ECONOMIC CONTRIBUTION OF COASTAL NATURE-BASED TOURISM FOR THE STATE OF SOUTH CAROLINA

FINAL REPORT FOR PHASE II

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Acronyms and Abbreviations

EC – Economic contribution
ECA – Economic contribution analysis
EI – Economic impact
EIA – Economic impact analysis
I/O – Input Output
NBT – Nature-based tourism
NORES – National Ocean Recreation Expenditure Survey
SC – South Carolina
SCDNR – South Carolina Department of Natural Resources
SCPRT – South Carolina Parks, Recreation and Tourism
TEIM - Travel Economic Impact Model
USTA – U.S. Tourism Association
Introduction
The outset of this research project was focused on investigating nature-based tourism’s (NBT) contribution to the South Carolina (SC) coastal economy, and further understanding the value and potential growth of the nature-based sector. It is in this sentiment that we infer that ‘valuing’ these resources reflects the importance of them as well; being able to articulate their value and importance provides evidence to support policies that can protect, conserve, and sustainably develop these natural resources in ways that ensure their longevity for future generations. However, these resources are being subsumed into one of the largest industries in the state; in 2017, gross spending on travel or on behalf of tourism in SC totaled $22.6 billion, a 6.4% increase from 2016 (U.S. Tourism Association [USTA], 2019). While the tourism industry brings concerns of overuse of natural resources and carrying capacity issues for parks, protected areas, and other natural sites, the neoliberal paradigm guiding our society and economy has made it a necessity for these places to engage with the discourse of economic value to achieve its charge of conservation.

NBT provides a means for conservation and economic development in ways that can lead to long-term coexistence. Generally, tourism is seen as low-impact and not as harshly irreversible as other forms of industry and development. What is more, NBT allows destination managers and marketers to move tourists into peripheral, rural areas. Rural communities are often in more need of tourism and its economic impact as they transition from other traditional industries (e.g., farming, textiles, manufacturing) to the service and experience economy; NBT which can draw on the rich natural resources of rural areas, has the potential to “renew struggling rural environments” (O’Neill, Riscinto-Kozub, & Hyfte, 2010, p. 141). Major destinations along the SC coast, such as Charleston, Myrtle Beach, Georgetown, Beaufort, and/or Hilton Head, can also benefit from a further distribution of tourists into more remote communities so as to disperse the unwelcome impacts of tourism such as crowding, traffic, and overdevelopment: there remains “continued interest in ‘moving the needle’ on visitation to some of the state’s rural communities” (Williams, 2019, para. 25). This project focused on capturing economic value derived from resident and tourist visitation and use of natural sites and resources that support a range of NBT activities along the SC coast.

Phase 2 Objectives
The objectives of this proposed study were to:

Objective 1. Conduct an ECA to measure the contribution of visitor expenditures to NBT attractions in coastal SC.

Objective 2. Collect visitor survey data that will allow for the identification of NBT sub-segments based on activities and motivations that will allow for a comparison of expenditures and economic contribution differences across sub-segments.

Objective 3. Develop a nature-based visitor typology that considers motivations, activities, time spent in nature-based tourism settings, and the level of importance of nature to destination decision-making.

Phase 1 of this project found that no recent appropriate data sets are available (e.g., NBT activity specific primary data collected after 2012) that could generally be used “as is” to conduct SC coastal or state level EIA and/or ECA of SC economic sectors directly affected by various types of NBT participant-related expenditures. This is especially important relative to the identification of NBT sub-segments based on activities and motivations that would allow for a comparison of expenditures and economic contribution differences across sub-segments. Based on these primary data gaps, Phase 2 tasks included designing, piloting, and implementing a multi-location...
on-site intercept survey of visitors (residents and tourists) at a location that can demonstrably be considered a NBT site or attraction. Given project funding and time constraints, on-site intercept surveying was selected as the appropriate method for collecting primary data (e.g., expenditure patterns, motives, etc.) regarding NBT participants and their activities. However, during Phase 2, it became apparent that it would be problematic to only use on-site interviewing survey data to extrapolate NBT expenditure patterns to a coastal region level as needed for ECA purposes. Consequently, USTA data that annually provides timely county level estimates of expenditures were selected to augment the primary data collected via the on-site intercept survey.

Measuring Economic Contribution of Coastal SC

Much of what is known about the economic contribution of SC’s tourism industry derives from the USTA’s Travel Economic Impact Model (TEIM) that estimates domestic travel expenditures, which can be disaggregated to the county level. According to the USTA (2019), the SC tourism industry contributed $14.4 billion in direct spending in 2018, an increase of 5.2% from 2017. The tourism industry continues to support one in 10 jobs across the state and creates $1.3 billion in state and local taxes. In a study of U.S. domestic tourism within the state, the eight counties that predominantly make up the coastal region (Beaufort, Berkeley, Charleston, Colleton, Dorchester, Horry, Georgetown, and Jasper) accounted for $9.4 billion of this economic impact, or 65% of the state’s total tourism expenditure revenue (USTA, 2019) with domestic traveler spending on foodservice and lodging comprising 55% tourism revenue (see Table 1). SC Parks, Recreation, and Tourism (SCPRT) also regularly collects accommodation tax revenue, occupancy rate, average room rates, and RevPAR, revenue per available room, quarterly as other indicators of economic activity within and across counties.

Regional economic effects specific to NBT are often scattered across multiple economic (industry) sectors, much like those from the general tourism market (e.g., transportation, food and beverage, accommodations). However, Fredman and Tyväinen (2010) raise an important concern related to considering the measurement of NBT: “[a]lthough it is the natural features that attract people to participate in nature-based tourism, in practice the largest share of the economic impact is generated through traditional tourism services such as travel, lodging and food while nature experiences directly generate less money” (p. 179-180). That is, understanding the direct market-oriented economic effects of sub-sector, niche markets – such as NBT – can be problematic due to the dispersed, smaller scale nature of the markets and the related lack of current and accurate economic data. Although the empirical investigations of NBT have expanded in the literature, there still remains a lack of reliable global and/or local indicators of market size and potential (Mehmetoglu, 2007a; 2007b).

Also important to this study is the distinction made between economic contribution analysis (ECA) and economic impact analysis (EIA), as there has been some misuse of these terms as synonymous. Each of these ideas and related measurement reflects “distinctly different metrics” (Watson, Wilson, Thilmany & Winter, 2007, p. 140). As Watson et al., (2007) clarify, an economic contribution can be defined as “the gross changes in a region’s existing economy that can be attributed to a given industry, event, or policy” (p. 142), whereas EIA methodology allows for ex ante evaluation of the net effects of an economic activity associated with an industry, event, and/or policy change in an existing regional economy. For a review of Input-Output (I/O) analyses, and further discussion of the differences between ECA and EIA approaches, see the Phase 1 (Duffy et al., 2019).

Based on professional judgement and other design parameters, an ECA approach was selected for Phase 2 analysis. Two types of ECA methods can be used with IMPLAN for
estimating the regional economic contributions of a single sector and multisector economic activity (Parajuli et al. 2019). One method involves making external changes using the targeted IMPLAN sector input (vector) values such as NBT related participant expenditures and employing a matrix inversion technique that commonly involves a spreadsheet software. The other method, which was used in this study, requires making various changes to the IMPLAN software and associated regional economic data (IMPLAN 2020). Parajuli et al. (2018) found that both methods result in yielding similar total economic contribution values. Regardless, both ECA procedures place constraints on the ECA process that are designed to prevent overestimating analysis results, a technically viable regional economic analysis protocol that differentiates ECA from economic impact analysis (Parajuli et al., 2019).

Methods

Coastal Intercept Survey – Tourist and Resident

Survey intercepts were conducted at selected NBT sites in the eight coastal counties (i.e. Berkeley, Beaufort, Charleston, Colleton, Dorchester, Georgetown, Horry, and Jasper) from July 2019 to January 2020. Intercept data was collected at 1) Private/commercial NBT venues and operations and 2) Public sector/non-profit settings, across the eight counties:

- Ashley River Park
- Bee City Zoo
- Blue Heron Nature Center
- Brookgreen Gardens
- Colleton State Park
- Cypress Gardens
- Edisto Beach State Park
- Folly Beach
- Folly Lighthouse and Inlet Preserve
- Folly Riverpark
- Givhans Ferry State Park
- Henry Robinson Boardwalk & Waterfront Park
- Hobcaw Barony
- Hunting Island State Park
- Magnolia Plantation and Gardens
- Murrell’s Inlet Marsh Walk
- Myrtle Beach State Park
- Old Santee Canal Park
- Pickney Island National Wildlife Refuge
- Port Royal Boardwalk/ Boat Landing
- Riverfront Park in North Charleston
- Savannah National Wildlife Refuge
- Shem Creek Park
- Wacatee Zoo Farm
- White Point Gardens

Listed above were central locations for various private operations, such as where an outfitter may have a storefront based or put-in/take-out (e.g., Nature Adventures Outfitters, Edisto River Adventures, Rover Boat Tours, Hilton Head Outfitters). Each site was contacted in advance to gain approval for data collection (Etikan, Musa, & Alkassim, 2016). The intercept instruments were developed and pretested with Clemson PRTM graduate students. A pilot test was conducted in May 2019 in Charleston at Charleston Paddler (private site), Patriot's Point and Caw-Caw Interpretive Center (public site). Following this pilot test (n = 40), questions were reviewed and modified for clarity and accuracy. Validity and reliability checks were conducted. Subsequently the survey instrument was loaded to a Qualtrics account (https://www.qualtrics.com/). iPads were used to administer the intercept survey via a Qualtrics iPad-based app for field-based surveying that can be used offline, storing the information to the device to be uploaded to the server at a later point. There were four trips to the coast amounting to eight full days of surveying. The survey intercepts were conducted by ten different graduate research assistants, each whom received training prior to data collection. Procedures for sampling can be found in Appendix A. There was variability in the days of the week in which intercepting took place, including both weekday and weekend dates. Each site was visited in four-hour blocks (morning and afternoon), though at some locations that received so few visitors after peak hours, the
research team move to other sites for more responses. Once at the data collection site, visitors were selected using randomized procedures to eliminate researcher bias (i.e., every \( n^{\text{th}} \) person) and minimize interrupting the visitor experience.

Following similar methods as Mehmetoglu (2007a; 2007b), psychographic (i.e., trip motivation, barriers to participation), trip characteristics (i.e., party size, length of stay, travel mode), and socio-demographic (i.e., age, income, gender, education) questions were included. Respondents were provided a menu of activities and asked to select what they participated in, and how much time they spent participating in specific activities. Additionally, how much time they spent in natural areas (at natural attractions) and importance of these will be queried. Intercept instruments are located in Appendices B (tourist) and C (resident). Data was imported from Qualtrics into SPSS. The data was checked for errors and a series of univariate frequencies and measures of central tendency. Of the 366 surveys collected, 342 usable surveys were kept after data cleaning (\( n = 188 \) tourist intercepts, \( n = 154 \) resident intercepts). Statistical analyses include mean comparison (independent t-tests, ANOVA) and exploratory factor analysis (EFA).

**Data Sources for Estimating Category Expenditures by Coastal NBT Participant**

During Phase 2, it became apparent that it would be problematic to only use on-site interviewing survey data to extrapolate NBT expenditure patterns to a coastal region level as needed for ECA purposes. Consequently, USTA data that SCPRT annually provides with county level estimates of total trip expenditures by SC domestic visitors were selected to augment the primary data collected via the on-site intercept survey. Using their proprietary model, TEIM generates total county level travel expenditure estimates by distributing their state estimates to the county level by applying proper category expenditure proportions in a given SC county. These county level expenditure totals are calculated based on state specific data sets collected from federal, state and local governments and private organizations. The USTA data also includes estimated travel expenditures by both traveling residents as well as SC non-residents (USTA, 2019), an important consideration for ECA purposes. Moreover, since these USTA county level expenditures can also be aggregated into regional multi-county regional expenditure data sets, some SC researchers have used the USTA data to estimate the annual regional economic contributions of SC coastal visitor expenditures (USC, 2009; Willis & Straka, 2016).

In situations where there remains the potential for wide variance and related confidence in a major secondary data source, it is also prudent to model using an upper and lower bound estimate of possible overall expenditures. This provides a precautionary confidence interval approach to frame the scope of potential economic contributions from the SC coastal NBT industry. For this analysis using the SC USTA data (USTA, 2019) and considering SC outdoor recreation participant primary purposes for visiting South Carolina, we selected a conservative upper bound of 14% based on an extensive review of various data sources as well the coastal intercept primary data collected during indicating that overall 52% of the respondents had and/or were planning “Spending time on the beach/ beachcombing…”. Therefore, 14% is still a conservative upper bound that is congruent with place-based “beach” centric tourism while acknowledging the consumptive and non-consumptive dimensions of NBT.

A lower bound of 7% was chosen after reviewing more detailed breakdowns of the most popular types of leisure activities for in- and out-of-state SC visitors. Activity categories in these reports range from well-defined categories such as wildlife viewing, with 7% of out-of-state visitors engaging in this activity; to others like special events/festivals, bird watching, youth sporting event spectator, wine tasting/winery tour, other nature, motor boat/jet ski…with 2% of out of state visitors enjoying these activities. Utilizing data provided in these reports and making
assumptions related to the percentage of mutual inclusivity across and within categories, a 7% lower bound was chosen as a conservative estimate for tourism that is primarily motivated by NBT.

**SC Coastal NBT Provider Phone Survey**

A phone survey targeting SC coastal NBT providers was designed and conducted during the fall of 2019. This survey was initiated when it became apparent during the early stages of Phase 2 that there was a critical need for selected provider primary data and other information to use for evaluating and/or augmenting the analysis of collected coastal intercept primary data and USTA coastal county regional aggregates as well as selected IMPLAN economic information to be used for the Phase 2 ECA tasks for Objective 1. In addition, during the fall of 2018, impacts of hurricanes on SC coastal tourism (including the NBT industry) were apparent, especially Hurricane Florence that hit the SC coastal area in September 2018. Thus, the purpose of this survey was to augment understanding of economic information needed to inform the ECA. The phone survey instrument can be found in Appendix D, the survey protocol and responses to the structured interviews can be found in Appendix E and responses specific to the effects of recent hurricanes, in Appendix F.

**Objective 1: Economic Contribution Analysis of SC Coastal Nature-based Tourism**

**IMPLAN Economic Contribution Analysis Procedures**

The compiled 2018 USTA expenditure totals from for the SC coastal county region (USTA, 2019) do not include subtotals for major travel industry sectors that could be used as an initial basis for estimating IMPLAN sector values needed for ECA purposes. Assuming USTA state level percentages for each major USTA travel industry sector could be used to approximated SC coastal region expenditure total\(^1\), coastal expenditure subtotals for each USTA travel sector were estimated (Table 1). Based on this assumption, six estimated USTA 2018 coastal expenditure aggregates that ranged from $2,809 million to $646 million for the Foodservice sector and the Entertainment & Recreation sectors, respectively, were estimated with the USTA coastal county data. The six coastal travel industry sectors represented aggregated economic sectors that were impacted by all SC coastal domestic travelers, not just NBT. Utilizing 7% and 14% as lower and upper bounds of NBT motivations as previously discussed, South Carolina coastal NBT related activities and sites (e.g. SCPRT coastal parks, nature centers, etc.) were estimated to have generated a total of $655.6 million and $1,311.1 million in total direct gross visitor expenditures (2018 dollars), respectively, across the eight SC Coastal Counties when applying the USTA travel sector percentages to the estimated USTA upper and lower bound coastal subtotals (Table 1). Note that above coastal USTA expenditure aggregates include gross retail expenditures that have not been adjusted (margined) for direct retail spending that leaks out of the study region. Using IMPLAN Activity templates, these USTA aggregated travel sector estimated expenditures were disaggregated and allocated (“sectored”) to each appropriate IMPLAN industry sector. IMPLAN related methodological literature (e.g., Kosaka & Steinback, 2018), IMPLAN industry and commodity sector descriptions, other sources (e.g., Willis & Straka, 2016) and professional judgment were used in

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\(^1\)While this is only a project working assumption that dependents upon the USTA TEIM algorithms and data sources, we also acknowledge that these USTA state level travel industry percentages could be significantly distorted relative to the substantial socioeconomic characteristic of the SC coastal tourism industry among other considerations.
the process of allocating USTA derived expenditure values to the appropriate IMPLAN sector (e.g., lodging, full service restaurants).

### Table 1. Estimated 2018 Domestic Travel Expenditures in South Carolina Coastal Counties Related to Nature-based Tourism, Dollars in Millions. (Gross direct dollars not adjusted for retail margins.) (Source: USTA, August 2019).

<table>
<thead>
<tr>
<th>Coastal Counties</th>
<th>Other SC Counties</th>
<th>Total Expenditures</th>
<th>Coastal Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$9,364.93</td>
<td>$5,073.37</td>
<td>$14,438.30</td>
<td>64.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USTA Major Travel Sectors*</th>
<th>Sector Percent</th>
<th>All Coastal Travel</th>
<th>NBT Related Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Transportation</td>
<td>9.5%</td>
<td>$889.67</td>
<td>$62.28</td>
</tr>
<tr>
<td>Auto Transportation</td>
<td>19.6%</td>
<td>$1,835.53</td>
<td>$128.49</td>
</tr>
<tr>
<td>Lodging</td>
<td>24.9%</td>
<td>$2,331.87</td>
<td>$163.23</td>
</tr>
<tr>
<td>Foodservice</td>
<td>30.0%</td>
<td>$2,809.48</td>
<td>$196.66</td>
</tr>
<tr>
<td>Entertainment &amp; Recreation</td>
<td>6.9%</td>
<td>$646.18</td>
<td>$45.23</td>
</tr>
<tr>
<td>General Retail Trade</td>
<td>9.1%</td>
<td>$852.21</td>
<td>$59.65</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>$9,364.93</td>
<td>$655.55</td>
</tr>
</tbody>
</table>

*Major Travel Sectors: Auto transportation sector includes privately-owned vehicles that are used for trips (e.g., automobiles, trucks, other recreational vehicles), gasoline service stations, and automotive rental. Foodservice sector includes restaurants, grocery stores and other eating and drinking establishments. Public transportation sector comprises air, intercity bus, rail, boat or ship, and taxi or limousine service. Lodging sector consists of hotels and motels, campgrounds, and ownership or rental of vacation. General retail trade sector includes gifts, clothes, souvenirs and other incidental retail purchases. Entertainment and recreation (E&R) sector includes amusement parks and attractions, attendance at nightclubs, sports events, and other types of E&R while traveling. Adapted from USTA (2019).

