majority of this revenue, 42%, came from goods and services related to Production and Imports, followed by Household spending (27%) and Employee Compensation (22%). Proprietor Income generated the smallest share of total tax revenue, 1%.

State and Local tax revenue comprised 47% of the total tax (Federal, State, and Local) generated from ocean recreation activities in the region, with approximately \$3.1 billion of State and Local taxes coming from Production and Imports (79% of State and Local tax revenue). Employee Compensation comprised the smallest share of State and Local tax revenue (1%). No taxes were generated from Proprietor Income. Federal tax revenue was largely made up of Employee Compensation (\$1.8 billion, 40% of Federal tax revenue) and Household spending (\$1.6 billion, 36% of Federal tax revenue). Three percent of Federal taxes came from Proprietor Income (\$122 million).

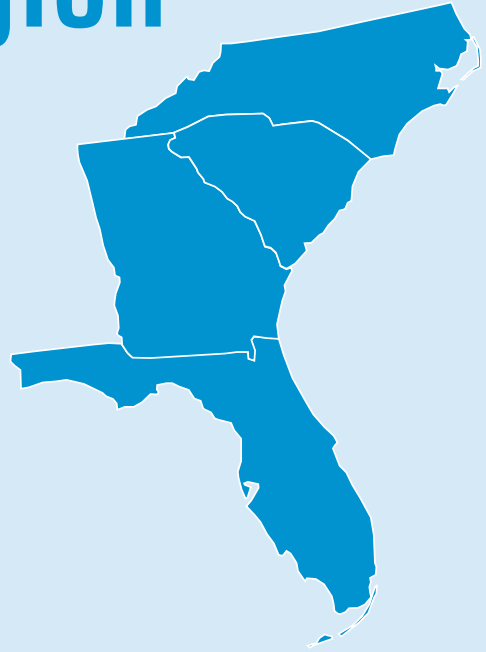
Table 4.2. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	22,240	0	3,068,702	651,869	139,232	3,882,043
Federal tax	1,776,488	122,323	387,380	1,612,836	536,868	4,435,895
Total tax revenue	1,798,728	122,323	3,456,082	2,264,705	676,100	8,317,938

⁹ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>

Results: South Atlantic Region

- East Florida
- Georgia
- North Carolina
- South Carolina



Children explore the Rachel Carson Reserve, North Carolina. Photo: NOAA's National Ocean Service/Emily Woodward



Diving in Gray's Reef National Marine Sanctuary off the coast of Georgia. Photo: NOAA's National Ocean Service

Ocean Recreation Participation and Effort (Table 5.1)

In 2012, there were approximately 9.7 million people who participated in one or more ocean recreation activities in the South Atlantic Region. Fifty-eight percent of these ocean recreators were residents of this region. Most resident and nonresident participants, 5.2 million of them, enjoyed Viewing or Photographing the Ocean more than any other ocean activity, followed by Beachcombing, Tidepooling, or Collecting Items (4.2 million), and Outdoor Activities not involving Water Contact (2.9 million). Hunting Waterfowl or other Animals comprised approximately 176,000 participants in the region, the smallest share of ocean recreation participants.

When considering the number of days¹⁰ spent engaged in a particular activity, most of the ocean recreation effort in the South Atlantic was spent Viewing or Photographing the Ocean: nearly 79 million full and partial days in 2012 or 30% of total effort. This activity was followed by Beachcombing, Tidepooling, or Collecting Items which comprised 20% of total effort, followed by the number of days ocean recreators participated in marine Recreational Fishing, 18% of total effort. Hunting Waterfowl or other Animals comprised the smallest share of total ocean recreation effort, less than 1%.

Ocean Recreation-Related Expenditures (Table 5.1)

Ocean recreators in the South Atlantic Region spent more than \$35 billion on durable goods and trip-related expenses combined (total expenses) when participating in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses such as lodging, car fuel, and food expenses (86% of total expenses). Expenses related to Viewing or Photographing the Ocean made up the biggest share of total expenditures by ocean recreators: \$8.9 billion or 28% of total spending. Ocean recreators spent over \$6.9 billion (22% of total spending) when participating in marine Recreational Fishing, nearly \$6.9 billion (21% of total spending) to engage in on Boating and associated Activities, \$5.8 billion (18% of total spending) on Beachcombing, Tidepooling, or Collecting Items, \$4.1 billion (13% of total spending) on Outdoor Activities not involving Water Contact, and \$2.4 billion (7.5% of total spending) on Water Contact Sports.

¹⁰ "Days" includes both full and partial days spent enjoying the ocean and/or coast.

Table 5.1. Ocean recreation participation, effort, and expenditures in the South Atlantic Region, 2012.

	Total participation (number of participants)	Resident participants (percent residents)	Total effort (number of days)	Resident effort (percent residents)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	2,326,092	65	46,684,115	66	6,940,325	1,430,678	5,509,647
Recreational shellfishing	233,691	47	2,944,733	83	*	*	*
Hunting waterfowl or other animals	175,596	42	1,029,788	51	*	*	*
Viewing or photographing the ocean	5,161,525	47	78,945,322	56	8,922,305	709,636	8,212,669
Beachcombing, tidepooling, or collecting items	4,248,002	55	51,786,943	60	5,801,160	449,972	5,351,188
Water contact sports	2,133,557	58	23,206,050	57	2,423,626	344,536	2,079,089
Boating and associated activities	1,963,611	53	21,657,691	58	6,894,713	1,307,579	5,587,135
Outdoor activities not involving water contact	2,912,191	64	37,062,662	63	4,134,534	504,202	36,303,317
All ocean activities combined**	9,699,505	58	263,317,305	60	35,116,663	4,746,603	63,043,045

* Not enough observations to estimate this value at the Region level.

** Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.



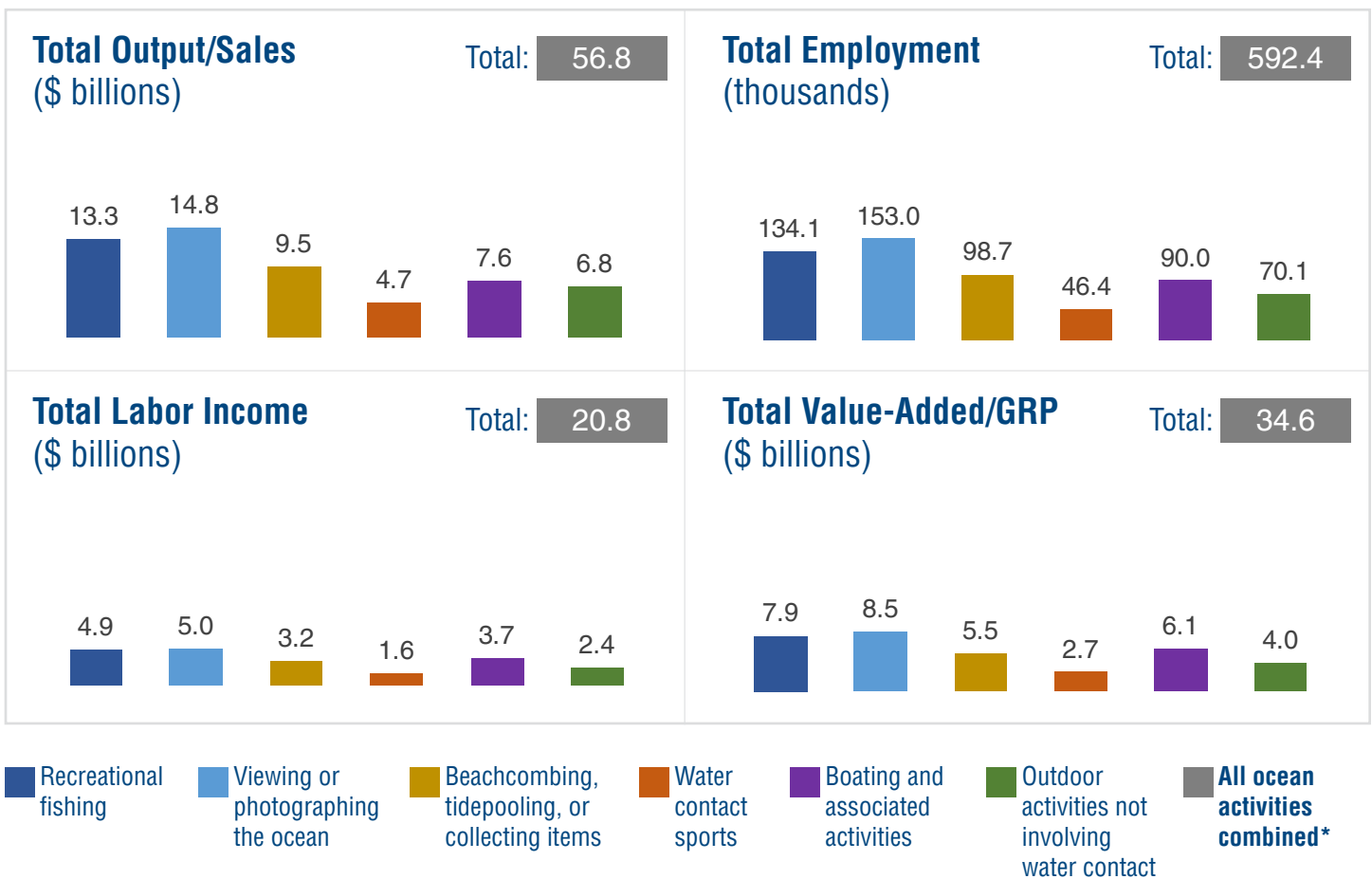
North Atlantic right whale (*Eubalaena glacialis*) dives off of Fernandina Beach, Florida. Photo: Florida Fish and Wildlife Conservation Commission, taken under NOAA research permit #15488

Economic Contribution to the South Atlantic Region (Figure 5.1)

The \$32 billion spent by ocean recreators cycled through the South Atlantic’s economy and generated a total of \$57 billion in output/sales to South Atlantic businesses, \$21 billion in labor income (employee compensation and proprietor’s income), \$35 billion in value-added (gross regional product), and supported over 592,000 full- and part-time jobs (Figure 5.1). When considering the economic contributions associated with each ocean recreation category, spending on Viewing or Photographing the Ocean generated the largest share of sales, labor income, value-added, and employment in the South Atlantic. Ocean recreation expenditures on marine Recreational Fishing contributed the second most to the South Atlantic’s economy, followed by Beachcombing, Tidepooling, or Collecting Items and Boating and associated Activities. Outdoor Activities not involving Water Contact and Water Contact Sports resulted in the smallest shares of total economic effects.

When considering how much ocean recreation contributes to the South Atlantic relative to all other types of economic activities within the region such as manufacturing, agriculture, and energy development, All Ocean Activities combined comprised approximately 1.5% of total regional sales, 2.4% of total regional jobs, 1.7% of total labor income in the region, and 1.7% of the Gross Regional Product.

Figure 5.1. Regional economic contribution by ocean recreation category, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

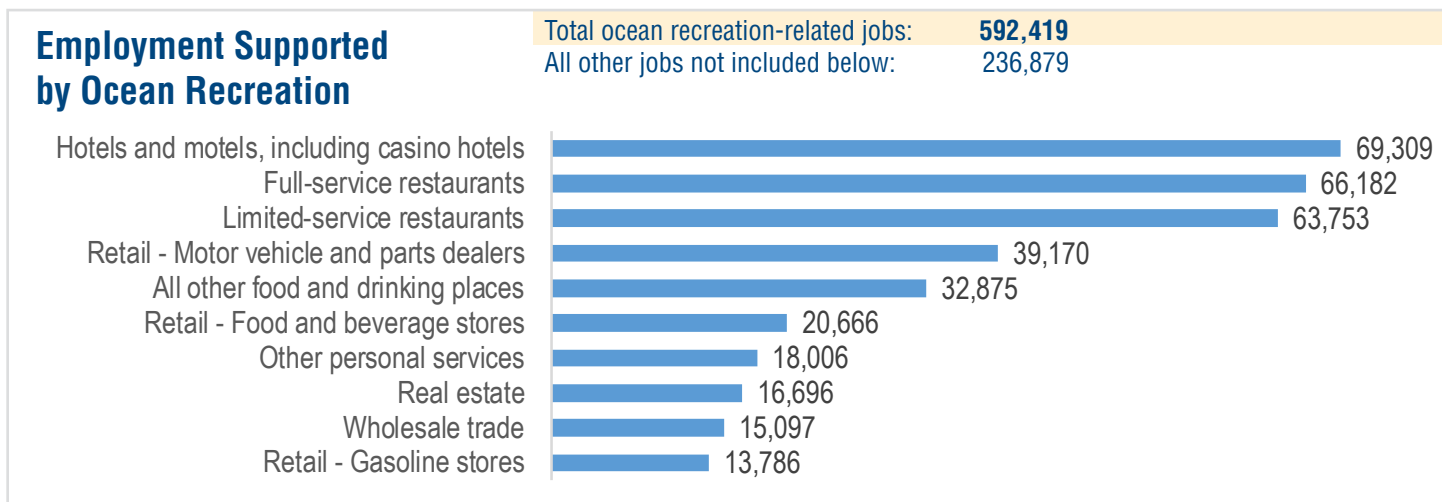


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus On Employment Resulting From Ocean Recreation Spending (Figure 5.2)

Over 592,000 full- and part-time jobs resulted from spending associated with ocean recreation activities in the South Atlantic Region (All Ocean Activities combined). Most of these jobs, 28%, were related to restaurants (full and limited service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food and drinking places). Over 69,000 full- and part-time jobs were in the hotel and motel industry, comprising 12% of total jobs in the region that resulted from ocean recreation spending. Employment in the motor vehicle and parts retail industry, which includes outboard motor dealers, comprised 7% of jobs. The remaining five industry sectors in the top ten, which included retail establishments specializing in food and beverages, and wholesale trade, each contributed 2% to 3% of full- and part-time jobs in the region. Forty percent of ocean recreation-related jobs in the South Atlantic were in other industries outside of the top 10 industries shown in Figure 5.2.

Figure 5.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).