When estimating the direct and secondary economic contribution effects characteristics of NBT participant expenditures such as various guide services, there have been differences in which IMPLAN sectors researchers have selected for allocating visitor expenditures related to these services. Specifically, IMPLAN Sector #414, “Scenic and sightseeing transportation and support activities for transportation” has been used by some researchers while others have used IMPLAN Sector #496, “Other amusement and recreation industries.” The selection of IMPLAN sector for estimating regional direct and secondary effects stemming from these services, however, can be affected by which of these two sectors is selected because of the difference in IMPLAN SAM multipliers for these two sectors. If considering Labor Income effects, for example, the rounded SAM Type Labor Income Multiplier for Sector #414, 1.82622, in the IMPLAN 2016 SC coastal region about is 15% higher than the Sector #496 SAM Labor Income Multiplier for the same region, 1.58437.

The magnitude of the computed mean coastal for-profit provider output-per-worker ratio value when adjusting for inflation, i.e. $75,552 (see Table G1 in Appendix G), appears to be consistent with the SC coastal region output-per-worker ratio, $60,083, for Sector #496 in the 2016 IMPLAN model. In contrast, the 2016 SC coastal IMPLAN Sector #414 output-per-worker ratio was $152,366 (Table G1), a value about two times higher than mean ratio (in 2016 dollars) computed using collected SC coastal for-profit provider data. Therefore, estimated visitor spending on guides and related service were allocated to IMPLAN Sector #496 based upon an empirical regional economic analysis that used the coastal NBT provider phone survey data.
As needed when using an I/O model, all expenditure values associated with a given producing sector were also converted into manufacturer or producer values using IMPLAN default settings. This includes converting disaggregated retail expenditures derived from the USTA foodservice (i.e., grocery stores) sector and the auto transportation sector (i.e., gasoline service stations) as well as USTA general retail sector in Table 1 into appropriate producer values using IMPLAN default retail margin settings. The disaggregated USTA data allocated into appropriate IMPLAN sectors were used to generate the ECA using a compiled IMPLAN I/O model for the SC coastal region economy.

Summary of Coastal NBT Economic Contribution Analysis Results

The ECA results (Table 2) based on estimated disaggregated USTA expenditures, intercept data and other data were summarized using the following major regional economic variables: Total industry output (total sales revenue) retained in a state, total value added (i.e., Gross State Product) and earned income (labor plus proprietor income) and employment (number of part-time and full-time jobs) (Miller & Blair, 2009). All results were also converted to 2019 dollars using IMPLAN’s sector deflators.

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Lower Bound Estimate</th>
<th>Upper Bound Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employment</td>
<td>Labor Income</td>
</tr>
<tr>
<td>Direct Effect</td>
<td>8,624</td>
<td>$246,051</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>898</td>
<td>$41,009</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>1,054</td>
<td>$47,025</td>
</tr>
<tr>
<td>Total Effect</td>
<td>10,576</td>
<td>$334,085</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17,248</td>
<td>$492,102</td>
</tr>
<tr>
<td>Direct Effect</td>
<td>1,795</td>
<td>$82,018</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>2,108</td>
<td>$94,049</td>
</tr>
<tr>
<td>Total Effect</td>
<td>21,152</td>
<td>$668,170</td>
</tr>
</tbody>
</table>

*Lower and Upper Bound estimates are based upon 2018 gross travel related expenditures attributable to South Carolina coastal nature-based tourism that were deflated to 2019 dollars using IMPLAN.

**Employment is the number of annual jobs (full time and part time) supported by estimated 2019 nature-based tourism expenditures in South Carolina. Labor Income ( proprietor income and wages paid to salaried employees), Value Added (the sum of labor income, property income and indirect business taxes) and Output (sum of value added and intermediate input cost) reported in thousands.

NOTE: Numbers may not add up due to rounding.

The ECA results based on estimated lower and upper bound expenditures by SC coastal visitors (in 2019 dollars) that were attributable to NBT activities and/or sites are summarized in Table 2 as direct, indirect and induced economic contribution effects. The estimated lower and upper bound direct contribution effects were $473.2 million and $946.5 million, respectively (Table 2). Direct effect output represents initial output (sales) retained in the SC coastal region, not gross sales by the NBT industry. The total economic contribution output effect due to coastal NBT expenditures ranged from $766.8 million for the lower bound estimate to approximately
$1,533.6 million for the upper bound estimate (Table 2). The estimated lower bound annual total economic contribution output effect included supporting SC jobs (full time and part time), about 10,576, and labor income (i.e. salaried employee wages and proprietor income) approximately $334.1 million (Table 2). The estimated lower bound annual total economic contribution output effect included supporting SC jobs (full time and part time), about 10,576, and total labor income (i.e. salaried employee wages and proprietor income) approximately $334.1 million (Table 2). Estimated upper bound total economic effects generated about $668.2 million in labor income and over 21 thousand coastal job (Table 2). The lower and upper bound coastal total economic contribution effect on SC coastal Gross State Product (Total Value Added), a subcomponent of the total output effect, ranged from $568.2 million to $1,136.5 million (Table 2).

When evaluating overall ECA results, a simple and useful regional economic analysis comparative evaluation metric involves comparing IMPLAN derived Type Social Accounting Matrix (SAM) economic contribution output multipliers to other regional ECA studies that also used I/O models, herein called a “SAM ECA output multiplier.” SAM total economic multipliers in general represent the size of estimated total economic effects as a ratio of total effects output to direct effects with total effects including indirect and induced effects stemming from an economic activity (e.g. NBT related economic activities) in a region due to household spending of earned income linked to the direct or indirect effect of resident and nonresident consumer spending. IMPLAN’s multipliers also include induced effects resulting from local/state/federal government spending. However, when comparing ECA SAM total output multipliers and other SAM multipliers2 to other SAM ECA multipliers, they are not comparable to IMPLAN EIA derived SAM total output multipliers even if the same exact regional data, participant spending patterns and related sectoring were used. This due to the ECA related constraints that were applied to the I/O model’s feedback linkages (i.e. indirect and induced effects) in the study area so that economic contribution effects would not be overestimated (Parajuli et al., 2019).

The state level 2011 SAM ECA output multiplier for SC WW wildlife watching expenditures as estimated by Poudel et al. (2017), 1.77, was larger than the overall3 2019 ECA output multiplier estimated for SC coastal NBT, 1.62, in this study. The results of another state-level SC study that involved combining estimated SC freshwater fishing, hunting, and wildlife watching expenditures based on 2011 expenditure data (USFWS, 2014) converted to 2016 dollars, also had a state level ECA output multiplier, 1.69 (Willis & Straka, 2016), that was greater than the ECA multiplier estimated in this study. Possible factors contributing to the lower multiplier in our study while perhaps not being significantly different include the use of different IMPLAN sectoring approaches and the size of the study region economies. The size of the study region economy is important because generally the larger the regional economy, the higher will be the associated total multipliers, other factors being equal, thus a higher potential for “recirculating” participant expenditures more often in the larger region (Watson et al., 2007). Therefore, given that Poudel et al. (2017) and (Willis & Straka, 2016) involved state level ECA, not a sub-state region like the SC coastal region used, region size may have partially accounted for their relatively larger multipliers. Willis and Straka (2016) also used the same SC coastal region and a 2016 SC USTA data expenditure source as employed in this NBT study when estimating the economic contribution of all SC coastal tourism. Based on their results, the estimated 2016 SAM ECA output multiplier for coastal tourism was 1.67. A review of their coastal tourism related expenditure values by IMPLAN sector indicated that they used a different

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2This also includes comparing IMPLAN SAM employment, labor income and value-added multipliers.

3The estimated SAM ECA output multipliers for the lower and upper bound NBT expenditures were the same.
overall expenditure pattern with more sectors than were used in our study. For example, they included IMPLAN Section #414 (Scenic transportation support activities) in their sectoring, a sector that we decided not to use as previously discussed.

Objectives 2 and 3: NBT activities, motivations, and expenditures
This study sought to consider expenditures across subsegments of nature-based tourists and to develop a typology of nature-based tourists based on activity segments, trip characteristics, and/or time spent doing nature-based tourism activities through the implementation of a resident and tourist intercept survey. See Appendices H and I for a descriptive summary of tourist and resident intercept responses, respectively.

Socio-demographic profile and trip characteristics
The tourist sample was skewed toward women: 63.8% female (n = 120; see Appendix J for Table J1). Ages ranged 20 to 87 with 42.6% of the sample between 40 and 59 years of age. The sample was mostly White (82.4%) and married (or in a union; 64.2%) with no children/no children living at home (61.5%). Likewise, approximately half the sample (47.4%) made between $75,000 and $150,000 and had a 4 year/ Bachelor’s degree or Master’s degree (56.1%). The resident sample also skewed toward women: 60.4% female (n = 93; see Table J2). Ages ranged 20 to 85 with 36.9% of the sample between 40 and 59 years of age. The sample was mostly White (86.4%) and married (or in a Union; 63.6%) with no children/no children living at home (58.4%). Half the sample had some college but no degree, or a 4 year/ Bachelor’s degree (50.6%). Over half the sample (61.9%) made between $25,000 and $99,999.

For 91.5% of the tourist sample, the SC Coast was the primary destination for their trip. Approximately three-fourths of respondents were repeat visitors (73.3%). Half (50.5%) traveled with their immediate families, and another 32.4% with a partner; only 49 travel parties included children. The average party size was 3.21 (SD – 5.84), 72.3% represented a drive market using their own vehicle as their main mode of transportation, and 88.8% were staying overnight on their trip. For those staying overnight (N = 167), the average number of nights was 5.08 (Sd = 4.99) with 29.5% staying two nights and 22.4% staying three nights. Hotels were the most common type of accommodation (24.5%), followed by staying in a resort, timeshare or vacation home community (20.7%), and staying with friends or family (19.1%). There were 41 respondents from within the state (Figure J1). There were 11 international tourists including three from Canada, two from the United Kingdom, and one each from Finland, Germany, Mexico, and Spain (one unknown international respondent). Out-of-state respondents represented 31 different states with North Carolina (28), New York (12), Georgia (10), and Pennsylvania (10) having the strongest representation (Table J3).

Tourist Motivations and NBT Typology
Central to this study was exploring how we demonstrate the value and importance of NBT as a niche market that is part of the larger tourism industry. In this regard, understanding primary motivation is important because it is what most assuredly drives consumer demand (Crompton, 2010). Consistent with SCPRT’s Omnitrack data, respondents were asked to identify their primary motivation for visiting (‘What is the primary purpose for this trip to the SC Coast?’); 19.9% of the tourist sample indicated that ‘Outdoor Recreation’ was their primary purpose. Further, asked if, ‘nature, a natural space, and/or a nature-based recreation activity a primary motivation for selecting the SC Coast for your trip?,’ 67.6% indicated that it was. When asked if they considered themselves a nature-based tourist on this trip, 67.0% also identified as such. Natural environments and natural resources play and important role in destination decision-
making, and thus, even if not a primary motivation, secondary and tertiary considerations are important to evaluate. Respondents were asked how important the opportunity to participate in nature-based activities were to deciding to visit to the SC Coast; 61.2% indicated that they were ‘Very Important.’ Similarly, they were also asked how important natural sites (e.g., parks, preserves, wildlife areas, public and private beaches) were to deciding to visit the SC Coast. Respondents indicated a similar 61.1% found them ‘Very Important.’ Finally, they were asked whether if the above activities and sites were not available, would they have still selected the SC Coast as their destination. Just under half the sample (45.7%) indicated they would have not selected the SC coast as their destination (and additional 5.3% were not sure if they would have or not). Taking these responses together suggests the importance of NBT activities and natural sites to the larger SC Coastal tourism destination.

Analyses of expenditures based on various groupings and categorization of the data that provide insight into the broader NBT market were also conducted. It was found that those whose primary motivation was outdoor recreation (19.9%) spent more in the categories of ‘Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but not airfare’ and ‘Retail Purchases (souvenirs, books, clothing, sporting goods, etc.)’ whereas they spent significantly less in the category of ‘Admission and/or entry fees for historical sites, zoos, museums, etc.’ (see ‘Primary Motivation – Outdoor Recreation’ in Appendix J). It was also found that those who would not choose the SC Coast as their destination if NBT activities were not available spent significantly more money in the following categories: ‘Overnight Camping, RV fees, and Related Charges,’ ‘Groceries and takeout food,’ ‘Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but not airfare’ and ‘Retail Purchases (souvenirs, books, clothing, sporting goods, etc.)’ (see Appendix J). Comparisons were also made between resident and tourist samples. Demographic profiles were not significantly different, however, it was found that residents were significantly more likely to label themselves as a nature based recreationist/tourist on their trip, and they were significantly more likely identify nature, natural space, and/or a nature-based recreation activity as a primary motivation. NBT activities were also compared between the samples finding that tourists were more likely to participate in Road biking/ cycling; Tennis; Golfing; Kayaking; Ocean wading/ swimming; Boating; Visiting historic sites/ plantations/ gardens; Visiting zoos/ aquariums; Birdwatching; and Wildlife viewing. Resident were more likely to be found ‘Walking dogs/pets’ (see ‘Comparison of Residents and Tourists’ – Appendix J).

Finally, an exploratory factor analysis (EFA) was conducted with NBT and other typical cultural touristic activities to consider activity subsegments of the tourists. Four profiles of NBT subsegments emerged: The Tourist Gazer who is defined by participation in rural and urban sightseeing, wildlife-viewing, birdwatching, and visiting historic sites, plantations and gardens; the Restorative Experiential Outsider who participates in visiting wineries/breweries, photography and art in the outdoors, kayaking, and picnicking; the Active Nature User who jogs, runs, or walks dogs/pets in the outdoors; and finally the Traditional Outdoor Coastal Visitor who participates in recreational fishing, golfing, and tennis (see Appendix J, Table J4). It should be noted that hiking/walking, and spending time on the beach/ beach combing were by far the two most popular NBT activities with over half the total sample indicating they participated in hiking/walking (51.06%) and 69.68% of the sample spent time on the beach. These two activities stood out as pervasive across the subsegment profiles. However, the profiles then provide more nuanced considerations of differences in NBT (differences in expenditures across categories is provided under ‘NBT Typology and Expenditure Categories’ in Appendix J).
References


https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf


University of South Carolina (USC). 2009. Underappreciated Assets: The Economic Impact of South Carolina’s Natural Resources, Division of Research, Moore School of Business, University of South Carolina, April, 2009.


Willis, D.B., & Straka, T J. (2016). The Economic Contribution of Natural Resources to South Carolina’s Economy (FW 13). Clemson University Experiment Station, Clemson, SC.

Appendices
Appendix A. Intercept Survey Instructions and Protocol
Appendix B. Intercept Survey – Tourist
Appendix C. Intercept Survey – Resident
Appendix D. Phone Survey Instrument for NBT Providers
Appendix E. Phone Survey Protocol and Summary of Responses from NBT Providers
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APPENDIX A: INTERCEPT SURVEY INSTRUCTIONS AND PROTOCOL

1. This is a researcher administered survey; meaning you will be helping each respondent complete the survey (not handing off the ipad until the demographics at the end).

2. Please wear a fashionable orange Clemson shirt (but also be prepared for hot weather). When going to the interview site, you will want to have your ipad(s), a copy of the control sheet, water, sunscreen/hat, small snack, etc.

3. Once you arrive at the site, get a sense of the movement and density of visitors. Find a place where people are traveling between two points. That is a good place to conduct interviews. You also need to find places where two surveyors can work without getting in each other’s way, and where you can hear the person speak easily.

4. Once you have observed the traffic patterns and density of the visitors, you will want to decide whether to intercept every travel party (low density of visitors), every other group (medium foot traffic), or every third group (high foot traffic). Regardless, only one intercept interview should be collected per travel party. That is, do not intercept multiple individuals from the same travel party.

5. If it is more than one individual within the party, also randomize your system for intercepting. The first person of a group (or an individual) that crosses an imaginary line at a distance appropriately far enough away from you so that you can make eye contact with them. Alternate between left and right if two people cross the imaginary line at the same time. This will allow for some randomization with who you ask.

6. Once you have selected a person to intercept, approach them with a smile, positive body language and good eye contact and introduce yourself: “…Hi, I am XXX, a PhD student at Clemson University, can I ask you some questions about your visit today?” If they hedge, indicate that the interview will take 10-15 minutes and it is for a research project that will benefit the natural resources along the coast. Be encouraging. If they complete the survey, they have the option to provide their email to enter into a drawing for a $100 Amazon Gift Card. If they want to know more, have them contact us at lduffy@clemson.edu and provide them with my business card.

7. You could also purchase suckers/ lollipops or granola bars to give as an extra incentive. We can reimburse for this.

8. You may also want to have your phone on you for a quick reference calculator.

9. Conduct the intercept interview. Be clear and consistent with how you ask questions. Thank them upon the completion of the study. Keep moving for the next person to intercept. Repeat.

10. If they insist on not being surveyed, thank them and indicate on the control sheet that they “refused” to be interviewed with a tick mark. If they give a reason for refusal, please note that in the comment section. Collect your thoughts (don’t get down on yourself), look up and select for the next person to intercept. Start the process over.

11. Make sure you complete the control sheet for the shift. In addition to refusals, you need to keep track of people who had already been interviewed before (“repeat respondent”) or were too young (under 18) to complete the interview. If they freely offer other reasons for not completing the survey, please note them in the comment section.

12. Be courteous, friendly and nice. Do not treat anyone inappropriately, even if they are rude to you. Intercepting is hard work. The goal is to have at least 200 completed surveys at the end of this two-day field trip.
Other notes on the instruments:

- Please be very familiar with the instruments prior to conducting your first live interview. Practice going through the instruments with each other and look for consistency with how you understand and interpret the questions.
- There are essentially two instruments – resident and tourist – that are defined by one of the first questions that is a skip logic for the rest of the survey.
- This is a researcher-administered survey with the exception of the demographics that you will let them enter into the iPad themselves at the end of the survey. However, you will also want to position yourself next to the participant so that they can see onto the iPad for the longer ‘check list’ questions.
- If a person decides to end the survey early, thank them for their time and close the survey out and look for another individual to intercept. Remember the question that they ended on, then you will click through the rest of the survey (if you have to force an answer for the skip logic, that is okay). Then at the ‘thank you’ prompt, where it states ‘research notes’ then you will put in a note of which question the respondent stopped answering questions.
- Please make sure you charge the iPads overnight before heading to the field and that there are no new software updates that will get in the way of intercepting.
- Make sure that the Qualtrics surveys are ready to be used offline as many locations may not have WIFI.
- Because it will be bright and sunny in the field, you may need to adjust screen settings to have a bright display. Be mindful that this will drain the battery quicker.
- Have a back-up iPad ready in case of disaster (dropped iPad, dead battery, and other technical failure).

Other notes to specific questions:

- The first three questions are for you to fill out right before intercepting a potential participant (date, location, researcher ID).
- Q9/Q45 – How many times have you visited the coast/site; the 3 years should also include the number of visits in the 12-month response
- Q11/ Q47 - What best describes your travel group during this trip? (Select all that apply) – Only select ‘self’ if they are traveling alone. If tour company is selected then anticipate Q13 – transportation mode – to include charter bus.
- Q13/ Q49 – What is your main mode of transportation – if they flew to a SC coastal city, then used a tour charter bus as a main transportation mode – code an response ‘Other: Describe’.
- Q15/ Q51 - Do you typically consider yourself a nature-based tourist? Why or why not? – You will need to get an answer and probe for an explanation as to why they indicate as such. You can repeat the definition that was given in the purpose statement again if needed.
- Q17/ Q53 - Which of the following nature-based activities will/did you participate in while visiting this site – as a quick guide, Column 1) Exercise/ Active NBT activities; Column 2) Water-based NBT activities; Column 3) Passive NBT activities.
- Q20/ Q55 - During this trip, which natural sites will/did you visit on the SC coast? (Select all that apply) – You will have a list of sites provided to you so if they give you a proper name, you can code it into the correct type of site. Additionally, since you are intercepting at a natural site, you should expect that nobody will choose ‘did/will not visit’; if they do, then you need to probe more and clarify the question.
- Q26/ Q62 - If you are staying overnight on this trip, what type of accommodations is your personal travel group using &/or will be using? (Select all that apply) – You must make sure you ask explicitly if they are staying with Friends and Families (this response option has skip logic if selected).
- Q27/ Q63 - If your group will stay or has stayed with friends/family during the entire trip but at different locations, please list the # of nights for each different location – if they also indicated paid lodging in the previous question (Q24) then you will need to select the ‘also paid for lodging’ option in order to have the correct skip logic.
- Q29/ Q65 - For you and your personal travel group during this trip, please estimate expenditures for each of the following categories – Research team must enter 0 and not leave category blank. Also know
that you will need to encourage on this question to really think through the estimations. If you have anyone not willing to respond to this question, or certain categories, you can input an ‘R’ for refusal.

- Q34/ Q70 - How many children (under 25) presently live in your household? – If it arises, we would qualify this as living ‘full time’ if someone is thinking about part-time or half-children situations.
- Q40/ Q76 – There is space at the end of the survey with the ‘thank you note’ for you to fill in any additional notes about the survey that will be important for analysis.
APPENDIX B. INTERCEPT SURVEY - TOURIST

2019 SC Coastal Nature Based Tourism Survey (Tourist)

Start of Block: Default Question Block

Q4
The purpose of this survey is to learn more about the contribution of nature-based tourism on the South Carolina Coastal economy. NBT is a type of tourism where natural settings and/or natural resources that support a number of activities is an important motivator for visiting a destination. Would you be willing to answer a few questions? It will take approximately 12-15 minutes to complete. Your participation in this survey is voluntary and you may withdraw at any time. All responses are anonymous.

Q5 Do you live in one of the following counties: Beaufort, Berkley, Charleston, Colleton, Dorchester, Georgetown, Horry, or Jasper?

☐ Yes (1)

☐ No (2)

Skip To: Q41 If Do you live in one of the following counties: Beaufort, Berkley, Charleston, Colleton, Dorchester, Georgetown, Horry, or Jasper = Yes

Page Break

Q6 What is your zipcode?

Q7
Is the SC Coast your primary destination for this trip (as defined by the eight coastal counties highlighted below)?

☐ Yes (1)

☐ No (2)
Q8 Is this your first trip to SC Coast?

☐ Yes (1)

☐ No (2)

Skip To: Q10 If Is this your first trip to SC Coast? = Yes

Q9 How many times have you visited the SC coast in the last:

☐ 12 months: (1) ___________________________________________________________________

☐ 3 years (includes first 12 months): (2) ___________________________________________________________________

Q10 What is the primary purpose for this trip to the SC Coast?

☐ Business (5)

☐ Visit friends and family (6)

☐ Entertainment/ sightseeing (7)

☐ Outdoor recreation (8)

☐ Other pleasure/ personal (9)

☐ Other (describe): (10) ___________________________________________________________________
Q11
What best describes your travel group during this trip? (Select all that apply)

☐ Partner/ Significant Other (2)
☐ Immediate Family (3)
☐ Extended Family (4)
☐ Friends (5)
☐ Business Associates (6)
☐ Organized Group or Club (7)
☐ Tour Operator/Company (8)
☐ I am traveling by myself (only) (9)

*Skip To: Q13 If What best describes your travel group during this trip? (Select all that apply) != Tour Operator/Company*

Q12 Please provide information for the tour operator you are using today (name of company, approximate number of people you are traveling with, dates of travel)

________________________________________________________________________

________________________________________________________________________
Q13 What was your main mode of transportation to the SC coast?

- Own Vehicle (1)
- Airplane (2)
- Chartered Bus (3)
- Rental Vehicle (specify city/state rented) (4)
- Amtrak (5)
- Flew to a SC City, then Rented a vehicle (specify city): (6)
- Other: Describe (7)

Q14 How many people are you financially responsible for in your personal travel party (group) today, including yourself?

- Adults (including yourself): (1)
- Children (under 25): (2)

Q15 Do you consider yourself a nature-based tourist on this trip? Why or why not?

- I am not sure/undecided. (1)
- No (2)
- Yes (3)
- Explanation (4)
Q16 Is nature, a natural space, and/or a nature-based recreation activity a primary motivation for selecting the SC Coast for your trip?

- I am not sure/undecided. (1)
- No (2)
- Yes (3)
Q17 Which of the following nature-based activities will/did you participate in while visiting the SC Coast? (Select all that apply)

- Hiking/Walking (1)
- Walking dogs or pets (2)
- Jogging/ Running (3)
- Road Biking/ Cycling (4)
- Mountain Biking (5)
- Camping (6)
- Tennis (7)
- Golfing (8)
- Other nature-based activities (9) ________________________________
- I will not/ did not participate in any NB activities during this visit (10)
- Kayaking (11)
- Canoeing (12)
- Ocean-wading/ swimming (13)
- Spending time on the beach/ beachcombing (14)
- Jet/water skiing (15)
- Recreational fishing (16)
- Sailing/Wind surfing (17)
- Surfing (18)
Stand-up Paddle Boarding (19)
Boating (20)
Hunting (21)
ATVing/ Offroading (22)
Photography/Art (23)
Visiting historic sites/Plantations/ gardens (24)
Visiting zoos/ aquariums (25)
Birdwatching (26)
Picnicking (27)
Wildlife Viewing (28)

Q18 Of the nature-based activities presented above, how important is the opportunity to participate in these activities when making your decision to travel to the SC coast?

- Very unimportant (1)
- Somewhat unimportant (2)
- Neutral (3)
- Somewhat important (4)
- Very important (5)
Q19 During this trip, which natural sites will/did you visit on the SC coast? (Select all that apply)

☐ Local municipal parks (e.g. city parks, playgrounds) (1)

☐ County Parks (2)

☐ SC State Parks/Mgt. Areas (3)

☐ Other natural/cultural sites: (5) ________________________________

☐ I/We did not and/or do not plan to visit any of the areas listed above during this SC visit. (6)

☐ Heritage Preserves (7)

☐ Private preserves (8)

☐ Public Beaches/Ocean (9)

☐ Private Beach/Ocean (10)

☐ Historic Sites/Plantations (11)

☐ Federal Wildlife Management Refuges/ Areas (12)

☐ Wildlife/nature centers (13)

☐ Marshes, Creeks & Wetlands (14)

☐ National Forest (15)
Q20 How important were natural sites, such as those presented above, in choosing to visit the SC coast?

- Very unimportant (1)
- Somewhat unimportant (2)
- Neutral (3)
- Somewhat important (4)
- Very important (5)

Q21 Approximately how much time did you and your travel party spend participating in any of the activities and/or at the natural/cultural areas listed above, relative to your overall trip to the SC coast? (% of awake time over total trip, 0 - 100%)

________________________________________________________________

Q22 If the above activities and sites were not available, would you still have selected the SC Coast as your destination?

- I am not sure/undecided (1)
- No (2)
- Yes (3)
Q23 Outside of nature-based activities, which of the following activities will/did you participate in below during your visit to the SC Coast?

- Shopping (1)
- Fine dining (2)
- Visiting friends and family (3)
- Urban sightseeing (4)
- Rural sightseeing (5)
- Visiting museums (e.g., art, kids, heritage, history) (6)
- Visiting old homes/mansions/Churches (7)
- Amusement park/water park (8)
- Nightlife/Dancing/Bars (9)
- Art Galleries (10)
- Spa/Health club (11)
- Theater/drama performances (12)
- Festival/special community event (13)
- Concerts/Musical Performances (15)
- Sporting event (16)
- Visiting wineries/breweries (17)
- Visiting local farms/trying local foods (18)
- Birthday/Wedding-related celebrations (19)
☐ I will not/ did not participate in any of these activities during this trip (20)

☐ Other (describe)? (21) ____________________________________________________________

Q24 Are you staying overnight (with paid or unpaid accommodations) on this trip?

☐ Yes (1)

☐ No, I am a daytripper (2)

Skip To: Q29 If Are you staying overnight (with paid or unpaid accommodations) on this trip? = No, I am a daytripper

Q25 How many total nights will you be staying away from home during this trip?

☐ Number of nights away from home on the SC Coast (1) ___________________________________

☐ Number of nights away from home NOT on the SC Coast (2) ______________________________
Q26 If you are staying overnight on this trip, what type of accommodations is your personal travel group using &/or will be using? (Select all that apply)

- Rental Cabin (1)
- RV/ Campground (2)
- Short-term vacation rental (e.g., VRBO/ AirBnB, through property management company) (3)
- Staying with friends or family (no paid lodging) (4)
- Bed & Breakfast (5)
- Time Share (6)
- Resort/Vacation Home Community (7)
- Motel (8)
- Hotel (9)
- Other (10) ________________________________________________

**Skip To: Q28 If you are staying overnight on this trip, what type of accommodations is your personal travel group using &/or will be using? (Select all that apply) Staying with friends or family (no paid lodging) **
Q27
If your group will stay or has stayed with friends/family during the entire trip but at different locations, please list the # of nights for each different location:

- # of Nights staying at Location A  (1) ________________________________________________
- Name of town/state Location A  (2) ________________________________________________
- # of nights staying at Location B  (3) ________________________________________________
- Name of town/state Location B  (4) ________________________________________________
- Other (please explain)  (5) ________________________________________________
- Also paid for lodging  (6)

Skip To: Q29 If If your group will stay or has stayed with friends/family during the entire trip but at different... != Also paid for lodging

Q28
For your paid lodging, please list the # of nights and name of town/state for each location

- # of Nights staying at Location A  (4) ________________________________________________
- Name of town/state Location A  (5) ________________________________________________
- # of Nights staying at Location B  (6) ________________________________________________
- Name of town/state Location B  (7) ________________________________________________
- # of Nights staying at Location C  (8) ________________________________________________
- Name of town/state Location C  (9) ________________________________________________
- Other explanation if needed  (10) ________________________________________________
Q29 For you and your personal travel group during this trip, please estimate expenditures for each of the following categories: (Enter “0” if no money was spent in a particular category.)

Estimated spending on the South Carolina Coast by the end of your group's trip:

☐ Hotel, motel, cabins, B&B, VRBO, etc. (1)  (1) ________________________________________________

☐ Overnight camping, RV fees, and related charges (2)  (2)

☐ Groceries and takeout food (3)  (3) _______________________________________________________  

☐ Restaurants, bars, night clubs, etc. (4)  (4) _______________________________________________________ 

☐ Rental car and other vehicle charges (5)  (5) ________________________________________________

☐ Gas and oil (for vehicle, RV, boat, etc.) (6)  (6) ________________________________________________

☐ Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but NOT airfare) (7)  (7)

☐ Tour guide fees & charges (8)  (8) ________________________________________________________

☐ Admission and/or entry fees for outdoor parks and protected areas (9)  (9)

☐ Admission and/or entry fees for historical sites, zoos, museums, etc. (10)  (10)

☐ Admission and/or entry fees for sports, performing arts events (11)  (11)

☐ Retail purchases (souvenirs, books, clothing, sporting goods, etc.) (12)  (12)

☐ Airfare (13)  (13) ________________________________________________

☐ Other (please specify) (14)  (14) ________________________________________________
Q30 When planning your visit to the SC Coast, what was your primary source of information when organizing your NBT activities or visit to NBT sites?

________________________________________________________________

Q31 When did you begin planning your trip to the SC Coast?

- Within the last 2 weeks (1)
- Within the last month (2)
- Within the last 3 months (3)
- Within the last 6 months (4)
- More than 6 months out (5)

________________________________________________________________

Q32 What is your age?

________________________________________________________________

Q33 What is your marital status?

- Single (never married) (1)
- Married/ Common Law Union (2)
- Widowed/Divorced/Separated (3)
Q34 How many children (under 25) presently live in your household?

- No children/ No children living at home (4)
- 1 child (5)
- 2 children (6)
- 3 children (7)
- 4 children (8)
- 5 children or more (9)

Q35 What was your total household income before taxes during the past 12 months?

- Less than $25,000 (1)
- $25,000 - $49,999 (2)
- $50,000 - $74,999 (3)
- $75,000 - $99,999 (4)
- $100,000 - $149,999 (5)
- $150,000 - $199,999 (6)
- $200,000 and over (7)
Q36 What is your gender?

- Male (1)
- Female (2)
- Gender Variant/non-conforming (3)
- Prefer not to answer (4)
- Not Listed (5)

Q37 For you only, which of these categories best indicates your race?

- American Indian/Alaska Native (1)
- Asian/Asian American (2)
- Black/African American (3)
- Native Hawaiian/Pacific Islander (4)
- White (5)
- Other Write In (6) ____________________________________________
Q38 Which best describes your highest completed education level?

- Some high school (1)
- High school graduate (2)
- 2-year/ Associate's degree (3)
- Some college, no degree (4)
- 4-year/ Bachelor’s degree (5)
- Master’s degree (6)
- PhD or similar terminal, professional degree (7)

Q39 If you would like to enter a raffle for the chance to win a $100 Amazon Gift Card, please enter your email address.

________________________________________________________________

Q40 Thank you for completing this survey! Direct comments and questions regarding this survey or other aspect of this data collection to: Dr. Lauren Duffy, Associate Professor, lduffy@clemson.edu, Clemson University, Department of Parks, Recreation and Tourism Management, 280B Lehotsky Hall, Clemson, SC 29634-0735

Researcher notes:

________________________________________________________________
APPENDIX C. INTERCEPT SURVEY - RESIDENT

2019 SC Coastal Nature Based Tourism Survey (Resident)

Start of Block: Default Question Block

Q4
The purpose of this survey is to learn more about the contribution of nature-based tourism on the South Carolina Coastal economy. NBT is a type of tourism where natural settings and/or natural resources that support a number of activities is an important motivator for visiting a destination. Would you be willing to answer a few questions? It will take approximately 15 minutes to complete. Your participation in this survey is voluntary and you may withdraw at any time. All responses are anonymous.

Q5 Do you live in one of the following counties: Beaufort, Berkley, Charleston, Colleton, Dorchester, Georgetown, Horry, or Jasper?

- Yes (1)
- No (2)

Skip To: Q41 If Do you live in one of the following counties: Beaufort, Berkley, Charleston, Colleton, Dorchester, Georgetown, Horry, or Jasper... = Yes

Page Break

Q41
What is your zipcode?


Q42 How long have you been living in your coastal community? (round in years)


Q43
Is this site your primary destination for your trip from home?

- Yes (1)
- No (2)
Skip To: Q45 If Is this site your primary destination for your trip from home? = Yes

Q44 If no, what is your primary destination for your trip?

________________________________________________________________

Q45 How many times have you visited this site in the last:

☐ 12 months: (1) ________________________________________________

☐ 3 years (includes first 12 months): (2) ____________________________

Page Break

Q46 What is the primary purpose for this trip?

☐ Business (5)

☐ Visit friends and family (6)

☐ Entertainment/ sightseeing (7)

☐ Outdoor recreation (8)

☐ Other pleasure/ personal (9)

☐ Other (describe): (10) __________________________________________
Q47
What best describes your travel group during this visit? (Select all that apply)

☐ Partner/ Significant Other (2)

☐ Immediate Family (3)

☐ Extended Family (4)

☐ Friends (5)

☐ Business Associates (6)

☐ Organized Group or Club (7)

☐ Tour Operator/ Company (8)

☐ I am traveling by myself (only) (9)

Skip To: Q49 If What best describes your travel group during this visit? (Select all that apply) != Tour Operator/ Company

Q48 Please provide information for the tour operator you are using today (name of company, approximate number of people you are traveling with, dates of travel)

________________________________________________________________________________________________________________________________________
Q49 What was your main mode of transportation for your trip?