Snorkeling for fish and fun in Florida. Photo: NOAA Fisheries/Kristy Wallmo

Tax Revenue Associated with Ocean Recreation Activities (Table 5.2)¹¹

Over \$9.2 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with ocean recreation activities in the South Atlantic. The majority of this revenue, 45%, came from goods and services related to Production and Imports, followed by Employee Compensation (24%) and Household spending (21%). Proprietor Income generated the smallest share of total tax revenue, 1%.

State and Local tax revenue comprised 45% of the total tax (Federal, State, and Local) generated from ocean recreation activities in the region, with nearly \$3.7 billion of State and Local taxes coming from Production and Imports (89% of State and Local tax revenue). Corporations (2%) and Employee Compensation (1%) comprised the smallest share of State and Local tax revenue. No taxes were generated from Proprietor Income. Federal tax revenue was largely made up of Employee Compensation (\$2.2 billion, 43% of Federal tax revenue) and Household spending (\$1.5 billion, 30% of Federal tax revenue). Two percent of Federal taxes came from Proprietor Income (\$127 million).

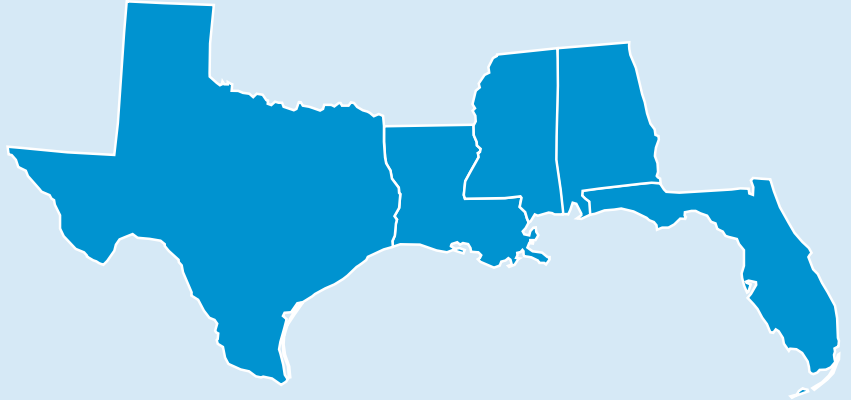
Table 5.2. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012
(excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	28,248	0	3,664,957	351,410	77,657	4,122,272
Federal tax	2,178,396	127,353	532,174	1,543,717	720,583	5,102,223
Total tax revenue	2,206,644	127,353	4,197,131	1,895,127	798,240	9,224,495

¹¹ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>

Results: Gulf of Mexico Region

- Alabama
- Louisiana
- Mississippi
- Texas
- West Florida



A morning on the water off of Destin, Florida. Photo: NOAA/Ayeisha Brinson



Skimboarding at Perdido Key Beach, Florida. Photo: NOAA Fisheries/Kristy Wallmo

Ocean Recreation Participation and Effort (Table 6.1)

In 2012, there were approximately 8.8 million people who participated in one or more ocean recreation activities in the Gulf of Mexico Region. Most of these ocean recreators, 4.1 million of them, enjoyed Viewing or Photographing the Ocean more than any other ocean activity, followed by Beachcombing, Tidepooling, or Collecting Items (3.2 million), and Recreational Fishing (2.8 million). Hunting Waterfowl or other Animals comprised approximately 83,000 ocean recreation participants in the region, the smallest share of ocean recreation participants.

When considering the number of days¹² spent engaged in a particular activity, most of the ocean recreation effort in the Gulf of Mexico was spent Viewing or Photographing the Ocean: nearly 59 million days in 2012 or 25% of total effort. This activity was closely followed by Recreational Fishing which comprised 23% of total effort, followed by the number of days ocean recreators participated in Beachcombing, Tidepooling, or Collecting Items, 18% of total effort. Hunting Waterfowl or other Animals comprised the smallest share of total ocean recreation effort, less than 1%.

Ocean Recreation-Related Expenditures (Table 6.1)

Ocean recreators in the Gulf Region spent over \$33 billion on durable goods and trip-related expenses combined (total expenses) when participating in ocean recreation (All Ocean Activities combined). Most of these expenses were trip expenses such as lodging, car fuel, and food expenses (87% of total expenses). Expenses related to marine Recreational Fishing made up the biggest share of total expenditures by ocean recreators: \$8.9 billion or 26% of total spending. Ocean recreators spent nearly \$7.4 billion (22% of total spending) when participating in Viewing or Photographing the Ocean, \$6.2 billion (18% of total spending) on Beachcombing, Tidepooling or Collecting Items, \$4.9 billion (15% of total spending) on Outdoor Activities not involving Water Contact, \$3.8 billion (11% of total spending) on Boating and associated Activities, and \$2.2 billion (6.6% of total spending) on Water Contact Sports.

¹² “Days” includes both full and partial days spent enjoying the ocean and/or coast.

Table 6.1. Ocean recreation participation, effort, and expenditures in the Gulf of Mexico Region, 2012.

	Total participation (number of participants)	Resident participants (percent residents)	Total effort (number of days)	Resident effort (percent residents)	Total durable and trip expenses (\$ thousands)	Total durable expenses (\$ thousands)	Total trip expenses (\$ thousands)
Recreational fishing	2,819,071	74	54,820,119	74	8,880,559	1,809,876	7,070,683
Recreational shellfishing	290,594	36	2,772,816	53	*	*	*
Hunting waterfowl or other animals	82,936	46	892,536	74	*	*	*
Viewing or photographing the ocean	4,134,707	60	58,802,687	56	7,372,661	701,727	6,670,935
Beachcombing, tidepooling, or collecting items	3,230,048	71	42,511,189	55	6,170,416	414,019	5,756,397
Water contact sports	1,430,438	57	14,983,668	48	2,232,265	197,095	2,035,170
Boating and associated activities	1,861,186	50	23,413,199	51	3,753,075	771,339	2,981,736
Outdoor activities not involving water contact	2,525,105	59	37,071,423	60	4,894,420	431,771	4,462,649
All ocean activities combined**	8,804,858	71	235,267,636	60	33,303,396	4,325,827	28,977,570

* Not enough observations to estimate this value at the Region level.

** Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.



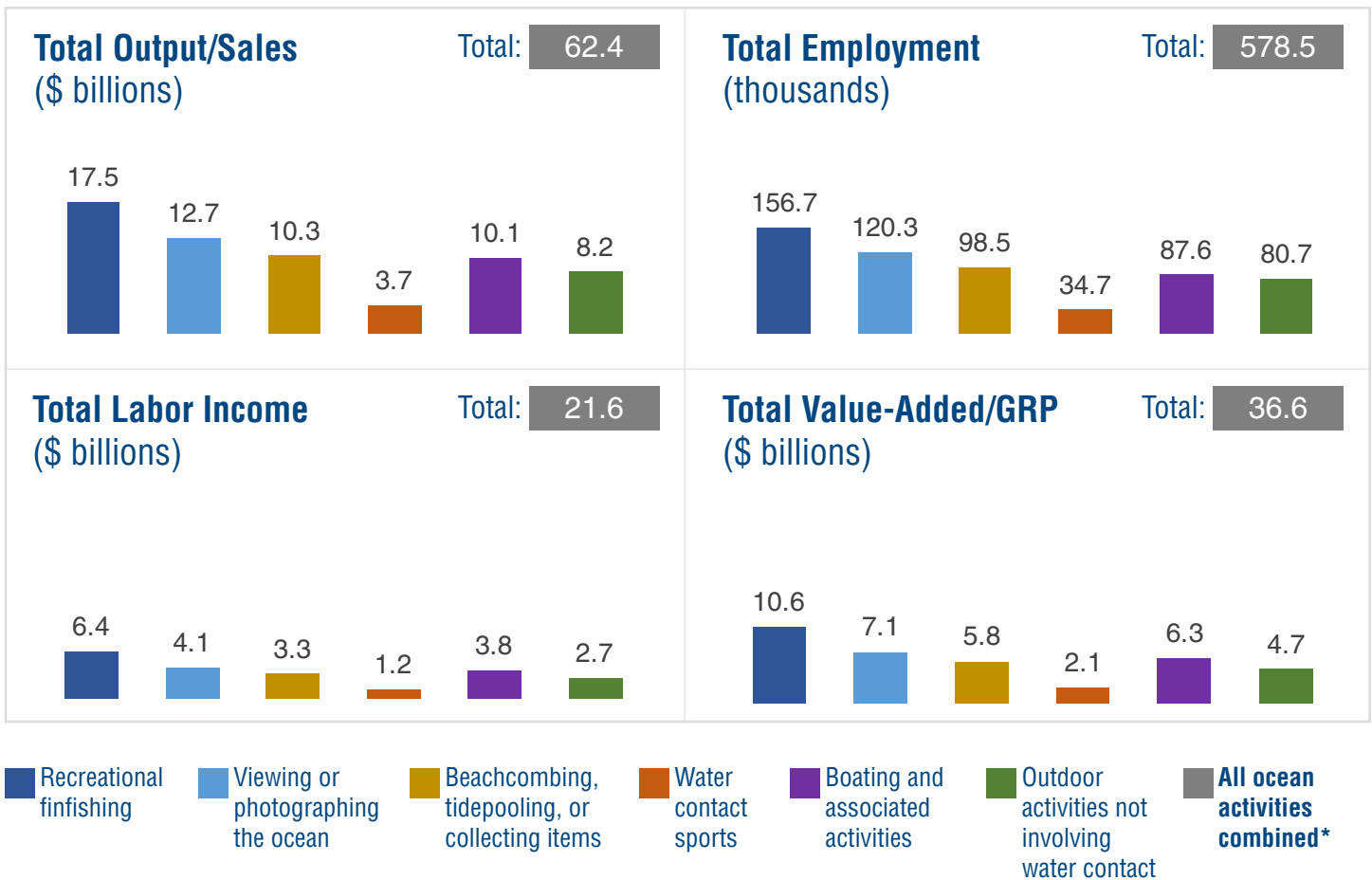
Viewing tarpon (*Megalops atlanticus*) from a dock in Islamorada, Florida. Photo: NOAA Fisheries/ Kristy Wallmo

Economic Contribution to the Gulf of Mexico Region (Figure 6.1)

The \$34 billion spent by ocean recreators cycled through the Gulf of Mexico’s economy and generated a total of \$62 billion in output (sales) to Gulf Region businesses, \$22 billion in labor income (employee compensation and proprietor’s income), \$37 billion in value-added (gross regional product), and supported approximately 579,000 full-and part-time jobs (Figure 6.1). When considering the economic contributions associated with each ocean recreation category, spending on Recreational Fishing generated the largest sales, labor income, value- added, and employment. Ocean recreation expenditures on Viewing or Photographing the Ocean contributed the second most to the Gulf of Mexico economy, followed by Beachcombing, Tidepooling, or Collecting Items (in sales and employment), and Boating and associated Activities (in labor income and value- added). Outdoor Activities not involving Water Contact followed these activities. Spending to participate in Water Contact Sports resulted in the smallest share of total economic effects.

When considering how much ocean recreation contributes to the Gulf of Mexico Region relative to all other types of economic activities within the region such as manufacturing, agriculture, and energy development, All Ocean Activities combined comprised approximately 1.4% of total regional sales, 2.6% of total regional jobs, 1.7% of total labor income in the region, and 1.7% of the Gross Regional Product.

Figure 6.1. Regional economic contribution by ocean recreation category, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or other Animals).

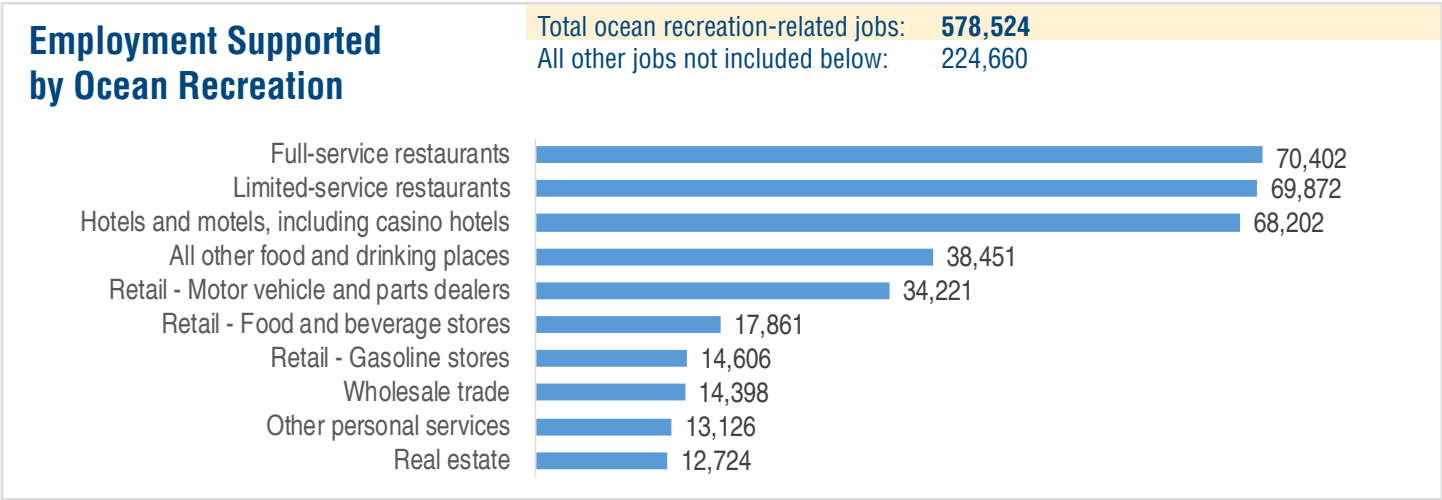


* Some individuals participated in more than one activity within a 12 month period and they are included in the totals for each of those ocean recreation activities. However, the “All ocean activities combined” total counts these individuals only once, regardless of the number of different activities they participated in. Therefore this total is smaller than the sum of participants in each ocean recreation activity category.