- Own Vehicle (1)
- Airplane (2)
- Chartered Bus (3)
- Rental Vehicle (specify city/state rented) (4)
- Amtrak (5)
- Flew to a SC City, then Rented a vehicle (specify city): (6)
- Other: Describe (7)

Q50 How many people are you financially responsible for in your personal travel party (group) today, including yourself?

- Adults (including yourself): (1)
- Children (under 25): (2)

Q51 Do you consider yourself a nature-based recreationalist on this trip from home? Why or why not?

- I am not sure/undecided. (1)
- No (2)
- Yes (3)
- Explanation (4)
Q52 Is nature, a natural space, and/or a nature-based recreation activity a primary motivation for selecting this site for your trip?

- I am not sure/undecided. (1)
- No (2)
- Yes (3)
Q53 Which of the following nature-based activities will/did you participate in while visiting this site? (Select all that apply)

- ☐ Hiking/Walking (1)
- ☐ Walking dogs or pets (2)
- ☐ Jogging/Running (3)
- ☐ Road Biking/Cycling (4)
- ☐ Mountain Biking (5)
- ☐ Camping (6)
- ☐ Tennis (7)
- ☐ Golfing (8)
- ☐ Other nature-based activities (9) ________________________________________________
- ☐ I will not/did not participate in any NB activities during this trip (10)
- ☐ Kayaking (11)
- ☐ Canoeing (12)
- ☐ Ocean-wading/swimming (13)
- ☐ Spending time on the beach/beachcombing (14)
- ☐ Jet/water skiing (15)
- ☐ Recreational fishing (16)
- ☐ Sailing/Wind surfing (17)
- ☐ Surfing (18)
Q54 Of the nature-based activities presented above, how important is the opportunity to participate in these activities when making your decision to travel to this site?

- Very unimportant (1)
- Somewhat unimportant (2)
- Neutral (3)
- Somewhat important (4)
- Very important (5)
Q55 During this trip, which natural sites will/did you visit? (Select all that apply)

☐ Local municipal parks (e.g. city parks, playgrounds) (1)

☐ County Parks (2)

☐ SC State Parks/Mgt. Areas (3)

☐ Other natural/cultural sites: (5) ________________________________________________

☐ I/We did not and/or do not plan to visit any of the areas listed above during this SC visit. (6)

☐ Heritage Preserves (7)

☐ Private preserves (8)

☐ Public Beach/Ocean (9)

☐ Private Beach/Ocean (10)

☐ Historic Sites/Plantations (11)

☐ Federal Wildlife Management Refuges/ Areas (12)

☐ Wildlife/nature centers (13)

☐ Marshes, Creeks & Wetlands (14)

☐ National Forest (15)
Q56 How important were natural sites, such as those presented above, in planning your trip?

- Very unimportant (1)
- Somewhat unimportant (2)
- Neutral (3)
- Somewhat important (4)
- Very important (5)

Q57 Approximately how much time did you and your travel party spend participating in any of the activities and/or at the natural/cultural areas listed above, relative to your overall trip? (% of awake time over total trip, 0 - 100%)

________________________________________________________________

Q58 If the above activities were not available, would you still have selected this site for your trip?

- I am not sure/undecided (1)
- No (2)
- Yes (3)

Page Break
Q59 Outside of nature-based activities, which of the following activities will/did you participate in below during your trip?

☐ Shopping (1)

☐ Fine dining (2)

☐ Visiting friends and family (3)

☐ Urban sightseeing (4)

☐ Rural sightseeing (5)

☐ Visiting museums (e.g., art, kids, heritage, history) (6)

☐ Visiting old homes/ mansions/ Churches (7)

☐ Amusement park/ water park (8)

☐ Nightlife/ Dancing/ Bars (9)

☐ Art Galleries (10)

☐ Spa/ Health club (11)

☐ Theater/ drama performances (12)

☐ Festival/ special community event (13)

☐ Concerts/ Musical Performances (15)

☐ Sporting event (16)

☐ Visiting wineries/ breweries (17)

☐ Visiting local farms/ trying local foods (18)

☐ Birthday/ Wedding-related celebrations (19)
☐ I will not/ did not participate in any of these activities during this trip (20)

☐ Other (describe)? (21) ________________________________________________

---

Q60 Are you staying overnight (with paid or unpaid accommodations) on this trip?

☐ Yes (1)

☐ No, I am a daytripper (2)

Skip To: Q65 If Are you staying overnight (with paid or unpaid accommodations) on this trip? = No, I am a daytripper

---

Q61 How many total nights will you be staying away from home during this trip?

☐ Number of nights away from home on the SC Coast (1)

☐ Number of nights away from home NOT on the SC Coast (2)
Q62 If you are staying overnight on this trip, what type of accommodations is your personal travel group using &/or will be using? (Select all that apply)

- Rental Cabin (1)
- RV/ Campground (2)
- Short-term vacation rental (e.g., VRBO/AirBnB, through property management company) (3)
- Staying with friends or family (no paid lodging) (4)
- Bed & Breakfast (5)
- Time Share (6)
- Resort/Vacation Home Community (7)
- Motel (8)
- Hotel (9)
- Other (10) ________________________________________________

Skip To: Q64 If you are staying overnight on this trip, what type of accommodations is your personal travel group using &/or will be using? (Select all that apply)
Q63
If your group will stay or has stayed with friends/family during the entire trip but at different locations, please list the # of nights for each different location:

- # of Nights staying at Location A (1)
- Name of town/state Location A (2)
- # of nights staying at Location B (3)
- Name of town/state Location B (4)
- Other (please explain) (5)
- Also paid for lodging (6)

Skip To: Q65 If If your group will stay or has stayed with friends/family during the entire trip but at different... != Also paid for lodging

Q64
For your paid lodging, please list the # of nights and name of town/state for each location

- # of Nights staying at Location A (4)
- Name of town/state Location A (5)
- # of Nights staying at Location B (6)
- Name of town/state Location B (7)
- # of Nights staying at Location C (8)
- Name of town/state Location C (9)
- Other explanation if needed (10)
Q65 For you and your personal travel group during this trip, please estimate expenditures for each of the following categories:
(Enter “0” if no money was spent in a particular category.)
Estimated spending on the South Carolina Coast by the end of your group's trip:

- Hotel, motel, cabins, B&B, VRBO, etc. (1)
- Overnight camping, RV fees, and related charges (2)
- Groceries and takeout food (3)
- Restaurants, bars, night clubs, etc. (4)
- Rental car and other vehicle charges (5)
- Gas and oil (for vehicle, RV, boat, etc.) (6)
- Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but NOT airfare (7)
- Tour guide fees & charges (8)
- Admission and/or entry fees for outdoor parks and protected areas (9)
- Admission and/or entry fees for historical sites, zoos, museums, etc. (10)
- Admission and/or entry fees for sports, performing arts events (11)
- Retail purchases (souvenirs, books, clothing, sporting goods, etc.) (12)
- Airfare (13)
- Other (please specify) (14)
Q66 When planning your visit, what was your primary source of information when organizing your NBT activities or visit to NBT sites?

________________________________________________________________

Q67 When did you begin planning your trip?

- Within the last 2 weeks (1)
- Within the last month (2)
- Within the last 3 months (3)
- Within the last 6 months (4)
- More than 6 months out (5)

Q68 What is your age?

________________________________________________________________

Q69 What is your marital status?

- Single (never married) (1)
- Married/ Common Law Union (2)
- Widowed/Divorced/Separated (3)
Q70 How many children (under 25) presently live in your household?

- No children/ No children living at home (4)
- 1 child (5)
- 2 children (6)
- 3 children (7)
- 4 children (8)
- 5 children or more (9)

Q71 What was your total household income before taxes during the past 12 months?

- Less than $25,000 (1)
- $25,000 - $49,999 (2)
- $50,000 - $74,999 (3)
- $75,000 - $99,999 (4)
- $100,000 - $149,999 (5)
- $150,000 - $199,999 (6)
- $200,000 and over (7)
Q72 What is your gender?

- Male (1)
- Female (2)
- Gender Variant/non-conforming (3)
- Prefer not to answer (4)
- Not Listed (5)

Q73 For you only, which of these categories best indicates your race?

- American Indian/Alaska Native (1)
- Asian/Asian American (2)
- Black/African American (3)
- Native Hawaiian/Pacific Islander (4)
- White (5)
- Other Write In (6) ________________________________
Q74 Which best describes your highest completed education level?

- Some high school (1)
- High school graduate (2)
- 2-year/Associate's degree (3)
- Some college, no degree (4)
- 4-year/Bachelor’s degree (5)
- Master’s degree (6)
- PhD or similar terminal, professional degree (7)

Q75 If you would like to enter a raffle for the chance to win a $100 Amazon Gift Card, please enter your email address.

____________________________________________________________________

Q76 Thank you for completing this survey! Direct comments and questions regarding this survey or other aspect of this data collection to: Dr. Lauren Duffy, Associate Professor, lduffy@clemson.edu, Clemson University, Department of Parks, Recreation and Tourism Management, 280B Lehotsky Hall, Clemson, SC 29634-0735

Research notes:

____________________________________________________________________

End of Block: Default Question Block
APPENDIX D. PHONE SURVEY INSTRUMENT FOR NBT PROVIDERS

2019 Clemson University South Carolina Coastal Nature-Based Tourism Provider Pilot Phone Survey
Phone Screening Sheet for Inviting Selected Nature-Based Tourism Providers to Participate in a 2019 Pilot Phone Survey Interview

<table>
<thead>
<tr>
<th>Resp. ID: __________________</th>
<th>Interviewer ID: ______________</th>
<th>NOTES: ______________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus./Organ.</td>
<td></td>
<td>Phone Screening Sheet:</td>
</tr>
<tr>
<td>Name/Address/Email:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ATTEMPTED CALLS: Indicated person(s) called, call date/time & status, e.g. no answer, phone recording, etc.

<table>
<thead>
<tr>
<th>Pers.: __________________________</th>
<th>Phone #: __________________________</th>
<th>Date/Time: ____________</th>
<th>Status:__________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pers.: __________________________</td>
<td>Phone #: __________________________</td>
<td>Date/Time: ____________</td>
<td>Status:__________</td>
</tr>
<tr>
<td>Pers.: __________________________</td>
<td>Phone #: __________________________</td>
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<tr>
<td>Pers.: __________________________</td>
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<td>Date/Time: ____________</td>
<td>Status:__________</td>
</tr>
<tr>
<td>Pers.: __________________________</td>
<td>Phone #: __________________________</td>
<td>Date/Time: ____________</td>
<td>Status:__________</td>
</tr>
</tbody>
</table>

[For invitees not responding within 24 hours to an initial phone invitation, send a follow up email invitation if an invitee has a business/organization email address. For those not responding to an initial phone invitation, three additional phone call interview invitation attempts should be made over a seven work day period after the initial phone interview invitation with only one attempt every other work day between 9 AM and 3 PM over this seven work day period. These invitee call attempt guidelines can be modified based on recorded phone messages, returned calls &/or messages by others following up on the invitee’s phone messages, etc.]

Recommended phone interview screener script (e.g. interviewer questions, responses, etc.) are in italics below & can be modified as needed based on specific interview situations.

Good morning/afternoon, my name is ___________________. I’m from Clemson University. (IF already contacted by others about the survey then: I believe: __________________________ may have contacted you about this study we are conducting in partnership with the South Carolina Sea Grant Consortium...). We are conducting a study in partnership with the South Carolina Sea Grant Consortium that includes collecting information to estimate the economic contribution or impact of nature-based tourism such as outdoor outfitting, nature tours and other activities & sites on South Carolina’s economy. Participation is voluntary and your responses will be confidential. It should take less than about 25 minutes to complete. Could I ask you some questions about your nature based or outdoor recreation services and products? (IF it is obvious that the person answering is not the suggested invitee, e.g. just covering phone calls or an answering service, etc., then only ask for the suggested invitee & if pressed for details, just briefly mention that the call is about a Clemson University tourism study.)

Possible “first call” response scenarios when targeting the selected interview invitee & recommended follow-up procedure for starting the phone interview include:

NOTES: (Use these “NOTES” space/lines as needed for summarizing reasons for possible significant variances in the initial interview invitee screener script.)

Response A: “Total” Refusal to participate in the survey.
Selected interview invitee answers the call, declines being interviewed & indicates that no one in the organization should be invited to be interviewed.
(Optional Question: Could you please indicate why your organization prefers not participating in this industry survey? (Asking this question assumes the refusal reason it is not already apparent.) Note refusal reason(s):

Thank you for your time & have a good day.

Phone Screening Sheet (Continued)
Response B: Initially contacted invitee is willing to participate in the survey and:
B.1. IF Available to begin the interview immediately: Use the provider phone interview script.
B.2. IF willing to participate but indicates it is not a good time for an interview:
I understand. However, could I possibly ask just one question?
   a. IF YES, use the interview script and ask Q1.
   b. IF NO (Prefers not even answering Q1): Can I schedule time and day to call you back...etc.?
Thank you & I am confirming I plan to call you back on: ___________________________ at ____________ AM/PM.

Thank you & I’m looking forward to interviewing you.

Response C: Suggested initial invitee answers but indicates someone else should be interviewed. First verify other suggested (new) invitee’s name, phone # & extension:_________________________________________________
______________________________________________________________________________________________
Thank you. Could you please forward this call to...?
C.1. IF suggested new invitee answers the phone, then use appropriate Response A, B, C or D.
C.2. IF no answer but you are able to leave a recorded message, then leave a brief message that includes indicating that the survey is part of a Clemson U. tourism research project, your name, your project phone # and asking the person to call you back. Enter the date & times the message was left & try contacting again after 2 business days:
______________________________________________________________________________________________
C.3. IF no answer & unable to leave a recorded message, then immediately call back the initially suggested invitee & see if that person could leave a message (e.g. in-person) asking this new suggested invitee to contact you. (See Response C.2. guidance about the recorded message to leave).
NOTES: ______________________________________________________________________________________

Response D: Suggested invitee answers the phone and is interested in being interviewed, but would like additional information. Verify the person’s name and determine what additional info is being requested & how she/he would like to receive more info (e.g. via email &/or snail mail, etc.).
Follow-up details: Indicate “who, when, how (e.g. email) & what” per sending additional information:
______________________________________________________________________________________________
______________________________________________________________________________________________
After sending the info, make a follow-up phone call after no more than 2 business days, if sent via email, or after 4 business days, if was sent by “snail mail,” to verify that the info was received, answer questions, to try conducting an interview or to schedule a future phone interview. (For this situation & if after three follow-up phone attempts, the person still will not commit to being interviewed, briefly describe below why, if apparent, and stop attempting to contact the phone interview invitee, etc.):
A Semi-structured Phone Interview Instrument to Collect Selected Data and Information from SC Coastal NBT Providers

This instrument assumes that the interview invitee had agreed to be interview during the preceding phone screening process. (See Appendix A for questions that were not asked and other interview details.)

Again, participation in this Clemson University phone interview is voluntary and your responses will be confidential. It should take less than about 25 minutes to complete. Could I ask you some questions about your nature based or outdoor recreation services and products? [If NO, ask why the invitee decided not to participate & end the interview.] I will be asking you questions regarding your business’s services, products &/or other activities related to NBT such as for-profit outdoor outfitting, nature tours/education programs, kayak rentals, nature centers & guided fishing trips in South Carolina during 2019. Can I first verify to whom I am speaking to & the best phone # for contacting you if needed at a later time?:___________________________________ [Go to Question 1.]

1. During the current year, 2019, did your business/organization provide ANY nature-based tourism services&/or related products in South Carolina such as outdoor outfitting, nature tours/education programs, kayak rentals & guided fishing trips, etc.?
   _YES_ _NO_ NOTES: (“NOTES” were used for entering important response details for given question.)
   a. IF YES, but initially indicated only wanting to be asked one question, GO to Q2.
   b. IF YES & respondent indicates being available to complete entire interview, SKIP to Q3.
   c. If NO (Probe why no NBT services/products/activities were provided during 2019 & then decide if the interview should be ended: IF ended, briefly explain why:
________________________________________________________________________________________

Thank you for your time & have a good day.

2. Would it be OK to ask you a few more questions?
   a. IF YES (Go to Question 3 to continue the interview.)
   b. IF NO: Can I schedule a date & time to call you back & to finish this interview?
   Scheduled Days/Times:
   (IF the respondent wants to end the interview after a few more questions [e.g. after Q4 or Q5, etc.], also use the above Q.2.b. to try scheduling a continuation of this interview.)

3. Are you the principal operator (manager) or an owner (manger) of this business (organization)?
   a. IF YES (Go to Question 5).
   b. IF NO, ask respondent to briefly describe role: __________________________________________________

4. If you are not the principal operator (manager) or owner, can you still provide information regarding your operation such as the estimated number of people employed and the services, products &/or other activities related to NBT that you provided last year (2018) & during the current year?
   a. IF YES (Go to Question 5) NOTES:
   b. IF YES but indicates it is not a good time for an interview: Can I schedule a date & time to call you back?
________________________________________________________________________
   c. If NO, but indicates managers/owners to contact, obtain their names, phone #’s & suggested times/days to contact them. NOTES:
   d. If NO & no contacts suggested, end interview. NOTES:
________________________________________________________________________

5. What best describe your organization?  ___For Profit Org.   ___Gov. Org.   ___Non-Gov. Org. (NGO)  ___Non-Profit Org. (NPO)   ___Other - Describe:

5.a. What year did this business/organization begin operating?

6. Is your business part of a larger corporation or organization?
   a. IF NO (Go to Question 7)
   b. IF YES – Describe:* ____________________________________________
*IF the above description, 6.b., indicates that they are a small branch office with only one SC employee, most of their non-employee operating expenditures are direct purchases from out of state businesses and their sale revenues flow directly to a non-coastal business or organization, then try to suspend the interview (e.g. Could I call you back later this week?...) and contact the survey monitor to determine if the interview should be continued or terminated.

7. Could you please provide an overview of the products, services & other activities that your business/organization currently offers:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

8. What services, products and other activities is your business (organization) currently (2019) providing that you consider to mainly be nature-based tourism related? Describe:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

9. Based on your previous answer to Question 8, what percent of your annual gross sales/revenues would you estimate to be attributable to these NBT related products, services & other activities in? a. 2018: _____% b. 2019 is expected to be: _____% In other words, approximate what percent of your total annual product and service gross sales, not adjusted for returns, rebates, etc., do you believe were NBT related in 2018 & in 2019 (expected %)? NOTES:

10. Is your nature-based tourism business (organization) operated on year-round or on a seasonal basis?
    a. IF YES (Year-round – 12 months), SKIP TO Question 12.
    b. IF NO, Go to Questions 11.

11. IF Seasonal: (Only check/indicate non-operating months.)
    a. What months during 2018 did you NOT operate? Jan Feb March April May June July Aug Sept Oct Nov Dec. NOTES:
    b. During 2019, the current year, what months did you NOT operate & currently PLAN NOT to operate? Jan Feb March April May June July Aug Sept Oct Nov Dec. NOTES:

Before I ask you some questions about the annual number of workers you employ, I would like to make sure I understand the annual baseline or time period for your annual employment estimates.

12. Will your estimates be based on a calendar year or the SC state fiscal year FY 2018-19 (i.e. July, 2018 – June 2019) or perhaps the federal FY (i.e. Oct., 2018 – Sept. 2019)?

13. About how many full time, part time and contract workers in 2018 including paid family members and office workers were employed and will have been employed in 2019 by your SC NBT related business (organization):
    # Employed full time, working 35 or more hrs./wk., in 2018: ____________ in 2019: ____________.
    # Employed part time, working less than 35 hrs./wk. in 2018: ____________ in 2019: ____________.
    # Hired as contract workers in 2018 ______ in 2019__________. (i.e. temp service employees).

NOTES: (Probe to determine if contract workers are directly paid by the provider & for possible non-NBT related employment):
14. Now, I am going to read a list of possible NBT related services/products/activities (see NBT activity addendum list) that your business/organization may have provided during 2018 and the current year. This information is critical to determining the economic contribution of the SC NBT industry. Based on this list, I will then ask you for each listed services &/or products to approximate annual NBT related metric such as the total # of tours, group size (e.g. average # of people per tour or total rentals), the average service &/or rental fee per person(unit) and the estimated annual percent of SC nonresidents and SC non-coastal county residents participating for each type*. [IF respondent prefers being sent an Excel or Word doc to use for providing requested data, ask for an email address for sending instructions and the data entry doc as well as assigning an interview ID # to the doc.] [Use Q18 if respondent only wants to provide an overall estimate of NBT gross revenues in 2018 & 2019.]

a. Agreed to provide data - Enter details in following list even if responses are incomplete for some types.

b. IF respondent unable or refuses to provide any Q14 requested info, note the reason(s) & Skip to Q16.

**INTERVIEWER INFO.: For each type during 2018, ask the provider to include an estimated percentage of participants (customers) that do not reside in SC, i.e. “~SC SC %” (SC non-resident %). Also, time permitting, use the “NOTES” column to enter a percentage estimate of their SC resident customers that reside in the SC coastal region, “locals.” An example: The provider conducts paddle tours and estimates that overall about 55% of their total annual tours are comprised of out of state customers & approximately 10% of the total annual tour participants are comprised of SC residents residing in a SC coastal county (“locals”) and; therefore: 55%+35% (SC non-coastal residents) +10% (SC coastal resident) = 100%.

### Types of Activities/Services including Rentals During 2018 & Estimated 2019 % Change

(If needed, read this hypothetical example.)

<table>
<thead>
<tr>
<th>Hypothetical Example: “Widget” Tours</th>
<th>2018 Total # of Tours</th>
<th>2019 % of 2018 Total Tours</th>
<th>Avg. Group Size: Adults/ (Child)</th>
<th>2018 Avg. Fee/ Pers.: Adult/ (Child)</th>
<th>2019 Avg. Fee/ Pers.: Adult/ (Child)</th>
<th>*SC NR%</th>
<th>NOTES: Usual locations, local customers, etc.?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>~+3%</td>
<td>8 (3)</td>
<td>$54/37</td>
<td>Same</td>
<td>55%</td>
<td>10%; Bulls Bay</td>
</tr>
</tbody>
</table>

Equipment Renting & Other Services:

<table>
<thead>
<tr>
<th>Rental &amp; Other Services/Products</th>
<th>2018 Total # of Rented Units or Other Services</th>
<th>2019 % vs. 2018</th>
<th>2018 Avg. Fee/ Unit</th>
<th>2019 Avg. Fee/ Unit</th>
<th>*NR SC%</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Equip./Serv.:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Equip./Serv.:</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

15. If your NBT business/organization received gross sales/revenues from other sources not listed above (e.g. kayak maint. contracts, retail sales, etc.) in 2018, please describe the additional sources & related estimated gross sales received:

#“Expected 2019 % Change: _____” – For example on Q15, how much does the respondent expect 2019 total gross sales received from other sources to decrease, -X%; increase, +X%; or generally change 0% compared to 2018?
16. To determine the economic contribution of the industry, we also need to know how much you spent in SC to operate your business (organization). What were your total estimated operating expenses in CY2018 (FY2017-18) including wages & salaries only for NBT related services, products & activities in South Carolina?
$________________ Expected 2019 % change: _______ (i.e. expected 2019 % change” in total NBT operating expenses compared to 2018 operating expenses.) NOTES: __________________________________________

17. (IF NO contract workers were used in 2018 or 2019 [See Q13.], skip to Q18.)
If your operation used contract workers related to your NBT related activities in South Carolina, approximately what percent did these contractual workers comprise of your total operating expenses in 2018? ___________%
NOTES: ___________________________________________________________ Expected 2019 % change: _______

18. Approximately what was your total 2018 annual (FY 2017-18) gross sales/revenues generated through the nature-based related tourism services, products &/or activities in South Carolina: $
NOTES: ___________________________________________________________ Expected 2019 % change: _______

19. Do you think Hurricane Matthew (Oct., 2016) may have affected the profitability of your services and/or products in 2016 and/or in 2017? Explain why or why not:
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________

20. Do you think Hurricane Florence (Sept., 2018) may have affected the profitability of your services and/or products in 2018 and/or this year (2019)? Explain why or why not:
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________

20. Do you think Hurricane Dorian (Sept., 2019) may affect the profitability of your services and/or products in 2019 and/or next year (2020)? Explain why or why not:
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________

21. Do you have any comments regarding the economic contribution of the SC NBT industry and/or perhaps possible challenges facing the SC NBT industry (e.g. availability of employees, insurance costs, regulations, etc.) that you would like to mention?
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________
___________________________________________________________________________________________

If we need clarity on anything, would it be okay to get back in touch with you?
Yes ___ No ___

Thank you for your time spent in this interview.

MISC. INTERVIEW NOTES (Indicate question number if related to a specific question, etc.)
APPENDIX E – PHONE SURVEY PROTOCOL AND SUMMARY OF RESPONSES FROM NBT PROVIDERS

Introduction and Phone Survey Objectives

The 2019-20 coastal intercept survey provided critical nature-based tourism (NBT) related primary data. However, it was also recognized that there could be a need for selected primary data and other information that could be obtained from SC coastal providers¹ that could be used to evaluate and/or augment the analysis of collected coastal intercept primary data as well as selected IMPLAN economic information might be used for the project’s economic contribution analysis (ECA) tasks. For example, business employment data collected during a mail survey of outdoor recreation related enterprises in Sonoma County, California, was used with the I-O model IMPLAN to estimate the direct, indirect and induced 2017 economic effects contributions of these businesses to the county’s economy (SCEDB, 2018).

Therefore, a 2019 pilot phone survey of selected SC coastal NBT service providers (e.g. nature tours, outfitters, etc.) and sites such as nature centers was conducted during the fall of 2019 with the following information collection objectives:

1. Selected user data that might assist in validating estimates of 2018 and/or 2019 coastal NBT related participant metrics (e.g. typical number of participants per kayak nature tour, etc.) and other selected activity variables related to major SC coastal NBT services and sites along with selected economic data that might be needed to extrapolate incomplete 2019 provider survey data relative to ECA tasks.

2. Selected provider economic data (e.g. estimated average number of employees, annual gross sales revenue, etc.) that would be available for evaluating, updating and/or augmenting IMPLAN economic data for the 2019 ECA of the SC coastal NBT industry (Phase 2 research Objective 1) as well as related possible evaluation and if needed modification of intercept statistics such as estimated total NBT expenditure aggregates delineated across user sub-segments (Phase 2 research Objective 2).

3. Respondent observations and opinions regarding the possible effects of Hurricane Dorian (2019), Hurricane Florence (2018) and Hurricane Matthew (2016) on their organization and/or overall SC coastal NBT industry and the economic contribution of the industry.

Methods:

Due to limited time and other project resources, a simple purposive or judgement-oriented pilot survey method was chosen (e.g., Etikan et al., 2016) for selecting SC coastal NBT providers to be invited to participate in a scheduled phone interview during the fall of 2019. This survey approach was intended to generally facilitate a diverse participation range of nature-based tourism (NBT) providers in the entire SC coastal region. Consequently, responses by interview invitees may not be representative of the SC coastal population of coastal NBT providers and sites.

The instrument’s structured questions were mostly used to collect quantitative data related to their NBT services and/or products such as the 2019 estimated total number and types of coastal paddle tours sold during 2019, the annual number of individuals employed and

¹Unless otherwise indicated, the term “provider” includes NBT related SC coastal sites or locations such as county parks, various types of specialized facilities designed for viewing living organisms (e.g. zoos) and multi-purpose nature-oriented facilities offering a variety of viewing opportunities and related education (classroom workshops, etc.) and/or interpretation opportunities.
contracted, if any, due to these services and the approximate 2019 annual NBT related gross sales for their operation. The use of semi-structured questions included collecting respondent descriptions of their NBT services and products as well as estimated damages (e.g. lost sales) due to Hurricanes Dorian (September, 2019), Florence (September, 2018) and Matthew (October, 2016) on their organization.

Semi-structured questions similar to those used in a Phase I were avoided as much as possible. This included avoiding interview questions that overlapped with Phase I interview topics such as the marketing and promotion of their enterprise, perceived value and willingness-to-pay for NBT and changes in demand for and provisioning of NBT related services and/or products. An exception to this included a sub-category of the provider phone survey Question 14 that included asking respondents to estimate the percent of their typical customers that were not SC residents, a topic area that was also explored in Phase I (see Duffy et al., 2019, page 26) of this project.

Those providers that were invited to participate in phone interview were selected from a list comprised of for-profit and other SC coastal organizations providing NBT related services and sites that was initially developed by using internet search terms such as “South Carolina and guided kayak tours in [coastal city or town].” In addition to NBT service-oriented providers, search terms were used to initially identify private for-profit and non-government NBT coastal site-oriented providers such as coastal “zoos” and “nature centers.” These search terms, however, did not include amenity related terms such as “lifejackets provided” or “free drinking water provided.” Also, providers that apparently only specialized in the renting of motorized and/or non-motorized watercraft (e.g. SUP paddle boards) were not included in the list for selecting providers to be invited to participate in a phone interview. Using this internet search protocol apparent SC coastal nature-based tourism (NBT) businesses and other organizations were initially identified by their internet promotion of their business services as such as coastal kayak and stand up paddle board “nature” tours. In addition to using internet search results, the identification of coastal NBT providers and sites was augmented by input from SC NBT industry stakeholders and other sources (e.g. the SC Sea Grant Consortium staff).

More than 25 coastal providers only apparently specializing in SC coastal recreational fishing guide services were identified and six SC providers based in the coastal region who apparently only specialized in guided hunting services and related products that included the SC coastal region were identified. It was decided not to invite these identified hunting and fishing providers generally because of the project’s limited interviewing resources. In addition, recent available (i.e. SC marine recreational data collected in 2012 or later) secondary data and related analysis (Lovell et al., 2016, Bachman et. al., 2017 and NMFS, 2019), if needed, were judged to be adequate for approximating or augmenting the 2019 economic contribution of SC coastal marine recreational fishing.

Only NBT providers and sites identified between August 21, 2019, and October 15, 2019, were included in the list to be used in initially selecting and inviting phone interview participants. Based on professional judgement and starting on October 17, 2019, for-profit provider services and sites were selected from the list and started to receive an initial phone invitation to participate in a voluntary phone interview. For invitees not responding within 24 hours to the initial phone invitation, follow up email invitations were also sent to these interview invitees. In addition, for those not responding to an initial phone invitation, three additional phone call interview invitation attempts were made over a seven work day period after the initial phone interview invitation with a limit of only an attempt every other work day between 9 AM
and 3 PM over this seven work day period. If an interview invitation was accepted, a date and time was agreed upon for a phone interview. These scheduled phone interviews occurred between October 18 and November 30, 2019\(^2\). Those not accepting an invitation or not responding to an invitation within the seven-day workday period were not contacted again to participate in this phone survey.

Phone interviews of selected government or NGO provider sites (e.g., parks, nature centers) started on November 8 and ended on November 13. However, it was only possible to make 1 or 2 phone call attempts per selected government or NGO NBT provider site during this six-day November period. IRB approved protocols were used to maintain confidentiality of all information collected, analyzed and electronically stored.

**Response Rates by Provider Types and Coastal County Regions:**

As described in the above “Methods” section, a simple purposive or judgement-oriented pilot survey method was used for identifying and selecting SC coastal NBT providers including NBT related sites to be invited to participate in a scheduled phone interview. Consequently, responses by interview invitees may not be representative of the SC coastal population of coastal providers and sites.

For the 35 businesses and other organizations selected and invited to participate in a phone interview, a total of 20 participated in an interview and the overall response rate was 57% (Table E1) that included interviews that were judged to be “partial” interviews (see Table E1 interview disposition definitions). When partial phone interviews are excluded, a total of 13 “complete” interviews were conducted overall, a response rate of 37%. The coastal percent of “Refusal” (11.4%, n=4) and “No Response” (31.4%, n=11), was 43%. Based on provider types, for-profit NBT service providers had the highest complete interview response rate, 40% (n=8) and the second highest “No Response” rate, 35% (n=7) (Table E1). The for-profit sites, 33% (n=2) and other sites, 33% (n=3), tied for having the lowest complete interview rate. For “Other sites” providers, the overall combined percent of “Refusal” (22.2%, n=2) and “No Response” (33.3%, n=3), was about 56%. Since the “Other sites” provider type was a combination of government and NGO sites, this relatively high “Refusal”- “No Response” percent among other considerations was probably due to limitations on attempted calls for these sites as previously noted in the above “Methods” section.

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\(^2\)An exception to this was a for-profit provider invited during November, 2019 that was not interviewed until December, 2019, due to delays in accepting an interview invitation.
Table E1. Final response disposition* of the 2019 pilot phone survey of selected coastal South Carolina nature-based tourism organizations interview invitees by provider types**.

<table>
<thead>
<tr>
<th>Counts by Provider Types:</th>
<th>For-profit services</th>
<th>For-profit sites</th>
<th>Other site</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Partial</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Subtotals:</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Refusal</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>No Response</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Totals:</td>
<td>20</td>
<td>6</td>
<td>9</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response Percentages by Provider Types:</th>
<th>For-profit service</th>
<th>For-profit site</th>
<th>Other site</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>40.0%</td>
<td>33.3%</td>
<td>33.3%</td>
<td>37.1%</td>
</tr>
<tr>
<td>Partial</td>
<td>15.0%</td>
<td>50.0%</td>
<td>11.1%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Subtotals:</td>
<td>55.0%</td>
<td>83.3%</td>
<td>44.4%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Refusal</td>
<td>10.0%</td>
<td>0.0%</td>
<td>22.2%</td>
<td>11.4%</td>
</tr>
<tr>
<td>No Response</td>
<td>35.0%</td>
<td>16.7%</td>
<td>33.3%</td>
<td>31.4%</td>
</tr>
<tr>
<td>Totals:</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Response Dispositions: "Complete" interview - Provider responded to all questions. "Partial" interview - invited provider did not respond to one or more of the following Questions: 14, 15, 16, 17 and 18.

**Nature-based Tourism Provider Types: "For-profit service" - Private providers mainly specializing in off-premise tours, guides and related "outfitter" services. "For-profit site" - Private providers typically offering on-premise activities, usually on the provider’s property (e.g. zoos, etc.). "Other site" - Government (e.g. county parks) and non-government organizations offering on-premise activities (e.g. wildlife viewing, interpretive programs, etc.) as well as off-premise services (e.g. guided nature tours, etc.).
Table E2. Final response disposition* of the 2019 pilot phone survey of selected coastal South Carolina nature-based tourism organizations interview invitees by coastal county groups.

<table>
<thead>
<tr>
<th>Coastal County Groups/Disposition</th>
<th>Response Dispositions</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete or Partial</td>
<td>Refusal or No Response</td>
<td>Totals</td>
<td></td>
</tr>
<tr>
<td>North Coast:</td>
<td>Count</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Row Percentages</td>
<td>80.0%</td>
<td>20.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Central Coast:</td>
<td>Count</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Row Percentages</td>
<td>50.0%</td>
<td>50.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>South Coast:</td>
<td>Count</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Row Percentages</td>
<td>45.5%</td>
<td>54.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>All Coastal Groups:</td>
<td>Count</td>
<td>20</td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Row Percentages</td>
<td>57.1%</td>
<td>42.9%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Response Dispositions: "Complete" interview - Provider responded to all questions. "Partial" interview - invited provider did not respond to one or more of the following Questions: 14, 15, 16, 17 and 18.
Summary of the Provider Pilot Phone Survey Responses

(Appendix F has summarized responses to the hurricane related questions, Questions 19 thru Q21, and associated hurricane background information. Appendix D includes the provider phone survey instruments and procedures).