Focus on Employment resulting from Ocean Recreation spending (Figure 6.2)

Approximately 579,000 full- and part-time jobs resulted from spending associated with ocean recreation activities in the Gulf of Mexico Region (All Ocean Activities combined). Most of these jobs, 31%, were related to restaurants (full- and limited-service) and other food and beverage establishments such as coffee shops, cafeterias, and bars (all other food/drinking places). Over 68,000 full- and part-time jobs were in the hotel and motel industry, comprising 12% of total jobs in the region that resulted from ocean recreation spending. Jobs in the motor vehicle and parts retail industry which includes outboard motor dealers comprised 6% of jobs. Food and beverage retail stores and gasoline retail each contributed 3% of jobs. Wholesale trade, other personal services (which includes parking lots and garages), and the real estate sector each comprised 2% of jobs resulting from ocean recreation spending. Thirty-nine percent of ocean recreation-related jobs in the Gulf of Mexico were in other industries outside of the top 10 industries shown in Figure 6.2.

Figure 6.2. Full- and part-time jobs associated with ocean recreation spending, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Wildlife or other Animals).



Scuba diving in the Flower Garden Banks National Marine Sanctuary, Texas. Photo: NOAA/G.P. Schmahl

Tax revenue associated with Ocean Recreation Activities (Table 6.2)¹³

Over \$10 billion in total tax revenue (Federal, State, and Local) was generated from spending associated with ocean recreation activities in the Gulf of Mexico. The majority of this revenue, 52%, came from goods and services related to Production and Imports, followed by Employee Compensation (20%) and Household Spending (19%). Proprietor Income generated the smallest share of total tax revenue, 2%.

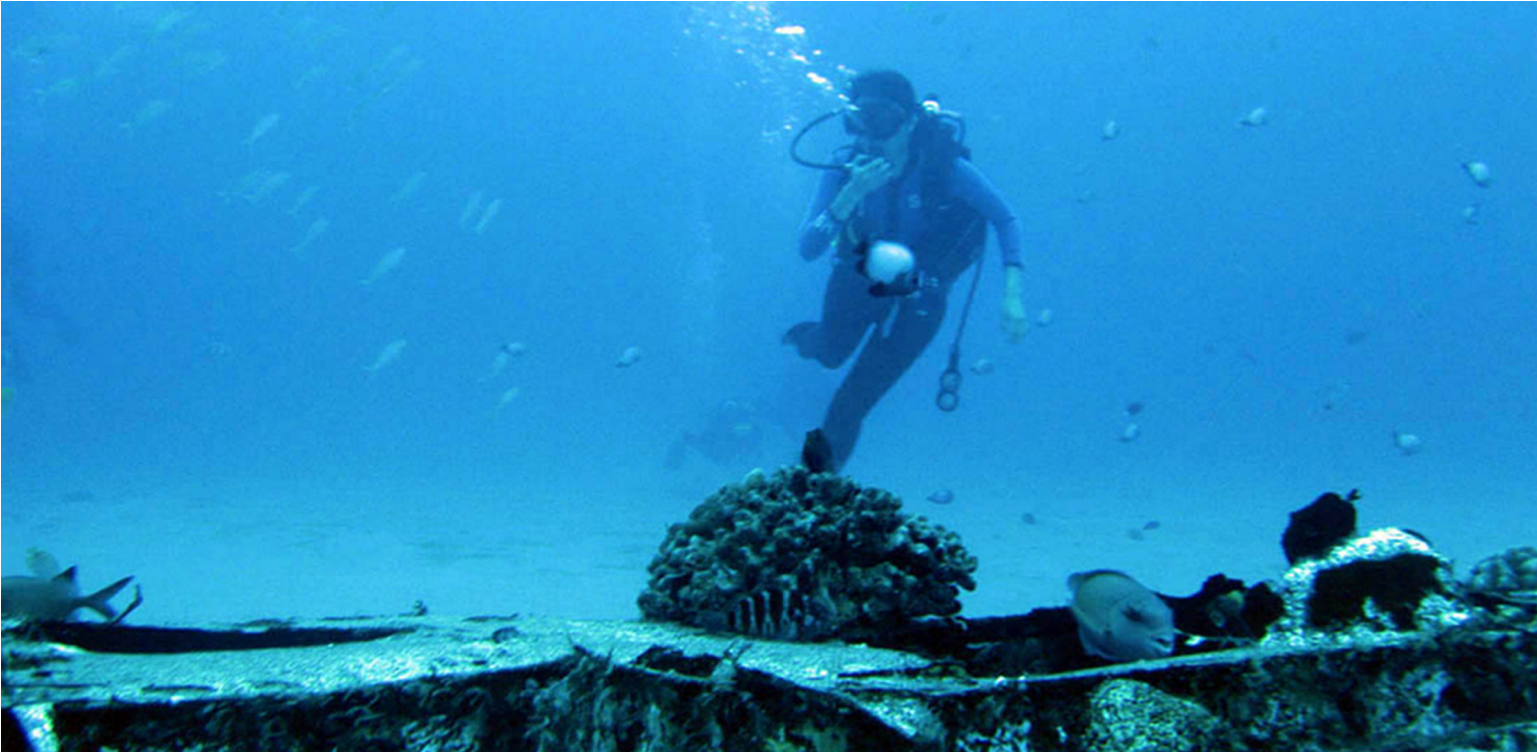
State and Local tax revenue comprised 48% of the total taxes (Federal, State, and Local) generated from ocean recreation activities in the region, with \$4.5 billion of State and Local taxes coming from Production and Imports (94% of State and Local tax revenue). Corporate taxes comprised the smallest share of State and Local tax revenue (less than 1%). No taxes were generated from Proprietor Income. Federal tax revenue was largely made up of Employee Compensation (\$2.0 billion, 37% of Federal tax revenue) and Household spending (\$1.9 billion, 32% of Federal tax revenue). Three percent of Federal tax revenue came from Proprietor Income (\$178 million).

Table 6.2. Total Federal, State, and Local tax revenue, All Ocean Activities combined, 2012 (excludes Recreational Shellfishing and Hunting Waterfowl or Other Animals).

	Employee compensation (\$ thousands)	Proprietor income (\$ thousands)	Production and imports (\$ thousands)	Households (\$ thousands)	Corporations (\$ thousands)	Total (\$ thousands)
State and local tax	36,394	0	4,530,756	238,675	23,634	4,829,459
Federal tax	1,957,518	177,847	742,808	1,704,549	732,458	5,315,180
Total tax revenue	1,993,912	177,847	5,273,564	1,943,224	756,092	10,144,639

¹³ IMPLAN's tax reporting feature was used to estimate income received by State/Local and Federal governments. For a description of the data sources and the underlying assumptions: <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>

Discussion



Dividing on the Corsair plane wreck, Oahu, Hawaii. Photo: ARC Centre of Excellence for Coral Reef Studies, James Cook University/Michele Barnes

This report presents results from the only national study to date that provides detailed participation, effort, expenditure, and economic contribution information for a comprehensive list of ocean and coastal (marine) recreation activities. Though primarily focused on fisheries research and management in the United States, the National Marine Fisheries Service (NOAA Fisheries) sought to enhance our Nation's understanding of recreational fisheries resource use by providing context to these activities. This context, in the form of empirical data and analysis of a broad suite of ocean and coastal recreation activities, was collected from a sample of Americans in all 50 states and the District of Columbia. The estimates provided in this report contribute to our growing understanding of the magnitude of ocean recreation activities that occur along our Nation's marine coastlines.

Because the National Ocean Recreation Expenditure Survey (NORES) is the first national study of ocean recreation activities conducted by NOAA Fisheries, it is difficult to systematically compare the results shown here with other analogous studies. A series of Federally-sponsored national recreation surveys were conducted periodically from 1965 through 2000, supported largely by the National Forest Service, but this survey effort was discontinued in 2000. The final National Survey on Recreation and the Environment (NSRE), conducted from 1999-2000, included information on marine recreation effort and participation across the Nation (Leeworthy and Wiley 2001). The NSRE data showed that approximately 43 percent of the U.S. civilian, non-institutionalized population, 16 years and older participated in marine recreation activities. This translated into 89 million participants, approximately 45% above our estimate of U.S. ocean recreation participants in 2012 (49 million). Differences in survey design and sampling procedures, disparities in the characterization of ocean recreation participants (e.g., our estimate excludes participants less than 18 years of age), and differences in the methods used to calculate ocean recreation participation likely contribute to the divergent participation estimates. While it is difficult to ascertain the specific approach used to

calculate participation in the NSRE report, we provide a conservative estimate of U.S. participation to avoid double-counting across multiple recreation activities and regions (see Appendix B for more detail).

In addition to providing aggregate U.S. and region-level participation estimates, we also provide participation, effort, and expenditure information for eight specific ocean recreation categories: recreational fishing; recreational shellfishing; hunting waterfowl or other animals; viewing or photographing the ocean; beachcombing, tidepooling, or collecting items; water contact sports; boating and associated activities; and outdoor activities not involving water contact. A literature search revealed only a few comparable national studies related to two of these categories: marine recreational fishing and hunting ocean waterfowl (Table 7.1). The NSRE report provides estimates of national participation and effort in marine recreational fishing and hunting ocean waterfowl in 2000. The 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (USFWS 2014) provides estimates of national participation, effort, and expenditures by marine recreational fishermen in 2011. The Fisheries Economics of the United States (FEUS), 2012 (National Marine Fisheries Service 2014) also shows national participation, effort, and expenditure estimates for our national marine recreational fishing participation estimate (11 million) is identical to the FEUS estimate and approximately 2 million higher than the USFWS estimate for 2011. The NSRE estimate of marine recreational fishing participants is considerably higher (21 million), but pertains to participation in 2000.

Table 7.1. Comparison of Ocean Recreation Activities.

U.S. Marine Recreational Fishing

Report	Participation (millions)	Effort (days fished, millions)	Expenditures (\$ billions)
NORES (2012)	11	192	29
FEUS (2012)	11	72	25
USFWS (2011)	9	100	10
NSRE (2000)	21	259	-

U.S. Hunting Ocean Waterfowl

Report	Participation (thousands)	Effort (days fished, millions)	Expenditures (\$ millions)
NORES (2012)	781	7	376
NSRE (2000)	680	6	-

In terms of national marine angler effort, our estimate (192 million days) is noticeably higher than shown in FEUS (72 million days) and by USFWS (100 million days), but lower than in the NSRE (259 million days). The FEUS effort estimates for the Atlantic and most of the Gulf coast are drawn from the NOAA Fisheries Marine Recreational Information Program (MRIP) data. In 2018, a new MRIP approach for estimating angler effort will be released and pilot studies have shown that estimates of effort will be 3 to 5 times higher using the new approach. Thus, future FEUS estimates of marine angler effort will be substantially higher.

Three of the four studies also show estimates of marine angler expenditures at the U.S. level. Our estimate of marine spending by anglers (\$29 billion) is \$4 billion higher than shown in FEUS (\$25 billion) and \$19 billion higher than shown by the USFWS (\$10 billion). These differences are likely largely due to disparities in how marine angler expenditures were defined and calculated across the studies. For example, FEUS includes marine angler spending on second homes (new home purchase, insurance, maintenance, property taxes, purchase fees, and real estate commissions). The NORES and USFWS studies exclude second home expenditures. Additionally, the NORES only shows the annualized value of marine angler purchases of vehicles and boats if an angler indicated the purchase was financed. FEUS shows the entire purchase price of a vehicle or boat purchased primarily for fishing.

Turning to the economic contribution estimates shown in this report, there are several caveats associated with the region-level contribution estimates that readers should be aware of. Since separate input-output models were

constructed for each region, the estimated contributions are limited to economic activity within a region and may underestimate the region-level effects of ocean recreation spending. Contributions generated through the imports of goods and services from other regions in the United States are excluded in each individual regional assessment. For example, if a retail store in the Gulf of Mexico region sold a wakeboard that was manufactured in the South Atlantic region, the economic contributions associated with the production of the wakeboard are excluded from both region's contribution assessments. The wholesale, distribution, and retail contributions that occurred in the Gulf of Mexico region are included in the Gulf of Mexico's contribution assessment, but the amount attributable to wakeboard manufacturing is derived from outside of the Gulf of Mexico region so it is excluded. Cross-region effects, however, are captured in the aggregate U.S. input-output model estimates.

In terms of the input-output models themselves, it is prudent to be aware of simplifying assumptions regarding linear production functions and constant relative prices that are required to construct the technical coefficients used to calculate the multiplier effects in input-output models. Nonetheless, input-output modeling is the most commonly employed approach for describing the structure and interactions of regional economies, and the approach has been shown to provide plausible results if primary data are supplied by users as was done for this study (Propst and Gavrilis 1987).

Lastly, the economic contribution estimates shown in this report are not equivalent to total net economic value. Benefit cost analysis measures the total net economic value of an activity, i.e., the difference between total economic value and total costs. In the context of recreation spending, total net economic value is generally defined as willingness to pay in excess of actual expenditures. The summation of this extra money across participants represents total net economic value (from the ocean recreators' perspective) and is used to determine if resources are being put to their best use. In contrast, input-output analysis reveals how actual expenditures affect economic activity in a region at a single point in time.



California students participate in a whale watching trip with Camp Science, Education, and Adventure (SEA) Lab. Photo: NOAA Education

NOAA Fisheries began work on this project in 2010 after recognizing that national level, standardized data related to a comprehensive list of ocean and coastal (marine) recreation activities were not available. This study sought to fill this data gap and contribute to the growing literature on recreational use of our Nation's marine resources. Such data and analyses are necessary for improving our understanding of how Americans utilize marine and coastal resources, and for informing efforts to manage our nation's natural resources on an ecosystem level (ecosystem-based management).

Though NOAA Fisheries' mission and regulatory authority is focused primarily on commercial and recreational fisheries research and management, fisheries activities interact and overlap with many other ocean and coastal uses. Understanding these interactions continues to be important for providing context to the Agency's fisheries-focused mission, and for generating dialogue and a shared understanding with our Federal, Tribal, State, Local, and community partners (e.g., fisheries and environmental stakeholders). We hope this project contributes to this dialogue and to our collective understanding of marine resource use in the United States.

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Appendix A.