NOTE: To reduce the interview time, after the first two initial interviews of selected for-profit providers, the following questions were not used when conducting for-profit service or site provider interviews: Questions 2, 4 and 11a. This appendix also includes generalizing text and/or response data used to ensure respondent confidentiality.

Question 1. During the current year, 2019, did your business provide ANY nature-based tourism services &/or related products in South Carolina such as outdoor outfitting, nature tours/education programs, kayak rentals & guided fishing trips, etc.?

__YES     __NO

All those interviewed reported providing nature-based tourism services and/or related products during 2019.

Question 3. Are you the principal operator (manager) or an owner of this business (organization)?

Only two of the 16 for-profit providers interviewed were not managers or owners. All providers interviewed representing non-government or government organizations had manager roles.

Question 5. What best describes your organization?

For Profit Org. 16 (80%); Government Org. 3 (15%); Non-Gov. Org. (NGO) 1 (5%); Non-Profit Org. (NPO) 0 (O%). Based on respondent interview comments when asked this question, most of the for-profit provider businesses were apparently organized as a Limited Liability Company (LLC) or as Sole Proprietorship.

Question 5a. What year did this business begin operating?

Responses are summarized in Table A3. One interviewed for-profit provider site reported starting in 1970 (Table A3).
Table E3. Number of operating years for South Carolina coastal nature-based providers interviewed during 2019.

<table>
<thead>
<tr>
<th></th>
<th>For-Profit Provider Operating Years:</th>
<th>Government &amp; NGO Provider Operating Years:</th>
<th>All Interviewed Provider Operating Years:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n: 16</td>
<td>n: 4</td>
<td>n: 20</td>
</tr>
<tr>
<td></td>
<td>Median: 11.5</td>
<td>Median: 34.0</td>
<td>Median: 16.0</td>
</tr>
<tr>
<td></td>
<td>Mean: 15.94</td>
<td>Mean: 31.75</td>
<td>Mean: 19.10</td>
</tr>
<tr>
<td></td>
<td>Mean S.E.: 3.020</td>
<td>Mean S.E.: 5.662</td>
<td>Mean S.E.: 2.980</td>
</tr>
<tr>
<td>Cumulative Percents:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.0%</td>
<td>1998 or earlier</td>
<td>1976 or earlier</td>
<td>1988 or earlier</td>
</tr>
<tr>
<td>50.0%</td>
<td>2007 or earlier</td>
<td>1985 or earlier</td>
<td>2003 or earlier</td>
</tr>
<tr>
<td>75.0%</td>
<td>2011 or earlier</td>
<td></td>
<td>2010 or earlier</td>
</tr>
<tr>
<td>100.0%</td>
<td>2017 or earlier</td>
<td></td>
<td>2017 or earlier</td>
</tr>
</tbody>
</table>
Question 6. Is your business part of a larger corporation or organization?
Only two (12.5%) of the 16 interviewed for-profit service or site providers reported being part of a larger organization. Three (75%) of the four interviewed government or non-government organizations reported being part of a larger organization.

Question 7. Could you please provide an overview of the products, services & other activities that your business currently offers?
For-profit providers commonly viewed their small business as an alternative to coastal “mass” tourism. They believed that their mixture of services and products should lead to an educational “nature experience” while bring relaxation and “bonding” among friends and/or family. As a pragmatic marketing consideration, they believed providing a quality experience for their customers would not only help with developing repeat customers but also enhance word-of-mouth marketing that is essential to attracting new customers.

While government and NGO site providers were also sensitive to building a loyal customer base and encouraging word-of-mouth marketing, these sites also recognized importance of promoting the authenticity of their site’s natural environment, history and/or culture. As noted by one of these interviewed site providers: “We believe we are offering an important educational opportunity by interpreting our site’s unique natural and cultural history.”

Regardless of the provider, a common view was also their desire to motivate their customers including “locals” to help protect South Carolina coastal natural, historic and/or cultural resources. In addition, a few for-profit providers noted that protecting SC coastal resources was partially based on their desire to maintain the alternative of passing on their business to younger family members and/or non-family employees.

Question 8. What services, products and other activities is your business (organization) currently (2019) providing that you consider to mainly be nature-based tourism related?
Interviewed for-profit service providers indicated that that their nature-based tourism (NBT) services usually included guided 2-hour to 4-hour coastal nature tours involving non-motorized or motorized watercraft. Common non-motorized watercraft used by their customers during these NBT tours included sit-in kayaks, sit-on-top kayaks as well as stand-up paddle boards. Common motorized watercraft used by interviewed providers for these coastal nature tours ranged from fiberglass “creek” skiffs to pontoon vessels capable of carrying more than six passengers. Major types of guided tours reported by interviewed for-profit providers included dolphin watching, sunset cruises and visiting isolated barrier island sites. In addition to the above services, two interviewed for-profit providers did report conducting guided recreational fishing trips during 2019.

Except for one, all interviewed for-profit provider sites had a site emphasis as a location housing vertebrates and invertebrates within enclosures for public display. These facilities usually offered some type of scheduled on-premise opportunities to view, photograph, touch (e.g. monitored animal petting, etc.) and/or feed various captured species at their site. Also, all of these for-profit provider sites had an admission (entrance) fee or an activity (e.g. outdoor recreation games, etc.) service fee for their site. Two of the three government/NGO provider sites that charged an
Question 9. Based on your previous answer to Question 8, what percent of your annual gross sales would you estimate to be attributable to these NBT related products, services, other activities...?
After the first two initial provider interviews, respondents were only asked to estimate their 2019 NBT related sales percentage. Except for two respondents, all providers estimated that 100% of their 2019 sales were attributable to their NBT products, services, etc.

Question 10. Is your nature-based tourism business (organization) operated on year-round or on a seasonal basis?
Overall, 40% (n = 8) of the interviewed providers (n = 20) reported not being open year-round in 2019.

Question 11b. During 2019, what months did you NOT operate & currently PLAN NOT to operate?
For those not operating year-round, five (62.5%) did not operate in January, February and December, 2019, two (25.0%) did not operate in January thru March and December, 2019, and one (12.5%) reported not operating in January and December, 2019.

Question 12. Will your employment estimates be based on a calendar year or the SC state fiscal year...?
All of the responding for-profit providers reported using the calendar year when providing employment responses. Other provider organizations reported using the SC state fiscal year or federal fiscal year.

Question 13. About how many full time, part time and contract workers in 2018 including paid family members and office workers were employed and will have been employed in 2019 by your SC NBT related business (organization)?
Note: There were only minor differences between 2018 and 2019 employment estimates; therefore, only 2019 employment and contractor worker response data by interviewed providers were used in Tables A4.

Fifty (50%) percent (n = 8) of the interviewed for-profit providers reported employing full time workers year-round and the average (mean) number of these employees was 4.63 (Table A4) during 2019. For those employing seasonal full-time workers, i.e. employees working 35 hours or more per week for more than ~7 and less than ~11 months, the average number of these employees was 3.63 (Table A4). Overall, interviewed for-profit providers averaged four full time employees (Table A4) with about 19% of this workforce being comprised of three or more full time or seasonal full-time employees. Fifty (50%) percent (n = 8) of the interviewed for-profit providers also reported on average employing two seasonal part time workers, i.e. payroll employees working less than 35 hours per week for ~6 or less month (Table A4). In addition, these providers reported using contact workers, 44% (n = 7) averaging about two (2) with four providers (25%) reporting the use of four or more contract workers in 2019. Year-round full-time workers employed by other interviewed provider organizations (n = 4) (i.e. NGO and...
government agencies) ranged from 1 to 183 with an 8.50 median value. The median number of seasonal part time employees for this group was 0.5.

Table E4. Descriptive statistics for the number of employees and contract workers reported by South Carolina for-profit coastal nature-based tourism providers interviewed during 2019.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>Mean S.E.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Full Time - Year Round Employees:</td>
<td>8</td>
<td>2.0</td>
<td>4.63</td>
<td>1.782</td>
</tr>
<tr>
<td>Number of Full Time Seasonal Employees:</td>
<td>8</td>
<td>2.0</td>
<td>3.63</td>
<td>1.238</td>
</tr>
<tr>
<td>Overall Number of Full Time Employees:</td>
<td>16</td>
<td>2.0</td>
<td>4.13</td>
<td>1.056</td>
</tr>
<tr>
<td>Number of Part Time Seasonal Employees:</td>
<td>16</td>
<td>0.5</td>
<td>2.00</td>
<td>0.775</td>
</tr>
<tr>
<td>Number of Contract (&quot;1099&quot;) Workers:</td>
<td>16</td>
<td>0.0</td>
<td>2.38</td>
<td>1.052</td>
</tr>
</tbody>
</table>

*Standard error of the mean.
Question 14. Now, I am going to read a list of possible NBT related services/products/activities (see NBT activity addendum list) that your organization may have provided during 2018 and the current year... Based on this list, I will then ask you for each listed services &/or products to approximate annual NBT related metric such as the total # of tours, the average service &/or rental fee per person, and the estimated annual percent of SC nonresidents... participating for each type.

NOTE: Respondents were only asked to estimate 2019 NBT related metrics such as annual number of nature tours, total sales and participant for each tour type.

Two interviewed for-profit providers did report conducting guided recreational fishing trips during 2019 in addition to their “non-fishing” services. Inshore boats fishing boats or kayaks were used.

Including guided fishing trips, the annual mean and median number of aquatic related non-motorized and motorized nature tour customers (AKA customer days) and their annual gross sales based on interviewed for-profit provider estimates are summarized in Table E5.

<table>
<thead>
<tr>
<th>Table E5. The mean and median estimated annual number of customers (AKA &quot;customer days&quot;) and gross sales for coastal non-motorized and motorized aquatic based tours reported by South Carolina for-profit nature-based tourism providers* interviewed in 2019.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Estimated Number of Tour Customers:</strong></td>
</tr>
<tr>
<td>Non-Motorized Coastal Nature Tours</td>
</tr>
<tr>
<td>n: 5</td>
</tr>
<tr>
<td>Mean: 2,175</td>
</tr>
<tr>
<td>Motorized Coastal Nature Tours</td>
</tr>
<tr>
<td>n: 8</td>
</tr>
<tr>
<td>Mean: 9,164</td>
</tr>
</tbody>
</table>

| **Annual Estimated Gross Nature Tour Sales:**                |
| Non-Motorized Coastal Nature Tours                           |
| n: 5 | Median: 75,400 |
| Mean: 87,754 | Mean S.E.: 12,699 |
| Motorized Coastal Nature Tours                              |
| n: 8 | Median: 235,070.0 |
| Mean: 411,279 | Mean S.E.: 141,594 |

*One provider was excluded due to extreme (outlier) low values.

**Standard error of the mean.

NOTE: Non-motorized watercraft provided by coastal providers commonly included sit-in and sit-on top kayaks. Motorized watercraft transporting nature tour customers included fiberglass skiffs as well as pontoon vessels.
Excluding guided fishing trips, interviewed for-profit provider average (mean) adult prices for non-motorized and motorized coastal nature tours lasting about two hours, the most common tour time period, were about $45 and $40, respectively, and ranged from $25 to $65. (A provider that used an atypical motorized watercraft was not included in these statistics.)

The 2019 estimated annual median adult customer percent of for-profit providers was about 72% (n = 8). The annual non-resident customer percentage estimates by providers (n = 5) were variable, ranging from a low of about 33% up to 78% with a median value of 44%. Nevertheless, other provider interview information suggests that the annual average non-resident NBT customer percentages could be 75% or higher.

**Question 15. If your NBT business/organization received gross sales from other sources not listed above in Question 14 (e.g. kayak maint. contracts, retail sales, etc.) …, please describe the additional sources & related estimated gross sales.**

One for-profit provider and an NGO/government provider site reported receiving revenues from other source, but these sources were still NBT related.

**NOTE:** After the first two initial provider interviews, respondents were asked to estimate total operating expenses (Question 16), contract worker percentage of total operating costs (Question 17) and annual gross sales (Question 18) only during 2019.

**Question 16. What were your total estimated operating expenses…including wages & salaries only for NBT related services, products & activities in South Carolina?** See Table A6.

**Question 17. If your operation used contract workers related to your NBT related activities in South Carolina, approximately what percent did these contractual workers comprise of your total operating expenses…?** See Table E6.

**Question 18. Approximately what was your… total annual gross sales generated through the nature-based related tourism services, products &/or activities in South Carolina …?**

**NOTE:** One interviewed for-profit provider refused to provide a gross sales value and another provider could not estimate gross sales directly attributable to NBT activities.
Table E6. The mean and median 2019 estimated annual operating costs, gross sales and contract worker percentage of annual operating costs reported by South Carolina coastal for-profit nature-based tourism providers interviewed in 2019.

<table>
<thead>
<tr>
<th>Annual Operating Costs*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n: 15</td>
<td>Median: $123.00</td>
</tr>
<tr>
<td>Mean: $276.60</td>
<td>Mean S.E.**: $69.071</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gross Sales***</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n: 14</td>
<td>Median: $138.50</td>
</tr>
<tr>
<td>Mean: $343.64</td>
<td>Mean S.E.: $90.76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contract Worker Percentage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n: 16</td>
<td>Median: 0.0%</td>
</tr>
<tr>
<td>Mean: 7.0%</td>
<td>Mean S.E.: 2%</td>
</tr>
</tbody>
</table>

*One provider’s operating cost value was excluded as an extreme (outlier) operating cost value.

**Standard error of the mean.

***Gross sales values for two interviewed providers were not available (See Question 18 Note in Appendix E).
Questions 19 through 21. Summarized question text: Do you think (Q19) Hurricane Matthew (Oct., 2016), (Q20) Hurricane Florence (Sept., 2018), (Q21) Hurricane Dorian (Sept., 2019) may have affected the profitability of your services and/or products…?

Explain why or why not:
(See Appendix D for the Question 19, 20 and 21 text used during provider phones interviews.) Appendix F summarizes provider responses to the above hurricane related questions, and related hurricane background information.

Question 22. Do you have any comments regarding the economic contribution of the SC NBT industry and/or perhaps possible challenges facing the SC NBT industry (e.g. availability of employees, insurance costs, regulations, etc.) that you would like to mention?

One response by a provider to Question 22:
“We are very worried about oil exploration that could be allowed off our coast. Obviously, the coast environment is important for the SC coastal tourism industry including nature—based tourism and our life style.”

Provider Question 22 comments were usually focused on their perceptions of various threats facing the NBT industry. The top three of these threats can be characterized as follows:
- Concerns about possible environmental damage due to permitting offshore energy exploration and development.
- The possible long-term marketing and economic impacts of frequent coastal hurricanes and tropical storms.
- Increasing boating traffic causing coastal waterway congestion.

For Question 22 respondents, the most common response was an overarching concern about the future environmental damage risks of permitting offshore energy exploration and the following commercial development of energy industrial activities (e.g. offshore oil drilling) including supporting onshore infrastructure in the SC coastal area. It should be noted that none of the Question 22 respondents mentioned apprehensions about inshore energy development such as “wind farming.”

Coastal South Carolina has been impacted by several hurricanes or tropical storms since 2015 (see Appendix F). Therefore, it is not surprising that interviewed providers were also troubled about the possible negative long-term destination marketing effects and associated economic impacts. Some of this concern apparently stemmed from their experience with asking their customers that had cancelled their August or early fall reservations due to a hurricane threat and the associated evacuation if they wanted to re-schedule the same activity (e.g. a coastal birdwatching tour) later in the same year. In general, they had the perception that their NBT customers were usually not interested in making new reservation(s) for the same activity during the current year.

For some of the for-profit service providers dependent on using various types of watercraft (e.g. pontoon boats, kayaks, etc.), perceived waterway congestion due to the growing number of coastal boaters using SC coastal rivers (e.g. Waccamaw River) and numerous creeks was cited as a significant safety factor and had impacted their customers’ tour enjoyment. Some other concerns mentioned by providers included the challenges of recruiting employees with nature
tour skills and experience as well as availability of affordable SC coastal housing for hospitality industry employees.
APPENDIX F: SUMMARY OF HURRICANE RESPONSES FROM NBT PROVIDERS

Notes: Unless otherwise indicated the following hurricane, summary synopses were adapted from Stewart (2017), Cangialosi et al. (2018), SCO (2018), NWC (2019) and Stewart & Berg (2019).

It is recognized that 2016-19 hurricanes or tropical storms did have a significant negative economic impact on many if not all SC coastal NBT government or NGO site provider organizations. Nevertheless, only interviewee responses to hurricane related questions by for-profit organizations (businesses) are presented in this Appendix because summarizing government or NGO interview responses without the risk of the possibility of compromising respondent confidentiality was problematic primarily due to limited number of government/NGO providers that were interviewed during this provider pilot phone survey.

Introduction
South Carolina has been impacted by several coastal storm events since 2015 that included two presidentially-declared disasters, Hurricane Matthew in 2016 and Hurricane Florence in 2018, as well as Hurricane Dorian in 2019 that was initially a deadly Category 5 hurricane in Bahamas before becoming a Category 1 hurricane along the SC central coast. Since these storm events have caused significant interruptions of coastal business economic activities including for-profit providers targeting visitors seeking NBT services (e.g. guided nature tours, etc.), the provider phone survey included three open ended questions, one for each of the above hurricanes (See Appendix D for the text of these questions, i.e. Questions 19, 20 and 21).

Although collecting provider observations related to the specific financial impacts of these storm events on their organization and market area was important, these questions were also asked to help frame recent coastal tourism economic trends relative to estimating the economic contribution of NBT economic activities This is especially important because these providers and their customers are part of the interconnected coastal economy that can cause negative indirect and induced economic ripples which can extend beyond the flooded and landfall areas of the storm event (Lenzen et al., 2019). As noted by Burrus et al (2002), documenting the regional economic effects of even “low-intensity” hurricanes is also valuable because these events may collectively cause “…a cumulative (in expectation) impact equivalent to a high-intensity hurricane strike…”.