Glossary

Table A.1. Glossary

Terminology	Definition
Days	Also known as effort; describes a day where some amount of time was spent engaging in one or more ocean recreation activities. One ocean recreation day can describe a day spent surfing for many hours or a day spent walking along a coastal trail for 20 minutes. These “days” are considered equivalent for this analysis.
Direct contribution or impact	Purchases made by ocean recreators at retail and service oriented businesses.
Durable expenses or expenditures	Purchases made by ocean recreators that could be used for more than one ocean recreation trip (e.g., wetsuit, hiking boots, waders, boat, vehicle).
Employee compensation	Total payroll costs of employees paid by employers. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.).
Economic impact	The economic activity generated by purchases made by ocean recreation participants in a particular geographic area. This activity is often characterized in terms of total sales made to ocean recreators, income earned by employees of businesses who sell goods and services to ocean recreators, value-added/Gross Domestic Product resulting from sales activity and income, and full- and part-time jobs supported by ocean recreation-related purchases.
Economic activity	The monetary contribution from purchases resulting from ocean recreation activities within a study region. This is the sum of direct, indirect, and induced contributions to the study region’s economy and excludes purchases of goods and services originating from outside the study region.
Effort	Number of days spent engaged in an ocean recreation activity. Includes partial and full days.
Gross Domestic Product or GDP	Otherwise known as gross value-added and is equivalent to the value of output (i.e., sales) less the value of intermediate consumption.
Gross Regional Product or GRP	Equivalent to GDP for a particular region.

Terminology	Definition
IMPLAN	An acronym for Impact Analysis for Planning, an input-output model originally developed in 1976 by the U.S. Forest Service (U.S. Department of Agriculture) and currently maintained and developed by IMPLAN Group, LLC. An input-output model is a type of regional economic model that considers the relationship between industries within a given study region and estimates the economic activity generated from the purchase of final goods and services (outputs) and industry-to-industry purchases (inputs) within the supply chain that support the production of that final good or service.
Indirect contribution or impact	The economic activity of local businesses buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value-added.
Induced contribution or impact	Economic activity generated by purchases made by employees who work in industries where direct and indirect sales were made. These are purchases made within the study region resulting from the salary and wages paid to these employees.
Labor income	All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.
Nonresident	A respondent who lives outside of the geographic area being reported, e.g., a New England nonresident does not reside in the New England Region.
Participation	Number of respondents who participated in an ocean recreation activity in the geographic area being reported.
Proprietor income	Payments received by self-employed individuals and unincorporated business owners. This income also includes the capital consumption allowance and is recorded on Federal Tax form 1040C.
Resident	A respondent who lives in the geographic area being reported, e.g., a New England resident resides in the New England Region.
Sales	The value of industry production derived from expenditures by ocean recreators in each region.
Trip	Describes a visit to the ocean or coast to engage in one or more ocean recreation activities. A trip can last a few hours or many days. If a trip does not include an overnight stay, it is considered a day trip whether it lasted a few minutes or several hours. If a trip includes at least one overnight stay, it is defined as a multi-day trip.
Trip expenses or expenditures	Expenditures during an ocean recreation trip. For example, food and beverages, transportation costs (fuel, parking, etc.), fishing licenses purchasing during a trip.
Value-added	Equivalent to GRP for a particular region or GDP for the Nation. The value of output (i.e., sales) less the value of intermediate consumption.

Appendix B.

Detailed Methods and Analysis

The National Ocean Recreation Expenditure Survey (NORES) questionnaire was developed through extensive qualitative testing. From April through August 2010, six focus groups and 18 cognitive (one-on-one) interviews were conducted to test the questionnaire with members of the general public. Focus groups and interviews helped to evaluate the content and flow of the questionnaire, and whether the information was presented in an understandable way to a range of individuals. Participants were recruited using random recruitment protocols by a focus group or market research facility that NOAA Fisheries contracted with in various locations nationwide (Charleston, Seattle, New Orleans, San Diego, and Boston).

GfK Group, formerly Knowledge Networks, was contracted to conduct this national study. GfK Group maintains a probability-based web-enabled panel of survey respondents.¹ The composition of the panel is designed to be statistically representative of the U.S. population based on U.S. Census benchmark attributes such as age, gender, and household income. The relative number of panel members in each area of the U.S. is designed to be proportional to the population sizes in those areas. To be eligible to participate in this study, respondents were civilian, non-institutionalized adults of at least 18 years of age who were U.S. residents living in English or Spanish-speaking households. The survey questionnaire was available in both English and Spanish. The English version is available in Appendix D.

Based on feedback from our focus groups and interviews, GfK Group updated the online questionnaire and a pre-test of the English version of the survey was conducted in February 2012. Approximately 3,500 surveys were fielded nationwide and over 2,200 surveys were completed, a survey completion rate of 64%. Some technical issues were identified and resolved based on this pre-test.

The main survey period for this study was from March 2012 through September 2013 and households in all 50 states and the District of Columbia were sampled with replacement. That is, a household was eligible to be sampled throughout the survey period. Due to a fielding error, Hawaii and Alaska were not sampled until November 2012. To correct for this omission, sampling in these two states started in November 2012 and continued through September 2013.

The survey questionnaire was sent every two months throughout the survey period and collected information about activities that occurred during the last twelve or two months. For example, a questionnaire received in July collected information about recent ocean activity and trip-related purchases in May and June. That same questionnaire also collected information about durable purchases made within the last twelve months. Six, two month waves were planned but as noted above, four additional waves to include Hawaii and Alaska were needed. Table B.1 provides information about survey frequency, sampling regions, and the number of surveys that were fielded and completed during this period.

Survey participants were contacted by e-mail and informed that a survey opportunity was available to them. Three e-mail reminders were sent to non-responders at prescribed intervals after the initial survey invitation. This project achieved a survey completion rate of 68% with nearly 114,000 surveys fielded and 78,000 panel members responding. The median survey completion time was 14-18 minutes.

¹ See GfK KnowledgePanel® Recruitment and Sample Survey Methodologies report, <http://www.gfk.com/products-a-z/us/knowledgepanel-united-states/>.

Table B.1. Main survey, March 2012 – September 2013.

Wave	Survey month	Region sampled	N fielded	N surveys completed	% surveys completed	N recreated in wave	% wave recreation
1	March 2012	Atlantic, Gulf	12,135	8,032	66.2	856	10.7
		Other states	6,676	4,518	67.7	306	6.8
2	May 2012	Atlantic, Gulf	12,100	8,181	67.6	1361	16.6
		Other states	6,668	4,552	68.3	412	9.1
3	July 2012	Atlantic, Gulf	12,354	8,168	66.1	1926	23.6
		Other states	6,703	4,659	69.5	615	13.2
4	September 2012	Atlantic, Gulf	12,340	8,026	65.0	2256	28.1
		Other states	6,668	4,488	67.3	650	14.5
5	November 2012	Atlantic, Gulf	12,104	8,532	70.5	1217	14.3
		Other states, AK, HI	6,956	4,787	68.8	434	9.1
6	January 2013	Atlantic, Gulf	12,165	8,688	71.4	859	9.9
		Other states, AK, HI	6,712	4,953	73.8	333	6.7
1	March 2013	AK, HI	55	39	70.9	5	12.8
2	May 2013	AK, HI	55	43	78.1	15	34.9
3	July 2013	AK, HI	55	31	56.3	14	45.2
4	September 2013	AK, HI	55	30	54.5	17	56.7
Total Main Survey			113,801	77,727	68.3	11,276	14.5

Nonresponse Bias

Potential nonresponse bias was evaluated through a comparison of demographic characteristics among survey respondents and nonrespondents. GfK maintains a rich set of demographic profile data for all online panel members. These data are collected by GfK as part of the online panel recruitment process, which eliminated the need for inclusion of demographic questions in our survey and allowed us to obtain demographic data from both survey respondents and nonrespondents.

A respondent was defined as someone who, at a minimum, answered yes or no to Question 1 (Q1: Did you participate in ocean recreation within the U.S. over the past 12 months?). A nonrespondent was considered someone who did not click on the web link contained in a GfK e-mail invitation letting them know that there was a new survey available for them to take, or someone who opened the survey web link but failed to continue on from the first screen that introduced the survey (i.e., Q1 on the second screen was not answered).

Pearson chi-squared tests were conducted to evaluate differences in gender, age, education, and household income between respondents and nonrespondents (Table B.2). To be consistent with the stratified random sampling design, the significance tests were conducted at the region and wave level. No statistically significant differences ($p < 0.05$) were detected for almost all of the comparisons we tested across regions and waves. The small number of differences that were detected were not systematic across waves within a region, suggesting that the likelihood of potential nonresponse bias due to differences in demographics between respondents and nonrespondents is minimal.

Table B.2. Nonresponse bias test results by wave and demographic characteristics, 2012-13.

Wave	Region	Gender, 2 groups	Age, 4 groups	Education, 4 groups	Household income, 6 groups
March 2012	United States	0.7425	0.5505	0.9537	0.3781
	Pacific	0.7729	0.0988	0.2529	0.4144
	New England	0.0280*	0.0127*	0.8160	0.5157
	Mid-Atlantic	0.8741	0.9442	0.2972	0.6789
	South Atlantic	0.7865	0.0724	0.5330	0.4341
	Gulf of Mexico	0.6800	0.8174	0.4912	0.0075*
May 2012	United States	0.9506	0.4540	0.9208	0.2074
	Pacific	0.3621	0.0735	0.6319	0.5295
	New England	0.2802	0.4096	0.9477	0.8653
	Mid-Atlantic	0.8231	0.1689	0.8067	0.3619
	South Atlantic	0.6427	0.2265	0.5621	0.4134
	Gulf of Mexico	0.3690	0.4526	0.3235	0.8287
July 2012	United States	0.9561	0.6527	0.9772	0.0355*
	Pacific	0.9345	0.3226	0.5794	0.3046
	New England	0.9890	0.7868	0.0403*	0.2711
	Mid-Atlantic	0.2097	0.4909	0.8346	0.0162*
	South Atlantic	0.1952	0.3862	0.6109	0.0907
	Gulf of Mexico	0.2660	0.2721	0.5727	0.0882
September 2012	United States	0.7320	0.6811	0.8265	0.1919
	Pacific	0.3606	0.2724	0.1124	0.3955
	New England	0.0643	0.7755	0.2127	0.8094
	Mid-Atlantic	0.6271	0.3687	0.0364*	0.3666
	South Atlantic	0.7240	0.0053*	0.9145	0.2405
	Gulf of Mexico	0.6461	0.7117	0.8280	0.5019
November 2012	United States	0.8934	0.8058	0.8373	0.3101
	Pacific	0.9722	0.2490	0.2269	0.4164
	New England	0.4381	0.1954	0.9754	0.9705
	Mid-Atlantic	0.0814	0.9563	0.9720	0.0605
	South Atlantic	0.1091	0.2604	0.6807	0.9677
	Gulf of Mexico	0.3760	0.7161	0.2622	0.4203
January 2013	United States	0.9282	0.7656	0.9487	0.4448
	Pacific	0.3057	0.0101*	0.0702	0.1254
	New England	0.7163	0.7798	0.7810	0.5583
	Mid-Atlantic	0.7576	0.3986	0.4873	0.3310
	South Atlantic	0.8243	0.8664	0.3511	0.3055
	Gulf of Mexico	0.8726	0.0460*	0.1762	0.2615

* Pearson's chi-squared test. Significant differences at the 0.05 level.

In addition to demographic comparisons, we contracted with GfK to follow-up with a sample of nonrespondents by e-mail. The purpose of the follow-up survey was to collect some baseline information on ocean recreation participation to evaluate whether the ocean recreation participation rate was similar across respondents and nonrespondents. Any differences between respondents and nonrespondents could signal potential nonresponse coverage bias.

The nonresponse follow-up survey (NRFUS) was sent to a sample of nonrespondents from the March and September 2012 survey waves. The NRFUS consisted of the first three questions from the main survey and one additional question that asked why the individual did not participate in the main survey. Table B.3 provides information about the number of follow-up surveys fielded and completed.

While over 1,100 NRFUS surveys were completed, statistically significant differences ($p < 0.05$) in demographics were detected between the NRFUS participants and all of the remaining nonrespondents to the main survey. Thus, the responses from the NRFUS participants may not accurately reflect the behavior of all of the nonrespondents. However, no statistical differences ($p < 0.05$) in ocean recreation participation rates were found between the NRFUS participants and respondents to the main survey, except for household income in the U.S. region for those interviewed during the September survey wave. Results of these statistical tests are available upon request.

Table B.3. Nonresponse follow-up survey (NRFUS), April and October 2012.

Wave	Survey month	Region sampled	N fielded	N surveys completed	% surveys completed	N recreated in wave	% wave recreation
NRFUS	April	Atlantic, Gulf	783	370	47.3	370	100
		Other states	470	234	49.8	234	100
	October	Atlantic, Gulf	1,252	348	27.8	348	100
		Other states	752	192	25.5	192	100
Total NRFUS			3,257	1,144	35.1	1,144	35.1

After the survey data were collected, GfK computed post-stratification weights by wave and region to adjust for any survey nonresponse as well as any noncoverage or under- and over-sampling resulting from the sample design. The U.S. Census Bureau's Current Population Survey estimates of demographic distributions for the non-institutionalized, civilian population ages 18 and over by region and wave were used as the benchmark controls in this adjustment. The demographic weighting criteria consisted of gender, race/Hispanic ethnicity, education, household income, Census region, internet access, and primary language (GfK Group 2015). Even though the sample weighting criteria were the same across the six waves contained in the study, wave weights were calculated to account for varying degrees of nonresponse in each wave. For example, nonresponse from young adults may be higher during the summer months; the weights are adjusted for each wave to account for these unique variations in completion.

Final analysis weights were produced using an iterative proportional fitting (raking) procedure to ensure that the resulting sample weights were aligned with the U.S. Census Bureau's benchmark demographic distributions. If necessary, outliers were then trimmed at the extreme upper and lower tails of the weight distributions. The post-stratified and trimmed weights were then scaled to the complete and qualified sample size by region and wave.

A final dataset was provided to NOAA Fisheries in October 2013. The dataset included responses to all survey questions including write-in responses; demographic information, zip code, and Federal Information Processing

Standards (FIPS) codes for all sampled panel members (respondents and nonrespondents); and post-stratification statistical weights. These weights were used for analysis of these data.

Data Analysis

For data analysis, seven regions were defined (Table B.4). As mentioned previously, residents from all 50 states and the District of Columbia were sampled for this study and their activities in their own region (if coastal) and across the U.S. were collected. This included ocean recreation activities that occurred in U.S. Territories and Commonwealths such as Guam and Puerto Rico. That is, these location options were available to respondents when asked about the location of their ocean recreation and related purchases. Recreation and expenditures made in these locations, collectively referred to as the Island Region in Table B.4, are not included in the U.S. estimates due to the small number of observations collected.

Table B.4. Regions used for data analysis.

Region	States, District of Columbia, U.S. Territories and Commonwealths
Pacific	Alaska, California, Hawaii, Oregon, Washington
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Mid-Atlantic	Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia
South Atlantic	East Florida*, Georgia, North Carolina, South Carolina
Gulf of Mexico	Alabama, West Florida*, Louisiana, Mississippi, Texas
Inland	Arizona, Arkansas, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Utah, West Virginia, Wisconsin, Wyoming
Islands	American Samoa, Commonwealth of the Northern Mariana Islands, Guam, Puerto Rico, U.S. Virgin Islands

* Florida was divided into East and West Florida. Coastal county residents were assigned to East or West FL based on definitions provided by the NMFS Marine Recreational Information Program (MRIP). Non-coastal county residents were assigned to East or West FL based on whether their county of residence was geographically closest to the Atlantic or Gulf of Mexico coasts.

The survey questionnaire collected location information related to where ocean activities occurred such as state of recreation and in some cases, town/city or county/parish. Location (state) of ocean recreation-related purchases was also collected and respondent residence (zip code) was made available by GfK.² When recreation and purchase locations were left blank by a respondent, decision rules were applied based on other information provided by the respondent (e.g., responses to previous questions, residence location).³

Participation, effort, and durable and trip-related expenses that occurred at the U.S. level and in the Pacific, New England, Mid-Atlantic, South Atlantic, and Gulf of Mexico Regions were then estimated. The economic activity that was supported by ocean recreation-related expenditures was also estimated at the national and regional levels.

²Zip code information of GfK KnowledgePanel® members was only made available after we signed a nondisclosure agreement to ensure the privacy and confidentiality of this information.

³Similarly, we used our discretion when considering typed-in responses to the “Other, please specify” response category. For some questions, this option was provided to respondents in case the existing response categories seemed not to apply to them. For example, if a respondent typed a response indicating that she attended a wedding on the beach, this response and related expenses were grouped with the “Outdoor activities not involving water contact” category. If the respondent’s typed response did not fit any of the existing response categories (e.g., watched an ocean program on television), this response was not included in the analysis.

Estimating Participation and Effort

Annual participation in ocean recreation is reported at the region and national levels for each ocean recreation category and for all ocean activities combined. These estimates were made using responses from Question 19 (Q19). This question asked respondents to estimate the number of full and partial days they spent engaged in one or more ocean activities within the last two months. If they participated in an activity at least once during the two month period, that response was included in estimating participation for that activity in that wave. Annual participation was estimated for each activity, wave, and region combination. The wave with the highest participation level for each activity/region combination was reported. These region level estimates were then summed to get an estimate of U.S. participation levels in each activity.



Striped bass (*Morone saxatilis*) after a great white shark (*Carcharodon carcharias*) took a bite, off of Cape Cod, Massachusetts. Photo: NOAA Fisheries/ Scott Steinback

Some respondents participated in more than one ocean recreation activity during the last two months. That individual was included in estimating participation for each of those activities. To estimate annual participation in “All ocean activities combined” and to avoid double (or more) counting, an individual who participated in multiple activities was assigned to one activity they spent the most days participating in. Therefore participation estimates for all ocean activities combined represents distinct participants and not the same participant counted multiple times in multiple activities.

Annual effort is also reported at the region and national levels for each ocean recreation category and for all ocean activities combined. Like annual participation, annual effort (number of days) was estimated using Q19. Respondents indicated the number of days they spent engaged in ocean activities during the last two months. These values were pooled across all six waves and an annual estimate for each activity and all ocean activities combined was calculated for each region. Region level effort estimates were then summed to estimate U.S. effort levels.

Estimating Durable and Trip Expenditures

Total annual expenditures on each durable and trip item were estimated. For durable items, we included only observations where the respondent indicated using a particular item at least 50% of the time for ocean activities. For both durable and trip items, we analyzed each item at the region of purchase, resident status (resident or nonresident), and ocean activity levels, then excluded observations (expenses) above the 99th percentile. This was done because in most cases, a few very large expenditures resulted in mean estimates much larger than the majority of reported expenditures. Removing the top 1% of the expense distribution for each item resulted in more reasonable mean estimates given the distributions observed.

Additional adjustments were made for some trip items. For fuel purchases, we excluded reported values that exceeded \$150 per day. This was done because some of the reported values indicated spending \$1000 on fuel each day, which seemed implausible. For example, if we assume that a car travels at 20 miles per gallon and each gallon

costs \$5, a respondent would have had to travel 4,000 miles in order to incur a fuel cost of \$1000 per day. Driving 4,000 miles in a day does not seem likely but 600 miles a day, though high, may be possible (600 miles = \$150 per day / \$5 per gallon * 20 miles per gallon).

Professional judgment was similarly applied to nonresident, boating-related lodging expenses in the Pacific Region. The initial estimate resulted in a value of \$78.71 per night which was much higher than for all other activities in the Pacific Region, and for other regions. When looking at the resident and nonresident distributions for this expense, the Pacific was the only one where respondents reported lodging costs as high as \$300 per night. Because this value was so much higher than other regions, in addition to excluding the top 1% as defined above, we also excluded an additional top two expense values (both were above \$280 per night). Doing this resulted in a mean lodging expense of \$55.60 per night, a value still higher than other activities and regions but within a reasonable range of those other estimates. Based on these mean estimates, we calculated total expenditures for each item. To calculate total expenditures on durable items (e.g., boats, vehicles, trailers, etc.) and activity-related durable items (rods and reels, surfboards, wetsuits, etc.), the mean expenditure for each item was multiplied by annual participation levels estimated for each region, resident status, and activity. Region level estimates were summed to get national level, total expenditure estimates for each durable item.

To calculate total trip expenditures (e.g., lodging, fuel cost, restaurant purchases, etc.), mean expenditure estimates for each item were multiplied by annual effort levels (number of days) estimated for each region, resident status, and activity. Region level estimates were summed to get national level, total expenditure estimates for each trip item. Total durable and trip expenditures at the region and national levels are available; see Appendix C for more detail.

Estimating Expenditure-Related Economic Activity

Input-output models require all values to be in producer prices (manufacturer prices) so each type of ocean recreator's expenditure (durable or trip) was associated with its corresponding IMPLAN producing sector. Tables B.5 to B.12 show how ocean recreation expenditures were allocated to IMPLAN sectors for each ocean recreation activity. Ocean recreator's expenditure categories that included more than one IMPLAN sector were assigned to individual IMPLAN sectors based on the proportion of final household demand in each IMPLAN sector within the region of interest. In IMPLAN, margins are used to convert the retail level prices paid by ocean recreators into appropriate producer values. Margins ensure that correct values are assigned to products as they move from producers, to wholesalers, through the transportation sectors, and finally on to retail establishments. While IMPLAN's default margins were used in almost all cases, adjustments were made to the retail margins associated with fuel and bait to properly account for boat fuel purchases, and live or frozen bait purchased by recreational fishermen.

IMPLAN's default local purchase coefficients (LPPs) were applied to retail-level expenditure estimates to ensure that imported goods and services were excluded from the regional input-output models. IMPLAN's LPPs reflect the proportion of retail level sales that are derived from manufacturers within a particular region. The one exception was for live or frozen bait purchased by recreational fishermen. Retail bait supplies are almost always derived from local harvesters, so region level LPP values for bait purchases were set to 100%.

Several of the IMPLAN expenditure assignments warrant further clarification. Grocery store purchases by ocean recreators were assigned to IMPLAN sectors according to the Bureau of Economic Analysis' 2013 national average expenditure pattern for food purchased for off-premise consumption (i.e., groceries). This expenditure pattern consists of approximately 50 food processing and agricultural producing sectors that represent the average grocery list.

Spending reported by ocean recreators on registration and license fees for boats, trailers, and vehicles was excluded

from the input-output assessment. Payments to state and local governments by households are internalized in an input-output model. Therefore, inclusion of license and registration fees would lead to double-counting. For the same reason, we also excluded ocean recreator's expenditures on licenses, tags, stamps, and permits associated with fishing, shellfishing, hunting, viewing, beachcombing, and water contact sports.

Ocean recreator's were asked to differentiate between "new" versus "used" purchases of boats (motor and nonmotor), boating electronics, and vehicles. If purchased "used", survey respondents were asked to distinguish between purchases made at the retail level and those made through private party sales (i.e., household-to-household sales). In an input-output model, private party sales are assumed to be transfer payments generating no economic impacts. Thus, for any of these items that were purchased "new", or purchased "used" from a retailer, the expense was included in the model. A "used" purchase derived from a private party sale was not included. However, if a loan was obtained for a "used" private party purchase, finance charges were included and assumed to be 2% of the principal.⁴

In contrast to the amortized annual expenditure estimates shown in this report for purchases that were considered "new" and financed (motor boats, nonmotor boats, boating electronics, and vehicles), the full purchase price was used for the input-output assessment. Whereas the amortized expenditure values provide an estimate of the actual outlays of financed purchases of ocean recreators during 2012, these values do not reflect the total activity generated from the financed sale. Inclusion of the total purchase price was necessary to properly attribute the full suite of multiplier effects that take place through financed purchases.



Enjoying the sea and sealife from a stand up paddleboard. Photo: NOAA's National Ocean Service/Claire Fackler

⁴A large portion of bank fees and interest on loans generate no economic impacts in an input-output model. The sales of most industries in an input output model are expressed in terms of business receipts, but the banking sector is measured on a net basis. The output of the banking sector includes loan fees and interest payments, but also many other income-generating activities, and takes into account the interest paid by banks on depositors' funds and for bank services where no explicit charges are made. Therefore, if the total estimated value of bank fees and interest payments incurred by ocean recreators in 2012 were applied to the input-output multipliers, the impact on the local economy would be overstated. To provide net expenditure estimates that would equate to the values contained within IMPLAN, the average net profit margin percentage for the banking industry in the U.S. was used to adjust expenditures on bank fees and interest payments (18%).

Table B.5. Recreational fishing IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Bait and Ice	3017, 3107	Commodity
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Charter Fees	414	Industry
	Fish Filleting	414	Industry
	Fish Processing	93	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
Durable	Binoculars and Cameras	3272, 3307	Commodity
	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Camping Equipment	3385, 3121	Commodity
	Clothing	3127, 3128, 3132, 3385	Commodity
	Club Dues	496	Industry
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Rods and Reels	3385	Commodity
	Tackle and Gear	3385	Commodity
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
	Vehicle/Trailer - Insurance	437	Industry
	Wetsuits	3385	Commodity

Table B.6. Recreational shellfishing IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Bait and Ice	3017, 3107	Commodity
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Guide Fees	414	Industry
	Shucking	414	Industry
	Shellfish Processing	93	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
Durable	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Camping Equipment	3385, 3121	Commodity
	Clothing	3127, 3128, 3132, 3385	Commodity
	Club Dues	496	Industry
	Equipment	3236, 3248	Commodity
	Gear	3195, 3235	Commodity
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
	Vehicle/Trailer - Insurance	437	Industry
	Wetsuits	3385	Commodity

Table B.7. Hunting waterfowl or other animals IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
	Equipment Rental	443	Industry
Durable	Binoculars and Cameras	3272, 3307	Commodity
	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Bows and Arrows	3385	Commodity
	Camping Equipment	3385, 3121	Commodity
	Clothing	3127, 3128, 3132, 3385	Commodity
	Club Dues	496	Industry
	Decoys and Game Calls	3385	Commodity
	Dog Costs	3065, 459	Commodity/Industry
	Guns and Ammunition	3257, 3259	Commodity
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Taxidermy	492	Industry
	Telescope Sights	3272	Commodity
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
	Vehicle/Trailer - Insurance	437	Industry

Table B.8. Viewing or photographing the ocean IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
	Whale Watch	414	Industry
	Durable	Binoculars	3272
Boat - New Motorized		3364	Commodity
Boat - Used Motorized		396	Industry
Boat - New Non-Motorized		3364	Commodity
Boat - Used Non-Motorized		396	Industry
Boat - Accessories New		3315, 3305, 3123	Commodity
Boat - Accessories Used		398	Industry
Boat - Maintenance		508, 396	Industry
Boat - Insurance		437	Industry
Boat - Storage		496	Industry
Camera and Equipment		3307, 3305	Commodity
Camping Equipment		3385, 3121	Commodity
Clothing		3127, 3128, 3132, 3385	Commodity
Club Dues		496	Industry
Field Guides and Charts		3154	Commodity
Loan - Bank Fees		434	Industry
Loan - Interest		434	Industry
Magazine/Electronic Subscriptions		3418, 3417, 3419, 3422	Commodity
Non-profit Contributions		514	Industry
Vehicle/Trailer - New		3343, 3344, 3348, 3349, 3367	Commodity
Vehicle/Trailer - Used		396	Industry
Vehicle/Trailer - Maintenance		504, 396	Industry
Vehicle/Trailer - Insurance		437	Industry

Table B.9. Beachcombing, tidepooling, or collecting items IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
Durable	Binoculars and Cameras	3272, 3307	Commodity
	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Clothing	3130, 3132, 3195	Commodity
	Club Dues	496	Industry
	Equipment	3322, 3195, 3121	Commodity
	Field Guides/Charts	3154	Commodity
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
Vehicle/Trailer - Insurance	437	Industry	