First it should be noted that damage from hurricanes includes not just wind and storm surge, but the ensuing flooding from the rain falling over an area for an extended period. This flooding may not be related to the intensity of the storm, but rather the speed at which the storm moves across an area that can result in heavy torrential rains occurring hundreds of miles away from the storm’s center. An obvious example of this was the slow-moving Tropical Storm Florence (2018) that caused extensive flooding within the Pee Dee Watershed that lasted for weeks because over 20 inches of rain fell on Chesterfield and Horry counties and more than 30 inches in areas in eastern North Carolina.

Hurricane Matthew (2016):
Matthew, the strongest Atlantic storm in 2016, was responsible for 585 direct deaths, with more than 500 deaths occurring in Haiti. Matthew reached Category 5 intensity at the lowest latitude ever recorded in the Atlantic Basin. As a Category 1, Matthew eventually made its US landfall near McClellanville, SC, on October 8, 2016. In the United States, severe rains occurred over much of eastern Florida, extending northward across coastal area of Georgia, much of eastern South Carolina, eastern and central North Carolina, and the Virginia Tidewater with rainfall amounts commonly exceeding 10 inches.

In South Carolina, the mixture of strong wind gusts and freshwater floods downed trees and powerlines up to about 60 miles inland from the SC coast. At least 800,000 homes and businesses lost power across the state. However, the much the damage occurred in the coastal counties of Beaufort, Berkeley, Charleston, Dorchester, Georgetown, and Horry. The combination of the strong winds and high surge severely damaged several waterfront homes, and Hunting Island State Park in Beaufort county became inaccessible due to the large number of downed trees. In Georgetown County, moderate flooding occurred on the Black River and Pee Dee River and numerous roads were closed across the county due to floodwaters and downed powerlines and trees. In Horry County, heavy rainfall, along with storm surge moving upstream, caused major flooding of the Waccamaw and Little Pee Dee Rivers. More than 170 roads were closed in the county due to freshwater flooding, including Highway US 501, a main route leading out of Myrtle Beach in Horry County.

Hurricane Florence (2018):
Florence was a persistent Category 4 hurricane that made landfall on September 14, 2018, near Wrightsville Beach, NC, along the southeastern coast of North Carolina close to the upper end of Category 1. Florence resulted in 22 direct deaths and was also associated with 30 indirect fatalities. As previously noted, Florence moved extremely slowly after making landfall, with a forward motion between 3 and 5 mph, and at points moving almost parallel to the coast. It’s extremely high rainfall totals caused destructive freshwater flooding across much of the southeastern United States.

These excessive rains resulted in extensive low-land and river flooding across much of northeastern South Carolina, with many rivers exceeding flood stage records that were set during Hurricane Matthew in 2016 with 11 stream gauges setting peak stage records. Flooding on the Great Pee Dee River shut down a portion of the city of Florence's municipal water system on September 24. In Horry County, over 100 people were rescued from flooded homes and cars in the town of Loris. Nearly 1,000 homes and businesses near the Waccamaw River in Conway were flooded. On September 26, raw sewage flowed from the Conway Wastewater Treatment Plant into a tributary that feeds into the Waccamaw River. In Georgetown County, flood waves on the Waccamaw and Great Pee Dee rivers reached Georgetown almost two weeks after Hurricane Florence's landfall, causing flooding of low areas around downtown Georgetown across several tide cycles. Interstate 95 was also closed in South Carolina for several days after the storm due to flooding from the Pee Dee River before reopening on 21 September.

Hurricane Dorian (2019):
Hurricane Dorian was the strongest and most destructive storm of the 2019 hurricane season. The northern Bahamas, the Abaco Islands, and Grand Bahama Island were devastated by Dorian's Category 5 winds estimated to have reached over 180 mph with a storm surge greater
than 18 feet. After leaving the Bahamas, Dorian turned northwestward and moved parallel to the
Florida east coast on September 4. Bands of showers and thunderstorms in front of the storm's
center produced over a dozen tornadoes across northeastern SC and eastern NC during the
morning of Wednesday, September 5. Dorian remained offshore as it approached Cape Fear that
evening.

Power was knocked out to the entire city of Georgetown, and Water Street in downtown
Georgetown flooded due to a combination of heavy rain and storm surge on September 5. Water
entered several businesses but damage was generally minor. Further north, sand dunes were
breached on Pawley’s Island during high tide and storm surge flooding affected Garden City
during the afternoon of September 5. Flash flooding also affected a few Horry County
neighborhoods near the city of Conway.

**Hurricanes and Grand Strand Lodging Trends: 2016-19**

Using readily available Grand Strand lodging data, the following is only intended as a
provisional “snapshot” using occupancy percentages to demonstrate the short-term impact of
recent hurricanes on the coastal lodging industry, a service sector critical NBT market segment.
It is also acknowledged that other lodging metrics such as average daily rate per occupied room
(ADR) and room revenues are necessary to comprehensively understand the financial and
economic impact of hurricanes on the lodging sector (e.g., Chandler, 2004).

The Clay Brittain Jr. Center for Resort Tourism (CRT) at Coastal Carolina University routinely
collects voluntary sample data from weekly-rented vacation rental properties (VRP) that are
located on SC’s Grand Strand in the coastal area of Horry and Georgetown county (Damonte et
al., 2019). While their sample data shows apparent declines in average occupancy percentages
(APO) associated with other Atlantic storm events during the 2016-19 period (i.e. Hurricanes
Irma and Maria in 2017), their early fall sample data indicated a substantial decline in APO
values when compared to weekly samples in 2017 and 2019 (Table F1) that were associated with
Hurricanes Matthew, Florence and Dorian. Of course, these lodging effects are also due to
evacuation orders issued by the Governor’s Office. For example, the Hurricane Florence
mandatory evacuation order for the Grand Strand counties started on Tuesday, September 11,
and was not lifted until Sunday, September 16, 2018, after hurricane made landfall on September
14 in NC.

A preliminary analysis of CRT’s September Grand Strand sample data indicates that when
comparing the APOs for weeks 2 and 3 in September 2018 when the area was impacted by
Florence, the values were about -51% and -44% percent difference, respectively, compared to the
weekly 2013-15 APO averages for those two weekly periods (Table F1). In addition, a
comparison of apparent impacted September weeks due to Hurricanes Matthew (2016) and
Dorian (2019) weekly APO values to equivalent weekly 2013-15 APO averages indicates a more
than 10% decline in APO values. The Grand Strand lodging impact of Hurricane Irma was also
evidently responsible for nearly a 28% decrease in the area APO during week 2 of September
2017 relative to the 2013-15 APO averages for the same week (Table F1).
Table F1. Average Percentage Occupancy (APO) for South Carolina Grand Strand lodging during Weekly Periods in September 2016 - 19 vs. Comparable Weekly Averages in 2013-15. (Data source: The Clay Brittain Jr. Center for Resort Tourism at Coastal Carolina University, South Carolina, as reported by Damonte et al., 2019.)

<table>
<thead>
<tr>
<th>Sample Weeks</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>70.8</td>
<td>59.7</td>
<td>72.2</td>
<td>37.2</td>
</tr>
<tr>
<td>Week 2</td>
<td>73.4</td>
<td>45.3</td>
<td>22.3</td>
<td>58.8</td>
</tr>
<tr>
<td>Week 3</td>
<td>70.0</td>
<td>64.5</td>
<td>24.5</td>
<td>68.0</td>
</tr>
<tr>
<td>Week 4</td>
<td>56.4</td>
<td>55.7</td>
<td>44.2</td>
<td>67.4</td>
</tr>
<tr>
<td>Week 5</td>
<td>23.9</td>
<td>57.3</td>
<td>53.0</td>
<td>59.4</td>
</tr>
<tr>
<td>Week 6</td>
<td>32.9</td>
<td>57.8</td>
<td>52.1</td>
<td>64.5</td>
</tr>
</tbody>
</table>

2013-15 Weekly Averages | Percentage Differences:* |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 67.7 3.1 -8.0 4.5</td>
<td>-30.5</td>
</tr>
<tr>
<td>2 73.2 0.2 -27.9</td>
<td>-50.9 -14.4</td>
</tr>
<tr>
<td>3 68.0 2.0 -3.5</td>
<td>-43.5 0.0</td>
</tr>
<tr>
<td>4 54.5 1.9 1.2</td>
<td>-10.3 12.9</td>
</tr>
<tr>
<td>5 48.0 -24.1 9.3</td>
<td>5.0 11.4</td>
</tr>
<tr>
<td>6 55.0 -22.1 2.8</td>
<td>-2.9 9.5</td>
</tr>
</tbody>
</table>

*The percent difference between the Grand Strand sampled lodging 2013-15 weekly APO averages compared to the APO values in a given year and week. Negative differences of 10% or more are highlighted in yellow. Sampled weeks were Sept. 4 to Oct. 15, 2016; Sept. 3, 2017 to Oct. 14, 2017; Sept. 2 to Oct. 13, 2018 and Sept. 1 to Oct. 12, 2019. The negative APO difference, -27.9, in Week 2, 2017, is associated with the effects of Hurricane Irma, a major destructive hurricane that was the first Category 5 Atlantic Hurricane in September, 2017.
Hurricane Florence Estimated Visitor Spending Effects
The Grand Strand APO lodging related effects of Hurricane Florence were symptomatic of a decline in coastal visitor spending during September 2018. According to preliminary estimates by the South Carolina Department of Parks, Recreation and Tourism (SCPRT), Hurricane Florence caused Grand Strand visitor spending (i.e. lost, disrupted or displaced spending) to decrease by about $72.3 million within a two-week period (September 9 – September 22). SCPRT also estimated that visitor spending in the Charleston Metro area (Berkeley, Charleston and Dorchester County) and Beaufort County decreased by approximately $38.3 and $28.6 million, respectively, with overall estimated loss of about $139 million in SC coastal visitor spending (Dudley Jackson, personal communication, March 4, 2020).

Summary of the Provider Phone Survey Responses to Hurricane Questions 19, 20 and 21:
For responding for-profit providers, the highest average estimated sales loss was due to Hurricane Matthew, the highest median sales loss was attributed to Hurricane Florence (Table F2). In contrast, the highest average estimate private property damages, $3,000, were associated with Hurricane Matthew (Table F3).

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>n:</td>
<td>n:</td>
<td>n:</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>Median: $9,000</td>
<td>Median: $10,000</td>
<td>Median: $550</td>
<td>Median: $4,000</td>
</tr>
<tr>
<td>Mean: $18,730</td>
<td>Mean: $8,577</td>
<td>Mean: $800</td>
<td>Mean: $8,811</td>
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<tr>
<td>Mean S.E.*: $11,345.8</td>
<td>Mean S.E.: $1,395.8</td>
<td>Mean S.E.: $292.6</td>
<td>Mean S.E.: $3,387.5</td>
</tr>
</tbody>
</table>

*Standard error of the mean.

**NOTE:** Estimated nominal dollar value of insured and uninsured gross sales losses due to the given hurricane event.

Table F2. Descriptive statistics for estimated sales losses due to Hurricanes Matthew (2016), Florence (2018) and Dorian (2019) reported by South Carolina for-profit coastal nature-based tourism providers interviewed during 2019. (Estimates reported in nominal dollars for a given hurricane event year.)
Table F3. Descriptive statistics for estimated private property damages due to Hurricanes Matthew (2016), Florences (2018) and Dorian (2019) reported by South Carolina for-profit coastal nature-based tourism providers interviewed during 2019. (Estimates reported in nominal dollars for a given hurricane event year.)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Median:</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Mean:</td>
<td>$3,000</td>
<td>$1,818</td>
<td>$0</td>
<td>$1,567</td>
</tr>
<tr>
<td>Mean S.E.*:</td>
<td>$2,758.8</td>
<td>$1,393.6</td>
<td>$0.0</td>
<td>$962.1</td>
</tr>
</tbody>
</table>

*Standard error of the mean.

NOTE: It is assumed that these damage estimates include insured and uninsured losses.
Hurricane Florence and Tour Rescheduling Comments by Interviewed Providers
Interviewed providers located in the “North Coast” coastal county group (see Table A2), noted that Hurricane Florence affected the post-hurricane availability and work commute time of their employees:

“After Florence, we had some employees that were unable to show up for work due to flooded homes inland. Also, employee commute time increased up to two hours due to Highway 501 and other inland roads being flooded.”

North Coast for-profit service providers also reported being unable to schedule nature tours at some Waccamaw River locations for at least 10 days or more due to Hurricane Florence flooding effects. Monthly gross revenues in September and October for some of these providers apparently declined by at least 50% compared to the same months in 2017 with Florence’s effects apparently resulting an estimated 8% or more decline in 2018 annual gross sales compared to 2017.

Regardless of the business location, for-profit providers commonly made comments about their experience with the customers rescheduling the nature tours in the same year after a hurricane: “We have found that our customers do not reschedule their tours after a hurricane and may not be interested in considering reservations for the next year.” Specifically, some of these providers believed that their NBT customers, unlike typical coastal visitors using mainstream coastal hospitality services, seem less inclined to just “rebook” lodging and NBT oriented services and/or sites a few weeks after a storm event.

This customer behavior reported by some interview providers is consistent with Schumann’s (2013) observation that for tourism dependent coastal economies, the negative economic impacts of hurricanes can be especially problematic because damage caused by hurricanes includes “…non-physical damage from a negatively altered destination image.” Consequently, it is common for regional CVBs and other organizations involved in destination marketing to implement post-hurricane marketing programs to help counter potential negative destination image effects on their marketing area.
Selecting the IMPLAN Sector for Allocating Estimated SC NBT Participant Spending on Guides, Tour and Related Provider Services

One of the regional economic metrics available in IMPLAN is the output-per-worker ratios which vary by region, industry sector and year. For a given IMPLAN industry sector, output-per-worker is calculated by dividing the direct output by direct employment. In general, output-per-worker as well as value added-per-output ratios are generated based on regional economic data and adapting the national production function to fit the study region for a given year. These regional output-per-worker ratios are important because direct employment numbers due to targeted economic activity such NBT can be generated by multiplying output-per-worker ratios in the coastal regional IMPLAN model for each of the NBT affected sectors by the estimated direct output derived from NBT participant total annual expenditures in each sector.

Regardless, when estimating the direct and secondary economic contribution effects characteristics of NBT participant expenditures such as various guide services, there have been differences in which IMPLAN sectors researchers have selected for allocating participant expenditures related to these services. For example, when using a 2014 (536 Sector Model) IMPLAN model for U.S. coastal regions, Kosaka & Steinback (2018) allocated spending related to recreational for-hire fishing guide, shellfishing and ocean viewing services to IMPLAN Sector #414 (“Scenic and sightseeing transportation and support activities for transportation”). Other researchers have chosen to allocate participant spending on for-hire fishing guides (Rollins and Lovell, 2019) and other NBT related guide services (Pinyon, 2016) to IMPLAN Sector #496 (“Other amusement and recreation industries”). However, the selection of IMPLAN sector for estimating regional direct and secondary effects stemming from these services among other considerations can be affected by which of these two sectors is selected because of the difference in IMPLAN SAM multipliers for these two sectors. If considering Labor Income effects, for example, the rounded SAM Type Labor Income Multiplier for Sector #414, 1.82622, in the IMPLAN 2016 SC coastal region is about 15% higher than the Sector #496 SAM Labor Income Multiplier for the same region, 1.58437.

Therefore, an ad-hoc evaluation was conducted using the provider survey data to help judge which one IMPLAN Sector would be generally best suited for allocating (sectoring) SC NBT participant spending on guides and related services for economic contribution analysis purposes. This included making the collected for-profit provider employment data generally comparable to IMPLAN jobs needed for calculating individual provider output-to worker ratios by converting provider estimated employee numbers to approximated direct IMPLAN annual jobs. Using the estimated annual direct IMPLAN jobs for each for-profit provider, the coastal output-per-worker ratio for each of these responding NBT providers was then approximated by dividing gross sales by the appropriate estimated IMPLAN jobs. The SC coastal output-per-worker ratio mean (n=13) and median values were $77,365 and $68,000, respectively (in 2019 dollars), and the mean ratio deflated to 2016 dollars was $75,552 (Table G1).
The SC coastal output-per-worker ratios in the 2016 IMPLAN model for Sectors #414 and #496 were $152,366 and $60,083, respectively. It is recognized that the SC coastal for-profit provider output-per-worker ratio values in Table G1 were derived from a simple purposive or judgement-oriented pilot survey method and included less than 30 computed ratio observations (e.g. Hogg et al. 2015) as well as the debatable assumption that gross sales values reported by interviewed for-profit providers can generally be used “as is” to approximate provider direct output. Nevertheless, as an ad-hoc evaluation, the magnitude of the computed mean coastal for-profit provider output-per-worker ratio value when adjusting for inflation, i.e. $75,552 (Table G1), appears to be consistent with the SC coastal region output-per-worker ratio, $60,083, for Sector #496 in the 2016 SC coastal IMPLAN region model used in this study. In contrast, the 2016 SC coastal IMPLAN Sector #414 output-per-worker ratio was $152,366, a value about two times higher than mean ratio (in 2016 dollars) computed using collected SC coastal for-profit provider data. Therefore, estimated visitor spending on guides and related service were allocated to IMPLAN Sector #496 based upon an empirical regional economic analysis that used the coastal NBT provider phone survey data. This sectoring selection also is conservative, i.e. it errors on underestimating the regional direct and secondary effects of these services.
APPENDIX H: INTERCEPT SURVEY RESULTS - DESCRIPTIVE STATISTICS SUMMARY (TOURIST)

Intercept Survey – Summary of Descriptive Statistics (Tourist)

Background

- Total N = 188
- 91.5% of the sample – the SC Coast was the primary destination
- 73.3% of respondents were repeat visitors. For those who had been here before,
  - Most had visited once before in the last 12 months (43.5%), followed by those who had visited twice in the last 12 months (21.0%)
  - In the last three years, 37.4% had visited two or three times.
- About half the sample (50.5%) were traveling with their immediate families, an additional 9.0% traveled with extended family, Traveling with a partner (32.4%) and friends (25.0%)
- Only a third of the sample were traveling with kids (n=48)
- Average travel party size = 3.21 (sd. = 5.84) while the mode and median was 2; 61.7% of travelers were in groups of two or less.
- 72.3% represented a drive market (own vehicle main mode of transportation)
- 88.8% of the sample overnighters
NBT as primary motivation?