Table B.10. Water contact sports IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Kayaking Equipment Rental	443	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
	Snorkeling Equipment Rental	443	Industry
	Surfing Equipment Rental	443	Industry
Durable	Binoculars and Cameras	3272, 3307	Commodity
	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Clothing	3127, 3128, 3132, 3385	Commodity
	Club Dues	496	Industry
	Jet Ski and Equipment	3367	Commodity
	Field Guides and Charts	3154	Commodity
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Safety Equipment	3380, 3187, 3394, 3261	Commodity
	Surfing, Snorkeling, and Diving Equipment	3385	Commodity
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
	Vehicle/Trailer - Insurance	437	Industry
	Wetsuits and Booties	3385, 3132	Commodity

Table B.11. Boating and associated activities IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
Durable	Binoculars and Cameras	3272, 3307	Commodity
	Boat - New Motorized	3364	Commodity
	Boat - Used Motorized	396	Industry
	Boat - New Non-Motorized	3364	Commodity
	Boat - Used Non-Motorized	396	Industry
	Boat - Accessories New	3315, 3305, 3123	Commodity
	Boat - Accessories Used	398	Industry
	Boat - Maintenance	508, 396	Industry
	Boat - Insurance	437	Industry
	Boat - Storage	496	Industry
	Camping Equipment	3385, 3121	Commodity
	Clothing	3127, 3128, 3132, 3385	Commodity
	Club Dues	496	Industry
	Field Guides and Charts	3154	Commodity
	Loan - Bank Fees	434	Industry
	Loan - Interest	434	Industry
	Magazine/Electronic Subscriptions	3418, 3417, 3419, 3422	Commodity
	Non-profit Contributions	514	Industry
	Safety Equipment	3380, 3187, 3394, 3261	Commodity
	Vehicle/Trailer - New	3343, 3344, 3348, 3349, 3367	Commodity
	Vehicle/Trailer - Used	396	Industry
	Vehicle/Trailer - Maintenance	504, 396	Industry
	Vehicle/Trailer - Insurance	437	Industry
	Waterskiing, Wakeboarding, Tubing Equipment	3385	Commodity
	Wetsuits and Booties	3385, 3132	Commodity

Table B.12. Outdoor activities not involving water contact IMPLAN sectoring scheme.

Expenditure Category	IMPLAN Sector(s)	IMPLAN Activity Type	
Trip	Auto Fuel	3156	Commodity
	Auto Rental	442	Industry
	Boat Fuel	3156	Commodity
	Boat Rental	443	Industry
	Food - Grocery Stores	Various	Household PCE Vector
	Food - Restaurants	501, 502, 503	Industry
	Horseback Riding	496	Industry
	Lodging - All Inclusive Resort	499, 410	Industry
	Lodging - Hotel, Campground	499, 500	Industry
	Parking and Site Access	512	Industry
	Public Transportation - Day Trips	412	Industry
	Public Transportation - Overnight Trips	412, 408	Industry
	Rental Equipment	443	Industry
	Durable	Biking Equipment	3365, 3247, 3385
Binoculars and Cameras		3272, 3307	Commodity
Boat - New Motorized		3364	Commodity
Boat - Used Motorized		396	Industry
Boat - New Non-Motorized		3364	Commodity
Boat - Used Non-Motorized		396	Industry
Boat - Accessories New		3315, 3305, 3123	Commodity
Boat - Accessories Used		398	Industry
Boat - Maintenance		508, 396	Industry
Boat - Insurance		437	Industry
Boat - Storage		496	Industry
Camping Equipment		3385, 3121	Commodity
Clothing		3130, 3127, 3128, 3129, 3132, 3386	Commodity
Club Dues		496	Industry
Field Guides and Charts		3154	Commodity
Horseback Riding Equipment		3133, 3385	Commodity
Horse Boarding		19	Industry
Loan - Bank Fees		434	Industry
Loan - Interest		434	Industry
Magazine/Electronic Subscriptions		3418, 3417, 3419, 3422	Commodity
Non-profit Contributions		514	Industry
Parasailing or Hangliding Equipment		3385	Commodity
Rollerblading and Skateboarding Equipment		3385	Commodity
Sun Protection, Towel		3182	Commodity
Volleyball, Frisbee and Kite Flying Equipment		3385, 3386	Commodity
Vehicle/Trailer - New		3343, 3344, 3348, 3349, 3367	Commodity
Vehicle/Trailer - Used		396	Industry
Vehicle/Trailer - Maintenance		504, 396	Industry
Vehicle/Trailer - Insurance		437	Industry
Walking, Running, Hiking Equipment		3385, 3322	Commodity
Wetsuits		3385	Commodity

Appendix C. Total Expenditures by Region and Activity

Total trip and durable expenditure estimates for a range of items that were purchased by ocean recreation participants were calculated. These expenditures were used to estimate total economic activity – i.e., total sales, employment, labor income, and gross domestic product – at the U.S. and region levels. Item-level expenditure estimates are available by geographic region and ocean activity (**Supplemental Tables:** https://spo.nmfs.noaa.gov/sites/default/files/TMSPO185_supp_tables.pdf).



A final game of chase at sunset. Photo: NOAA's National Ocean Service/Claire Fackler

Appendix D.

Survey Questionnaire (English Version)

Ocean Recreation Activities within the U.S.

Thank you for participating in this study funded by the National Oceanic and Atmospheric Administration (NOAA), a U.S. government agency with ocean and coastal natural resource management responsibilities. The goal of this study is to learn about the types of ocean recreation you participate in and how important these activities are to you. The information that is collected is vital for evaluating the importance of ocean and coastal recreation in your region in terms of how frequently Americans participate in ocean recreation, the number of jobs these activities support, and the revenue that is generated. Your responses will be combined with others so that all of the information you provide will remain confidential. Your participation in this important study is voluntary.

The focus of this study is **ocean recreation within the U.S.** – that is, recreation on, in, or in view of oceans, bays, estuaries, coastal wetlands, saltwater bayous, or other seawater areas. This study is not about freshwater activities associated with rivers, creeks, lakes, reservoirs, and ponds.

For this survey, **ocean recreation** includes the following activities that occur at, in, or in view of oceans, bays, estuaries, coastal wetlands, saltwater bayous, or other seawater areas:

- **Recreational fishing** from a boat/kayak/canoe/rowboat, from shore, or while diving or spear fishing
- **Recreational shellfishing** from a boat/kayak/canoe/rowboat, from shore, or while diving
- **Hunting waterfowl or other animals** for recreation at the ocean or coast
- **Viewing or photographing the ocean** – including ocean features such as waves and wildlife such as birds, whales, or sea lions – from a boat/kayak/canoe/ rowboat, from shore, or from a car
- **Beachcombing, tidepooling, or collecting items** such as shells, rocks, fossils, or driftwood
- **Water contact sports** such as swimming, surfing, wind surfing, body surfing, skimboarding, snorkeling, diving (not associated with fishing), kitesurfing, or jet skiing
- **Boating and associated activities** such as sailing, kayaking, canoeing, motorized boating, water skiing, wake boarding, or tubing
- **Outdoor activities not involving water contact** – that you chose to do at the ocean or coast because of the view or access to the water – such as sunbathing, building sandcastles, walking, running, hiking, biking, rollerblading, skateboarding, volleyball, frisbee, kite flying, kite buggies, parasailing, hang gliding, horseback riding, camping, or bonfires

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Section 1 - Introduction

Q1. Did you participate in **ocean recreation within the U.S. over the past 12 months?**

[Instruction text: *Please check one.*]

Yes No

[If Q1 = “No”, go to Section 5]

[Show if Q1 = “Yes”]

Q2. Which **ocean activities did you participate in over the past 12 months?**

[Instruction text: *Please check all that apply.*]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

[Dropdown box with coastal states; show if Q1 = “Yes”]

Q3. Within the U.S., in which state or U.S. territory did you do most or all of your **ocean recreation in the past 12 months?**

[Instruction text: *Please select your answer from the list below.*]

- | | | | |
|--------------------------------------|---|--|---|
| <input type="checkbox"/> Alabama | <input type="checkbox"/> Maine | <input type="checkbox"/> Rhode Island | <input type="checkbox"/> Puerto Rico |
| <input type="checkbox"/> Alaska | <input type="checkbox"/> Maryland | <input type="checkbox"/> South Carolina | <input type="checkbox"/> U.S. Virgin Islands (USVI) |
| <input type="checkbox"/> California | <input type="checkbox"/> Massachusetts | <input type="checkbox"/> Texas | |
| <input type="checkbox"/> Connecticut | <input type="checkbox"/> Mississippi | <input type="checkbox"/> Virginia | |
| <input type="checkbox"/> Delaware | <input type="checkbox"/> New Jersey | <input type="checkbox"/> Washington | |
| <input type="checkbox"/> Florida | <input type="checkbox"/> New York | <input type="checkbox"/> American Samoa | |
| <input type="checkbox"/> Georgia | <input type="checkbox"/> North Carolina | <input type="checkbox"/> Commonwealth of the Northern Mariana Islands (CNMI) | |
| <input type="checkbox"/> Hawaii | <input type="checkbox"/> Oregon | <input type="checkbox"/> Guam | |
| <input type="checkbox"/> Louisiana | <input type="checkbox"/> Pennsylvania | | |

Section 2 - Durable Items

EXPENSES ON DURABLE ITEMS RELATED TO OCEAN RECREATION

In this section, we will ask you some questions about big ticket items such as a boat, a vehicle, or a second home.

Q4. Do you own a **boat or boats** (such as a kayak, canoe, motorboat, or sailboat) that you have used for ocean recreation in the past 12 months?

[Instruction text: *Please check one.*]

- Yes No

[Show if Q4 = "Yes"]

Q5. When using this boat(s) for ocean recreation, which one activity was most enjoyable to you?

[Instruction text: *Please choose one.*]

[List Responses from Q2 Here]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

[Show if Q4 = "Yes"]

Q6. How long is the boat you used most often for ocean recreation?

[Instruction text: *Please type a number for your answer.*]

_____ feet

[Show if Q4 = "Yes"]

Q7. Does this boat have an engine?

[Instruction text: *Please check one.*]

- Yes No

[Show if Q7 = "Yes"]

Q8. Please tell us the horsepower of this motorized boat.

[Instruction text: Please type a number for your answer.]

_____ horsepower

[Show if Q4 = "Yes"]

Q9. Approximately how much did you **personally spend** on boats and boating accessories in the past 12 months? If you own more than one boat used for ocean recreation, please include expenses for all of these boats.

[Instruction text: Please type a number for each expense you made and select all that apply.]

[Insert dropdown with all states for column, "State where most of your purchases were made"]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?	Purchased new or used?	Purchased from whom?
Purchase of a motorized boat including accessories purchased with the boat <i>[This Row Should Only Appear if Q7="Yes"]</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Used	<input type="checkbox"/> Store, broker, or dealer <input type="checkbox"/> Private party
Purchase of a non-motorized boat (canoe, kayak, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Used	<input type="checkbox"/> Store, broker, or dealer <input type="checkbox"/> Private party
Boat accessories purchased separate from the boat	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Used	<input type="checkbox"/> Store, broker, or dealer <input type="checkbox"/> Private party
Boat mooring, haul out, launch, or storage fees	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			
Boat or trailer maintenance or repairs	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			
Boat or trailer license or registration	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			
Boat insurance	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			

[Show if Q4= "Yes"]

Q10. When you used your boat(s) during the last 12 months, what percentage of this time was your boat(s) used for ocean recreation (rather than for recreation on a lake, river, etc.)?

[Instruction text: Please type a number for your answer.]

_____ % of the time I used my boat(s), I used it for ocean recreation.

Q11. Do you own a **vehicle(s)** (such as a car, truck, motorhome or RV, off-road vehicle, motorcycle, etc.) that you used for ocean recreation in the past 12 months? For example, a car you used to travel to and from the ocean, or a truck used to pull a boat.

[Instruction text: Please check one.]

Yes No

[Show if Q11 = "Yes"]

Q12. When using this vehicle(s) for ocean recreation, which one activity was most enjoyable to you?

[Instruction text: Please choose one.]

[List Responses from Q2 Here]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

[Show if Q4= “Yes”]

Q13. Approximately how much did you **personally spend** on this vehicle(s) in the past 12 months? If you own more than one vehicle used for ocean recreation, please include expenses for all of these vehicles.

[Instruction text: Please type a number for each expense you made and select all that apply.]

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?	Purchased new or used?	Purchased from whom?
Purchase of a vehicle(s) (car, truck, RV, ATV, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Used	<input type="checkbox"/> Broker, dealer, or store <input type="checkbox"/> Private party
Repair and maintenance for vehicle(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			
Insurance for vehicle(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			

[Show if Q11= “Yes”]

Q14. When you used your vehicle(s) during the last 12 months, what percentage of this time was your vehicle(s) used for ocean recreation (rather than for commuting, driving to a lake, etc.)?

[Instruction text: Please type a number for your answer.]

_____ % of the time used my vehicle(s), I used it for ocean recreation.

Q15. Do you own a **second home(s)** (such as a cabin, timeshare, or vacation home) that you used for ocean recreation in the past 12 months?

[Instruction text: Please check one.]

Yes No

[Show if Q15= “Yes”]

Q16. When staying at this second home(s), which one activity was most enjoyable to you?

[Instruction text: Please choose one.]

[List Responses from Q2 Here]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

[Dropdown Box with Coastal States; show if Q15 = “Yes”]

Q17. For the second home you used most often, in which state or U.S. territory is it located?

[Instruction text: Please select your answer from the list below.]

- | | | |
|--|---|--|
| <input type="checkbox"/> Not located within the U.S. | <input type="checkbox"/> Massachusetts | <input type="checkbox"/> Commonwealth of the Northern Mariana Islands (CNMI) |
| <input type="checkbox"/> Alabama | <input type="checkbox"/> Mississippi | <input type="checkbox"/> Guam |
| <input type="checkbox"/> Alaska | <input type="checkbox"/> New Jersey | <input type="checkbox"/> Puerto Rico |
| <input type="checkbox"/> California | <input type="checkbox"/> New York | <input type="checkbox"/> U.S. Virgin Islands (USVI) |
| <input type="checkbox"/> Connecticut | <input type="checkbox"/> North Carolina | |
| <input type="checkbox"/> Delaware | <input type="checkbox"/> Oregon | |
| <input type="checkbox"/> Florida | <input type="checkbox"/> Pennsylvania | |
| <input type="checkbox"/> Georgia | <input type="checkbox"/> Rhode Island | |
| <input type="checkbox"/> Hawaii | <input type="checkbox"/> South Carolina | |
| <input type="checkbox"/> Louisiana | <input type="checkbox"/> Texas | |
| <input type="checkbox"/> Maine | <input type="checkbox"/> Virginia | |
| <input type="checkbox"/> Maryland | <input type="checkbox"/> Washington | |
| | <input type="checkbox"/> American Samoa | |

[Show if Q15= "Yes"]

Q18. In the past 12 months, approximately how much did you personally spend on this second home? If you own more than one second home used for ocean recreation, please include expenses for the one second home that you used the most.

[Instruction text: Please type a number for each expense you made and select all that apply.]

[Insert dropdown with all states for column, "State where most of your purchases were made"]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?	Purchased new or used?	Purchased from whom?
Purchase of this second home	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Used	<input type="checkbox"/> Real estate agent <input type="checkbox"/> Homeowner
Repair and maintenance for this second home (including condo fees)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			
Insurance for this second home	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____			

[Show if Q15= "Yes"]

Q19. When you used your second home during the last 12 months, what percentage of this time was your second home used for ocean recreation?

[Instruction text: Please type a number for your answer.]

_____ % of the time I used my second home, I used it for ocean recreation.

Section 3 - Participation and Effort

PARTICIPATION IN OCEAN RECREATION ACTIVITIES WITHIN THE U.S.

We would like to learn about how often you participate in ocean activities and any associated expenses you might have.

Q20. Did you participate in any **ocean recreation** within the U.S. in **[MONTH 1]** or **[MONTH 2]**?

[Instruction text: Please check one.]

Yes No

[If Q20 = “No”, go to Section 5]

Q21. How many days in **[MONTH 1]** **AND** **[MONTH 2]** did you participate in ocean recreation?

[Instruction text: For each month below, please type a number for your answer and count partial days as full days.]

Number of days in	
[MONTH 1]	[MONTH 2]

Q22. You mentioned that you spent **[Days from Q21]** days in **[Month1]** and **[Days from Q21]** days in **[Month2]** participating in ocean recreation. In the table below, please assign each of these days to an ocean activity.

If you participated in **more than one activity on a single day**, please attribute that day to the one activity that was most enjoyable to you.

For instance, if you went shellfishing and wildlife viewing on the same day but shellfishing was more enjoyable to you, assign that day to “Recreational shellfishing.”

[In the table below, show only rows that coincide with responses from Q2]

Ocean Recreation Activity (within the U.S.)	Number of days in	
	[Month1]	[Month2]
Recreational fishing		
Recreational shellfishing		
Hunting waterfowl or other animals		
Viewing or photographing the ocean		
Beachcombing, tidepooling, or collecting items		
Water contact sports		
Boating and associated activities		
Outdoor activities not involving water contact		
Other, please specify _____		
Total Number Of Days In From Q21; Respondents Do Not See This Row.	[Sum of this column should equal Q21]	[Sum of this column should equal Q21]

[Last row in this table will not be seen by respondents. It is intended to check that the number of days included in this table equals the number of days stated in Q21. If these numbers are not the same, show a prompt that asks respondents to “please adjust the number of days so that they equal the number of days you mentioned for **[Month1]** and **[Month2]**.” Show prompt only once.]

[Dropdown box with coastal states]

Q23. In which state or U.S. territory did you spend the most time participating in ocean recreation?

[Instruction text: *Please select your answer from the list below.*]

- | | | | |
|--------------------------------------|---|--|---|
| <input type="checkbox"/> Alabama | <input type="checkbox"/> Maine | <input type="checkbox"/> Rhode Island | <input type="checkbox"/> Puerto Rico |
| <input type="checkbox"/> Alaska | <input type="checkbox"/> Maryland | <input type="checkbox"/> South Carolina | <input type="checkbox"/> U.S. Virgin Islands (USVI) |
| <input type="checkbox"/> California | <input type="checkbox"/> Massachusetts | <input type="checkbox"/> Texas | |
| <input type="checkbox"/> Connecticut | <input type="checkbox"/> Mississippi | <input type="checkbox"/> Virginia | |
| <input type="checkbox"/> Delaware | <input type="checkbox"/> New Jersey | <input type="checkbox"/> Washington | |
| <input type="checkbox"/> Florida | <input type="checkbox"/> New York | <input type="checkbox"/> American Samoa | |
| <input type="checkbox"/> Georgia | <input type="checkbox"/> North Carolina | <input type="checkbox"/> Commonwealth of the Northern Mariana Islands (CNMI) | |
| <input type="checkbox"/> Hawaii | <input type="checkbox"/> Oregon | <input type="checkbox"/> Guam | |
| <input type="checkbox"/> Louisiana | <input type="checkbox"/> Pennsylvania | | |

Q24. Intro. [Expenditures on semi-durable items]

In the following table, we would like to learn about equipment or gear that you may have purchased (not rented) in **[Month1]** and **[Month2]** for ocean activities.

We will not ask you about food, drinks, rental equipment or gear, fuel costs, or other items that you may have purchased or used on your most recent visit to the ocean. These items will be included in the next section.

[Only one of the following tables (Q24a-Q24h) will be shown to a respondent. The table displayed will be based on the activity in Q22 that had the highest number of days. If multiple activities have the same highest number of days, randomly select one from these activities. If “other” has the highest number of days, go to Q24e.]

[Show if “Recreational fishing” has the highest number of days in Q22]

Q24a. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?**RECREATIONAL FISHING**

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Rods, poles, reels, and components for rodmaking	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Tackle and gear such as lures, hooks, sinkers, fishing line, tackle boxes, nets, knives, gaffs, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Clothing used for fishing such as foul weather gear, boots, waders, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Wetsuits, booties, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Camping equipment such as sleeping bags, packs, tents, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Saltwater fishing licenses, fees, or stamps	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contribution to <i>nonprofit organizations</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Recreational shellfishing” has the highest number of days in Q22]

Q24b. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

RECREATIONAL SHELLFISHING

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Rakes, baskets, cages	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Gear such as poles, buckets, nets, knives, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Clothing such as foul weather gear, boots, waders, gloves, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Wetsuits, booties, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Camping equipment such as sleeping bags, packs, tents, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Saltwater shellfishing licenses, fees, or stamps	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Contributions or dues to <i>clubs</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Contributions to <i>nonprofit organizations</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Hunting waterfowl or other animals” has the highest number of days in Q22]

Q24c. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

HUNTING WATERFOWL OR OTHER ANIMALS

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Shotgun, muzzleloader, ammunition, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Bows, arrows, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Decoys or game calls	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Telescopic sights	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Clothing for hunting such as waders, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Hunting dogs and associated costs	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Processing or taxidermy fees	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Camping equipment such as sleeping bags, packs, tents, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Hunting licenses, fees, duck stamps, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Viewing or photographing the ocean” has the highest number of days in Q22]

Q24d. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

VIEWING OR PHOTOGRAPHING THE OCEAN

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Binoculars, field glasses, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Cameras, video cameras, lenses, tripods, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Field guides or charts for identifying ocean or coastal features, animals, or plants	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Clothing used for these activities such as hats, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Camping equipment such as sleeping bags, packs, tents, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Licenses, permits, or fees related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Beachcombing, tidepooling, or collecting items” has the highest number of days in Q22]

Q24e. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

BEACHCOMBING, TIDEPOOLING, OR COLLECTING ITEMS

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Equipment or gear used for this activity such as a metal detector, buckets, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Clothing used for this activity such as water shoes, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Field guides, tide tables, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Licenses, permits, or fees related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to this activity.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to this activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Water contact activities” has the highest number of days in Q22]

Q24f. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

WATER CONTACT ACTIVITIES

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Clothing for these activities such as swimsuit, swim cap, hat, water shoes, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Wetsuit, booties, rash guard, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Life jacket, other safety items	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>swimming or body surfing</i> such as goggles, kickboard, fins, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>surfing</i> such as a surfboard, leash, wax, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>boogie boarding</i> such as boogie board, fins, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>skimboarding</i> such as a skimboard, traction pad, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>snorkeling, scuba diving, or free diving</i> such as a snorkel, mask, weights, fins, buoyancy compensator, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>windsurfing</i> such as a board, mast, sail, booms, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>kitesurfing or kite buggying</i> such as an inflatable kite, kite buggy, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

(table continued on next page)

Q24f. (table continued from previous page)

WATER CONTACT ACTIVITIES

[Insert dropdown with all states for column, "State where most of your purchases were made"]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Equipment or gear for <i>jet skiing</i> such as a jet ski, jet ski cover, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Field guides, tide tables, charts, etc. used for these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Licenses, permits, or certifications related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to these activities such as Surfrider, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Boating and associated activities” has the highest number of days in Q22]

Q24g. Approximately how much did you personally spend on the following items in **[Month1]** and **[Month2]**?

BOATING AND ASSOCIATED ACTIVITIES

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Clothing for these activities such as hats, water shoes, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Wetsuit, booties, rash guard, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Life jacket, other safety items	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>water skiing</i> such as water skis, helmets, bindings, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>wakeboarding</i> such as wakeboard, board bags, helmets, bindings, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>tubing</i> such as tube, tow line, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Field guides, tide tables, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

[Show if “Outdoor activities not involving water contact” has the highest number of days in Q22]

Q24g. Approximately how much did you personally spend on the following items in [Month1] and [Month2]?

OUTDOOR ACTIVITIES NOT INVOLVING WATER CONTACT

[Insert dropdown with all states for column, “State where most of your purchases were made”]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Clothing for these activities such as hats, swimsuit, hiking boots, running shoes, biking gloves, riding boots, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear purchased for <i>sunbathing</i> such as sunscreen, towel, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear purchased for <i>walking, running, or hiking</i> such as hiking poles, compass, pedometer, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>biking</i> such as a bike, lock, helmet, tire pump, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear purchased for <i>rollerblading, skateboarding, or roller skating</i> such as rollerblades, skateboard, knee pads, helmet, wheels, bearings, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for activities for <i>beach volleyball, frisbee, kite flying, etc.</i> such as volleyballs, nets, kites, equipment bags, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>parasailing or hang gliding</i> such as parasails, harness, windsocks, wind meters, parachutes, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Equipment or gear for <i>camping</i> such as tents, packs, sleeping bags, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

Q24f. (table continued from previous page)

OUTDOOR ACTIVITIES NOT INVOLVING WATER CONTACT

[Insert dropdown with all states for column, "State where most of your purchases were made"]

Type of expense	Did you purchase this item(s)?	Your expenses	State where purchase was made	Was this purchase financed?
Equipment or gear for <i>horseback riding</i> such as halters, leads, crops, brushes, helmets, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Horse maintenance costs, stable fees, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Binoculars, field glasses, cameras, video cameras, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Field guides, maps, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Magazine, newspaper, and electronic subscriptions related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>clubs</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Dues or contributions to <i>nonprofit organizations</i> related to these activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %
Other equipment or gear, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	_____	_____ %

Section 4 - Trips Expenses

MOST RECENT OCEAN RECREATION WITHIN THE U.S.

In this last section, we would like to learn about your most recent ocean recreation activity that you participated in within the U.S.

Q25. Did you participate in your most recent ocean activity during a longer trip where you spent one or more nights away from your permanent or seasonal residence?

[Instruction text: *Please check one.*]

Yes No

[Show if Q25 = "Yes"]

Q26. How many nights were you away from your residence on this trip?

[Instruction text: *Please type a number for your answer.*]

_____ nights away from residence

[Show if Q25 = "Yes"]

Q27. How many days of this trip did you engage in ocean recreation?

[Instruction text: *Please type a number for your answer and count partial days as full days.*]

_____ days engaged in ocean recreation

Q28. Sometimes people go to the ocean specifically for recreation. Other times they may engage in some ocean recreation while they are at or near the ocean for another reason such as for a business trip.

What was the main reason for your visit to the ocean or coast?

[Instruction text: *Please check one.*]

- Pleasure
- Business
- Other, please specify _____

Q29. Sometimes people participate in more than one recreation activity when they visit the ocean or coast. Please check all of the ocean recreation activities that you participated in during your most recent visit.

[Instruction text: *Please check all that apply.*]

[List only activities that coincide with a non-zero response from Q22]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

Q30. Of the activities you participated in, which one activity was the most enjoyable to you?

[Instruction text: *Please check one.*]

[List only activities chosen in Q29]

- Recreational fishing
- Recreational shellfishing
- Hunting waterfowl or other animals
- Viewing or photographing the ocean
- Beachcombing, tidepooling, or collecting items
- Water contact sports
- Boating and associated activities
- Outdoor activities not involving water contact
- Other, please specify _____

[Dropdown box with coastal states]

Q31. In which state or U.S. territory did you engage in this activity?

[Instruction text: Please select your answer from the list below.]

- | | | | |
|--------------------------------------|---|--|---|
| <input type="checkbox"/> Alabama | <input type="checkbox"/> Maine | <input type="checkbox"/> Rhode Island | <input type="checkbox"/> Puerto Rico |
| <input type="checkbox"/> Alaska | <input type="checkbox"/> Maryland | <input type="checkbox"/> South Carolina | <input type="checkbox"/> U.S. Virgin Islands (USVI) |
| <input type="checkbox"/> California | <input type="checkbox"/> Massachusetts | <input type="checkbox"/> Texas | |
| <input type="checkbox"/> Connecticut | <input type="checkbox"/> Mississippi | <input type="checkbox"/> Virginia | |
| <input type="checkbox"/> Delaware | <input type="checkbox"/> New Jersey | <input type="checkbox"/> Washington | |
| <input type="checkbox"/> Florida | <input type="checkbox"/> New York | <input type="checkbox"/> American Samoa | |
| <input type="checkbox"/> Georgia | <input type="checkbox"/> North Carolina | <input type="checkbox"/> Commonwealth of the Northern Mariana Islands (CNMI) | |
| <input type="checkbox"/> Hawaii | <input type="checkbox"/> Oregon | <input type="checkbox"/> Guam | |
| <input type="checkbox"/> Louisiana | <input type="checkbox"/> Pennsylvania | | |

Q32a. In which city or town did you engage in this activity?

[Instruction text: Please select your answer from the list below.]

[Show dropdown menu of coastal cities based on state selected in Q31]

- I don't know or don't remember.

[Show if Q32a = "I don't know or don't remember."]

Q32b. In which coastal county or parish did you engage in this activity?

[Instruction text: Please select your answer from the list below.]

[Show dropdown menu of coastal cities based on state selected in Q31]

- I don't know or don't remember.

Q33. Which mode(s) of transportation did you use to get to and from [Text of location from Q32a/b or Q31 if they did not answer Q32a/b or "this coastal location" if Q31/Q32a/b refused]?

[Instruction text: Please check all that apply.]

[Show dropdown menu of coastal cities based on state selected in Q31]

- | | |
|---|--|
| <input type="checkbox"/> Personal car, rental car, taxi, or carpool | <input type="checkbox"/> Boat |
| <input type="checkbox"/> Bus | <input type="checkbox"/> Airplane |
| <input type="checkbox"/> Train or subway | <input type="checkbox"/> Walk |
| <input type="checkbox"/> Motorcycle or scooter | <input type="checkbox"/> Other, please specify _____ |
| <input type="checkbox"/> Bike | |

Q34. In the table below, please indicate **how much you personally spent** on each item that you purchased or rented during your most recent visit to the ocean or coast. Please include expenses for your entire trip away from home, not just the time you spent recreating at the ocean.

[Instruction text: Please type a number for each expense you made and people you paid for.]

I did not have any expenses during my most recent visit to the ocean or coast.....X

[If the above statement is checked, "0"s will automatically be filled in for this table.]

[In the table below, show only the rows that are associated with the ocean activity indicated in Q30. For example, if they indicated "water contact activities" in Q30, the rows for this activity will pop up. In addition to the ocean activity chosen, "transportation," "lodging," "food and drink," "other equipment" and "other expenses" should pop-up for all respondents. The "other activity" row would only pop-up if "other activity" was checked in Q30.]

	Type of expense	Did you purchase this item(s)?	Your expenses for this visit or trip
Transportation	Fuel cost – car, truck, or RV	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rental cost – car, truck, or RV	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other transportation such as bus, taxi, airline, subway fare, ferry, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Parking, beach, or site access fees	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other transportation fees such as carbon offsets, etc., please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Lodging	Lodging such as a hotel, campground, trailer park, cabin, vacation rental, timeshare, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	All-inclusive vacation package for a <u>resort location</u> within the U.S. or a U.S. territory, or a <u>cruise ship</u> that departed from the U.S. or a U.S. territory	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Food and drink	Restaurants, bars, cafes, or snack shacks	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Grocery stores or convenience stores	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other food and drink, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____

(table continued on next page)

Q34. (table continued from previous page)

	Type of expense	Did you purchase this item(s)?	Your expenses for this visit or trip
Recreational fishing	Rental cost for a boat, kayak, canoe, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Boat fuel or lubricants	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Fishing bait and ice	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Party, charter, or guide fees	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Fish filleting fee	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Processing, taxidermy, freezing, or shipping	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Recreational shellfishing	Rental cost for a boat, kayak, canoe, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Boat fuel or lubricants	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Shellfishing bait and ce	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented shellfishing equipment or gear such as wetsuits, diving gear, snorkel, mask, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Party, charter, or guide fees (including tips)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Shellfish cleaning or dressing fee paid to charter operator or crew	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Processing, taxidermy, freezing, or shipping	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Other recreational shellfishing supplies, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____	

(table continued on next page)

Q34. (table continued from previous page)

	Type of expense	Did you purchase this item(s)?	Your expenses for this visit or trip
Hunting waterfowl or other animals	Rented hunting equipment or gear	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Viewing or photography	Whale or other wildlife watching boat fees (including tips)	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rental fees for sailboat or other boat	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Water contact activities	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented equipment or gear for snorkeling or diving such as fins, masks, wetsuit, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented equipment or gear for surfing, windsurfing, or skimboarding such as a surfboard, wetsuit, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented equipment or gear for kayaking, canoeing, or rowing	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Boating activities	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rental cost for a boat, kayak, canoe, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented equipment or gear for activities such as waterskiing, wakeboarding, or tubing	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rental equipment or gear for kayaking, canoeing, rowing, or sailing	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Fuel cost	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____

(table continued on next page)

Q34. (table continued from previous page)

	Type of expense	Did you purchase this item(s)?	Your expenses for this visit or trip
Activities not involving water contact	Rented equipment or gear for activities in ocean areas such as walking, hiking, rollerblading, biking, skateboarding, or horseback riding	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Rented equipment or gear for games or sports in ocean areas such as a volleyball or frisbee	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Horseback riding fees	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Camping equipment or gear	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
	Other activity-related equipment or gear, please specify: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Other activity	Activity-related equipment or gear, please specify	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Other equipment	Other <u>equipment or gear</u> not included above but used for ocean recreation activities such as beach toys, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____
Other expenses	Other <u>expenses</u> not included above but used for ocean recreation activities such as sunscreen, hat, towel, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$ _____

[Show if the respondent indicated an expense in the row, “all inclusive vacation package” under “lodging” in the above table, Q34]

Q35. You indicated that you purchased an all-inclusive vacation package for a resort in the U.S. or a U.S. territory, or a cruise ship vacation that departed from the U.S. or a U.S. territory. What was included in this vacation package?

[Instruction text: Please check all that apply.]

[Show dropdown menu of coastal cities based on state selected in Q31]

- Transportation to and from your vacation location (flights, taxis, etc.)
- Food and beverages while at your vacation location
- Lodging while at your vacation location
- Equipment rental for recreational fishing or shellfishing activities
- Equipment rental for viewing or photographing wildlife
- Equipment rental for water contact activities
- Equipment rental for outdoor activities not involving water contact
- Tours or excursions if they occurred within the U.S. or U.S. territories
- Other, please specify _____

[Shown only if respondent input value(s) in Q34 and “i did not have any expenses during my most recent visit to the ocean or coast” is not chosen]

Q36. Approximately what percentage of these expenses were made in [State from Q31]?

[Instruction text: Please type a number for your answer.]

_____ % of expenses were made in [State from Q31]

Q37. Intro.

On the next four screens, we will ask you about factors that may have influenced your choice of location for your most recent ocean activity.

Q37. How important were the following factors when you chose [Text of location from Q32a/b or Q31 if they did not answer Q32a/b or “this coastal location” if Q31/Q32a/b refused or dk] as the location for your most recent ocean activity?

[Instruction text: Please check the box that best represents the importance of each factor.]

	Very important	Important	Somewhat important	Not important
Ocean conditions (wave size, break, undertow, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weather conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water quality (temperature, clarity, cleanliness, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sand quality or quantity (fine sand versus pebbles)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of the view from this location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The number of people at this location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling of safety and security at this location, including availability of lifeguards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to the water from shore including a boat slip or ramp, pier, jetty, wharf, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking availability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cost of going to this location (entrance, access, or parking fees)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of wheelchair access or other mobility easement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of restrooms, showers, BBQ grills, picnic tables, etc. at this location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity to restaurants, shopping, casinos, and other amenities near this location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pet policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Familiarity with, or history of, visiting this location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity to my residence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Show if respondent ranked “Weather conditions” in Q37 as “Very important” or “Important”]

Q38. How **important** were the following weather conditions when you chose to participate in **[Activity from Q30]**?

[Instruction text: Please check the box that best represents your answer.]

	Very important	Important	Somewhat important	Not important
Presence of wind	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of humidity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presence of warm air temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of rain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presence of sunshine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presence of storms, hurricanes, or typhoons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Show if “Very important” or “Important” is selected in Q38 for “Presence of warm air temperatures”; highest temp should be greater than or equal to lowest temp]

Q39. When you participated in your most recent ocean activity, what were the highest and lowest outdoor temperatures that you experienced?

[Instruction text: Please check the box that best represents your answer.]

_____ °F was approximately the highest temperature

_____ °F was approximately the lowest temperature

I don’t know or don’t remember.

[If Q39 = “I don’t know or don’t remember” or respondents refuse to answer Q39, skip to Section 5.]

[Show Q40 if respondent answered Q39 with temperatures]

Q40. How confident are you in your high and low temperature estimates?

[Instruction text: Please check one.]

Very confident

Confident

Somewhat confident

Not confident

[If Q40 = “Somewhat confident” or “Not confident”, skip to Section 5.]

Q41.

On the following screens, we are interested in learning whether a change in outdoor temperature would influence your participation in ocean recreation.

Q41a. If the outdoor temperature was expected to be between **[Lower temp from Q39 – 15]** and **[Higher temp from Q39 + 15]** degrees Fahrenheit (°F), what is the likelihood that you would have participated in the following activity?

[Instruction text: Please check the box that best represents your answer.]

[Lower and higher temps should not be lower/higher than what is historically possible for that state. Also, “Activity1” should be the activity indicated in Q30.]

I would have participated in [activity1], if the temperature was:	Very likely	Likely	Somewhat likely	Not likely
A [lower temp from Q39 - 15]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B [lower temp from Q39 - 10]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C [lower temp from Q39 - 5]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D [higher temp from Q39 + 5]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E [higher temp from Q39 + 10]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F [higher temp from Q39 + 15]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Show Q41b only if in Q41a a, b or c is “Not likely”. If more than one of Q41a a, b or c is “Not likely”, select the highest “Not likely” temperature out of Q41a a, b or c to be displayed in Q41b.]

Q41b. [If choose “Not likely”: for the highest low temperature that they chose “Not likely”] You said that if the temperature was **[Highest low temp where “Not likely” is checked]**, you would not likely participate in **[Activity1]**. What would you have done instead?

[Instruction text: Please check one.]

- I would have participated in a different ocean recreation activity.
- I would have participated in a non-ocean recreation activity (an outdoor activity that was not an ocean activity).
- I would have participated in an indoor recreation activity.
- I would have done something other than what was listed here.

Q42a. If the outdoor temperature was expected to be between [lower temp from Q39 – 15] and [higher temp from Q39 + 15] degrees Fahrenheit (°F), what is the likelihood that you would have participated in the following activity?

[Instruction text: Please check the box that best represents your answer.]

[Lower and higher temps should not be lower/higher than what is historically possible for that state. Also, “Activity2” should be randomly selected from activities in Q29 if more than one activity was selected in Q29. “Activity2” should not = “Activity1”. If only one activity was selected in Q29 then Q42a-42c should be skipped.]

I would have participated in [activity1], if the temperature was:	Very likely	Likely	Somewhat likely	Not likely
A [lower temp from Q39 - 15]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B [lower temp from Q39 - 10]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C [lower temp from Q39 - 5]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D [higher temp from Q39 + 5]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E [higher temp from Q39 + 10]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F [higher temp from Q39 + 15]°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Show Q42b only if any of Q42a a, b or c is “Not likely”. If more than one of Q42a a, b or c is “Not likely”, select the highest “Not likely” temperature out of Q42a a, b or c to be displayed in Q42b.]

Q42b. [If choose “Not likely”: for the highest low temperature that they chose “Not likely”] You said that if the temperature was [Highest low temp where “Not likely” is checked], you would not likely participate in [Activity2]. What would you have done instead?

[Instruction text: Please check one.]

[Lower and higher temps should not be lower/higher than what is historically possible for that state. Also, “Activity2” should be randomly selected from activities in Q29 if more than one activity was selected in Q29. “Activity2” should not = “Activity1”. If only one activity was selected in Q29 then Q42a-42c should be skipped.]

- I would have participated in a different ocean recreation activity.
- I would have participated in a non-ocean recreation activity (an outdoor activity that was not an ocean activity).
- I would have participated in an indoor recreation activity.
- I would have done something other than what was listed here.

[Show Q42c if any of Q42a d, e or f is “Not likely”. If more than one of Q42a d, e or f is “Not likely”, select the lowest “Not likely” temperature out of Q42a d, e or f to be displayed in Q42c.]

Q42c. [If choose “Not likely”: for the lowest high temperature that they chose “Not likely”] You said that if the temperature was [Lowest high temp where “Not likely” is checked], you would not likely participate in [Activity2]. What would you have done instead?

[Instruction text: Please check one.]

[Lower and higher temps should not be lower/higher than what is historically possible for that state. Also, “Activity2” should be randomly selected from activities in Q29 if more than one activity was selected in Q29. “Activity2” should not = “Activity1”. If only one activity was selected in Q29 then Q42a-42c should be skipped.]

- I would have chosen to do a different ocean recreation activity.
- I would have chosen to do a non-ocean recreation activity (an outdoor activity that was not an ocean activity).
- I would have chosen to do an indoor recreation activity.
- I would have done something other than what was listed here.

THANK YOU FOR YOUR PARTICIPATION!

Your responses are **very important!** They will be combined with others and will remain confidential. As mentioned at the beginning of this survey, the information from your responses will help the National Oceanic and Atmospheric Administration (NOAA) learn more about how important ocean recreation activities are to you.

This nationwide survey is collecting information from respondents like you over a 12 month period from March 2011 through January 2012. To ensure that your responses are accurately accounted for, your continued participation is crucial to the success of this survey. By collecting information throughout the year, we can learn about the variety of ocean recreation activities you do and how often you do them. In the next few months, you may be contacted again and asked to participate in this survey. Your continued participation is truly appreciated!

If you would like to be notified when preliminary results are available in 2012, please check the box below:

- I would like to receive an e-mail notification when preliminary survey results are available.**

We want your feedback! If you would like to provide us with comments related to this survey, please do so here:

If you have questions about this survey, please feel free to contact Rosemary Kosaka at Rosemary.Kosaka@noaa.gov or 831-420-3988.

Thank you again for your participation! We look forward to your responses.