- Being in and experiencing nature in some form may be a primary motivation for some travelers – primary motivation is what most assuredly drives consumer demand (Crompton, 2010).

<table>
<thead>
<tr>
<th>‘Primary purpose’</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>VFR</td>
<td>44</td>
<td>23.7</td>
</tr>
<tr>
<td>Entertainment/ Sightseeing</td>
<td>6</td>
<td>3.2</td>
</tr>
<tr>
<td>Outdoor Recreation</td>
<td>37</td>
<td>19.9</td>
</tr>
<tr>
<td>Other pleasure/ personal</td>
<td>82</td>
<td>44.1</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Is nature, a natural space, and/or a nature-based recreation activity a primary motivation for selecting the SC Coast for your trip?

- Yes: 126 (67.0%)
- No: 48 (25.5%)
- I am not sure/ undecided: 14 (7.4%)
Of those who did not consider themselves a nature-based tourist on this trip:

- But what does it mean?
  - “I don’t know what that means. We came to golf”
  - “Don’t know if a lighthouse is considered nature, more history/sightseeing”
  - “I don’t like the wild and the wilderness”
- Motivation may be attached to the motivations/desires of other travel party members:
  - “Don’t like the bugs but here for grandkids”
  - “Just accompanying the girlfriend”

<table>
<thead>
<tr>
<th>Motivation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBT</td>
<td>5</td>
</tr>
<tr>
<td>Doesn’t love nature doesn’t like to be outside</td>
<td>4</td>
</tr>
<tr>
<td>Not primary reason</td>
<td>8</td>
</tr>
<tr>
<td>Tequilla, drinking and hanging</td>
<td>1</td>
</tr>
<tr>
<td>More than just NBT</td>
<td>1</td>
</tr>
<tr>
<td>Adventure/Exploring</td>
<td>2</td>
</tr>
<tr>
<td>Here for pleasure/comfort</td>
<td>2</td>
</tr>
<tr>
<td>No NBT activities</td>
<td>3</td>
</tr>
<tr>
<td>I don’t know what that means</td>
<td>1</td>
</tr>
<tr>
<td>Do it for the kids (to keep them busy) or others</td>
<td>3</td>
</tr>
</tbody>
</table>

Of those who considered themselves a nature-based tourist on this trip:

- The coast is attracting people who “Rather be outside than go to bars” and the “goal to be outside”
- Parks are important: “If there’s a park I’m going to go”
- Nature as the added layer:
  - The beach is an important draw, but different activities are important. “I like different attractions and when we are going to the beach”
- Nature as the central layer:
  - “Choose to come here for nature” and “We’re visiting the beach, that’s nature”

<table>
<thead>
<tr>
<th>Motivation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach (as a place) “They love the beach”</td>
<td>15</td>
</tr>
<tr>
<td>Beach activities (shell finding, beachcombing, laying on the beach, swimming in ocean)</td>
<td>2</td>
</tr>
<tr>
<td>State Park</td>
<td>1</td>
</tr>
<tr>
<td>Parks and natural sites generally/Scenery</td>
<td>8</td>
</tr>
<tr>
<td>Simply being outside</td>
<td>5</td>
</tr>
<tr>
<td>Doing outdoor activities/nature activities (hiking, kayaking, photography)</td>
<td>17</td>
</tr>
<tr>
<td>Outdoor lovers/Nature lovers</td>
<td>45</td>
</tr>
<tr>
<td>Wildlife (viewing, birdwatching)</td>
<td>10</td>
</tr>
<tr>
<td>Consumptive (hunting, fishing)</td>
<td>1</td>
</tr>
<tr>
<td>Educational interest in nature (most citing they are biologist in training or something similar)</td>
<td>3</td>
</tr>
<tr>
<td>Therapeutic nature of nature/relaxing</td>
<td>4</td>
</tr>
<tr>
<td>NBT is inexpensive</td>
<td>1</td>
</tr>
<tr>
<td>Spiritual element of NBT/Meditation</td>
<td>2</td>
</tr>
<tr>
<td>Weather</td>
<td>1</td>
</tr>
</tbody>
</table>
NBT activities

<table>
<thead>
<tr>
<th>NBT sites*</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiking/Walking (1)</td>
<td>96</td>
</tr>
<tr>
<td>Walking dogs or pets (2)</td>
<td>9</td>
</tr>
<tr>
<td>Jogging/ Running (3)</td>
<td>7</td>
</tr>
<tr>
<td>Road Biking/ Cycling (4)</td>
<td>17</td>
</tr>
<tr>
<td>Mountain Biking (5)</td>
<td>1</td>
</tr>
<tr>
<td>Camping (6)</td>
<td>5</td>
</tr>
<tr>
<td>Tennis (7)</td>
<td>5</td>
</tr>
<tr>
<td>Golfing (8)</td>
<td>15</td>
</tr>
<tr>
<td>Kayaking (11)</td>
<td>24</td>
</tr>
<tr>
<td>Canoeing (12)</td>
<td>3</td>
</tr>
<tr>
<td>Ocean-wading/ swimming (13)</td>
<td>65</td>
</tr>
<tr>
<td>Spending time on the beach/ beachcombing (14)</td>
<td>131</td>
</tr>
<tr>
<td>Jet/water skiing (15)</td>
<td>5</td>
</tr>
<tr>
<td>Recreational fishing (16)</td>
<td>19</td>
</tr>
<tr>
<td>Sailing/Wind surfing (17)</td>
<td>1</td>
</tr>
<tr>
<td>Surfing (18)</td>
<td>2</td>
</tr>
<tr>
<td>Stand-up Paddle Boarding (19)</td>
<td>3</td>
</tr>
<tr>
<td>Boating (20)</td>
<td>42</td>
</tr>
<tr>
<td>Hunting (24)</td>
<td>3</td>
</tr>
<tr>
<td>ATVing/ Offroading (22)</td>
<td>2</td>
</tr>
<tr>
<td>Photographs/Art (23)</td>
<td>11</td>
</tr>
<tr>
<td>Visiting historic sites/Plantations/ gardens (24)</td>
<td>62</td>
</tr>
<tr>
<td>Visiting zoos/ aquariums (25)</td>
<td>15</td>
</tr>
<tr>
<td>Birdwatching (26)</td>
<td>21</td>
</tr>
<tr>
<td>Fishing (27)</td>
<td>12</td>
</tr>
<tr>
<td>Wildlife Viewing (28)</td>
<td>41</td>
</tr>
</tbody>
</table>

How important is the opportunity to participate in these NBT activities when selecting your destination?

<table>
<thead>
<tr>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>5</td>
</tr>
<tr>
<td>Somewhat unimportant</td>
<td>7</td>
</tr>
<tr>
<td>Neutral</td>
<td>10</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>51</td>
</tr>
<tr>
<td>Very important</td>
<td>115</td>
</tr>
</tbody>
</table>
NBT Sites

◊ In terms of natural sites visited,
  ◊ Public Beach access/ocean (n = 135)
  ◊ Visiting SC State Park Areas (n = 65)
  ◊ Historical sites/plantations (n = 56)
  ◊ Marshes, Creeks, & Wetlands (n = 53)
  ◊ Local municipal parks (n = 26)

How important were natural sites, such as those presented above, in choosing to visit SC coast
Still trying to understand importance...

- Approximate amount of ‘awake’ time spent participating in NBT activities and/or at NBT sites relative to overall trip:
  - M = 50.88% of their time spent engaging (SD = 25.68%)
  - 20% of the sample indicated ½ their time was directly connected to NBT

- If the NBT activities/sites were not available, would you still have selected the SC Coast as your destination?
  - I am not sure/ undecided (5.3%)
  - No (45.7%)
  - Yes (48.9%)

Outside of NBT, what activities are the doing?

<table>
<thead>
<tr>
<th>Activity</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping (1)</td>
<td>111</td>
</tr>
<tr>
<td>Fine dining (2)</td>
<td>97</td>
</tr>
<tr>
<td>Visiting friends and family (3)</td>
<td>33</td>
</tr>
<tr>
<td>Urban sightseeing (4)</td>
<td>23</td>
</tr>
<tr>
<td>Rural sightseeing (5)</td>
<td>23</td>
</tr>
<tr>
<td>Visiting museums (e.g., art, kids, history, historic) (6)</td>
<td>14</td>
</tr>
<tr>
<td>Visiting old homes/ mansions/ Churches (7)</td>
<td>10</td>
</tr>
<tr>
<td>Amusement park/ water park (8)</td>
<td>5</td>
</tr>
<tr>
<td>Nightlife/ Dancing/ Bars (9)</td>
<td>40</td>
</tr>
<tr>
<td>Art Galleries (10)</td>
<td>9</td>
</tr>
<tr>
<td>Spas/ Health clubs (11)</td>
<td>6</td>
</tr>
<tr>
<td>Theater/ drama performances (12)</td>
<td>4</td>
</tr>
<tr>
<td>Festival/ special community event (13)</td>
<td>6</td>
</tr>
<tr>
<td>Concerts/ Musical Performances (14)</td>
<td>8</td>
</tr>
<tr>
<td>Sporting event (16)</td>
<td>4</td>
</tr>
<tr>
<td>Visiting wineries/ breweries (17)</td>
<td>15</td>
</tr>
<tr>
<td>Visiting local farms/ eating local foods (18)</td>
<td>20</td>
</tr>
<tr>
<td>Birthday/ Wedding-related celebrations (19)</td>
<td>2</td>
</tr>
<tr>
<td>I will not/ did not participate in any of these activities during this trip (20)</td>
<td>9</td>
</tr>
</tbody>
</table>
Travel Behavior and Tripographics

- For those staying overnight (N=167)
  - Average number of nights 5.08 (SD 4.99)
    - Staying 2 nights = 20.5%
    - Staying 3 nights = 22.4%
    - Staying 4 nights = 12.7%
    - Staying a week = 12.1%
- Type of accommodations
  - Hotels = 74.5%
  - Staying with FF = 19.1%
  - Resort, timeshare, vacation home community = 20.7%

<table>
<thead>
<tr>
<th>When did you begin planning your trip to the SC Coast?</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the last 2 weeks</td>
<td>38</td>
<td>20.4</td>
</tr>
<tr>
<td>Within the last month</td>
<td>37</td>
<td>19.9</td>
</tr>
<tr>
<td>Within the last 3 months</td>
<td>54</td>
<td>29.0</td>
</tr>
<tr>
<td>Within the last 6 months</td>
<td>27</td>
<td>14.5</td>
</tr>
<tr>
<td>More than 6 months out</td>
<td>30</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Expenditures and Demographics of the Sample

- Overall expenditures per travel party (n = 186) = $1,105.27
  - 50% of respondents spent $665 and below
- Respondents:
  - 63.8% women
  - 82.4% white; 10.1% African American/Black
  - Average age: 49.30 (median = 50)
  - 64.2% married/CLU
  - 61.5% no children/ no children living at home
  - About half the sample (47.4%) earned between $75,000 - $149,999
  - 56.6% with a 4-year college degree or higher
APPENDIX I: INTERCEPT SURVEY RESULTS - DESCRIPTIVE STATISTICS SUMMARY (RESIDENT)

Intercept Survey – Summary of Descriptive Statistics (Resident)

Background

- Total N = 154
- 92.2% of the sample – the NBT site in which they were interviewed was their primary destination, and for those that it was not, their primary destination was still in the coastal region.
- The average length of residency on the SC Coast was 15.05 years (SD = 16.51); telling though is that the mode was 1, and the median 8.
  - In the last year, the average number of times for visiting this locations was 28.95 (SD = 55.275); the median visitation was five times a year balancing those that visit less frequently with regular visitors.
  - In the last three years, the average visitation was 71.91 (SD = 168.817), with a median of 10 visits.
- About half the sample (42.2%) were traveling with their immediate families, an additional 3.2% traveled with extended family. Further, respondents were traveling with a partner (26.6%), traveling with friends (13.6%), or alone (18.2%) traveling solo.
- Average travel party size = 2.48 (sd. = 1.94) while the median was 2. 49 of the travel parties included children.
- 92.8% represented a drive market (own vehicle main mode of transportation), while a remaining 7% were on foot/bike or golf cart.
- 96.1% of the sample were day-trippers.
NBT as primary motivation?

- Being in and experiencing nature in some form may be a primary motivation for some travelers – primary motivation is what most assuredly drives consumer demand (Crompton, 2010).

<table>
<thead>
<tr>
<th>‘Primary purpose’</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>VFR</td>
<td>18</td>
<td>11.8</td>
</tr>
<tr>
<td>Entertainment/ Sightseeing</td>
<td>7</td>
<td>4.6</td>
</tr>
<tr>
<td>Outdoor Recreation</td>
<td>77</td>
<td>50.7</td>
</tr>
<tr>
<td>Other pleasure/ personal</td>
<td>36</td>
<td>23.7</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Is nature, a natural space, and/or a nature-based recreation activity a primary motivation for selecting the SC Coast for your trip?

- I am not sure: 1%
- No: 17%
- Yes: 82%

Do you consider yourself a nature-based tourist on this trip?

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am not sure/ undecided</td>
<td>6</td>
<td>3.9</td>
</tr>
<tr>
<td>No</td>
<td>31</td>
<td>20.1</td>
</tr>
<tr>
<td>Yes</td>
<td>117</td>
<td>76.0</td>
</tr>
</tbody>
</table>

Do you consider yourself a nature-based tourist?
Of those who did not consider themselves a nature-based tourist on this trip:

- “I prefer to view nature from a distance.”
- Though interviewed while visiting a NBT site, it seems as though they consider a NBT to be frequent experiences in/with nature.

| 1 | Not heavy fishing or hunting |
| 1 | Sports guy |
| 1 | Just something to do with kids |
| 1 | Just here to let the baby outside |
| 2 | Not doing any activity/recreation entails some sort of activity |
| 1 | Not really, we are locals |
| 1 | Not here to eat and drink |
| 1 | Doesn’t come to mind |
| 1 | We live here and would rather go to the pub |
| 21 | Doesn’t do nature as often/doesn’t go out much |
| 1 | Just here to meet friends |
| 1 | Side thing |
| 1 | Just the beach |
| 1 | Doesn’t like to sweat |
| 1 | More for my dog |
| 2 | Just here to play Pokemon Go |
| 1 | Just getting out of the house |

Of those who considered themselves a nature-based tourist on this trip:

- Nature as a reason to live here
  - “Nature is one of the reasons I moved to this area.”
  - “I wanted to live by it so I am always around it.”
  - “I enjoy being outdoors and that’s why I live here.”

| 1 | Came for the beach |
| 4 | Visits the state parks; enjoys local parks |
| 10 | Lives being outside/a love the outdoors |
| 2 | To get away (from people) |
| 3 | Wants to contribute to preservation/conservation |
| 9 | Participates in a lot of NB activities |
| 2 | Get the kids outside |
| 2 | Hiking |
| 2 | More and fauna identification |
| 11 | Quiet/ Meditative/ therapeutic/ relaxing |
| 5 | Hunt and fish |
| 2 | Learning/ education |
| 2 | With the dogs |
| 2 | Wildlife |
| 1 | Spend time with family/friends |
| 2 | Job related to nature/ ecosystem management |
| 10 | Water activities (being on the water) |
| 1 | Spiritual |
| 1 | Walking |
| 1 | Be in the sun |
| 1 | Grew up around nature |
| 3 | Nature as a reason to live here |
Which NBT activities will/did you participate in while visiting this site?

<table>
<thead>
<tr>
<th>Activity</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiking/Walking (1)</td>
<td>24</td>
</tr>
<tr>
<td>Walking dogs or pets (2)</td>
<td>14</td>
</tr>
<tr>
<td>Jogging/Running (3)</td>
<td>4</td>
</tr>
<tr>
<td>Road Biking/ Cycling (4)</td>
<td>7</td>
</tr>
<tr>
<td>Mountain Biking (5)</td>
<td>0</td>
</tr>
<tr>
<td>Camping (6)</td>
<td>6</td>
</tr>
<tr>
<td>Tennis (7)</td>
<td>0</td>
</tr>
<tr>
<td>Golfing (8)</td>
<td>4</td>
</tr>
<tr>
<td>Kayaking (11)</td>
<td>11</td>
</tr>
<tr>
<td>Canoeing (12)</td>
<td>2</td>
</tr>
<tr>
<td>Ocean-wading/swimming (13)</td>
<td>20</td>
</tr>
<tr>
<td>Spending time on the beach/beachcombing (14)</td>
<td>46</td>
</tr>
<tr>
<td>Jet/water skiing (15)</td>
<td>2</td>
</tr>
<tr>
<td>Recreational fishing (16)</td>
<td>17</td>
</tr>
<tr>
<td>Sailing/Wind surfing (17)</td>
<td>0</td>
</tr>
<tr>
<td>Surfing (18)</td>
<td>2</td>
</tr>
<tr>
<td>Stand-up Paddle Boarding (19)</td>
<td>4</td>
</tr>
<tr>
<td>Boating (20)</td>
<td>12</td>
</tr>
<tr>
<td>Hunting (21)</td>
<td>0</td>
</tr>
<tr>
<td>ATVing/Offroading (22)</td>
<td>0</td>
</tr>
<tr>
<td>Photographs/Art (23)</td>
<td>9</td>
</tr>
<tr>
<td>Visiting historic sites/Plantations/gardens</td>
<td>19</td>
</tr>
<tr>
<td>Visiting zoos/aquariums (25)</td>
<td>3</td>
</tr>
<tr>
<td>Birdwatching (26)</td>
<td>11</td>
</tr>
<tr>
<td>Picnicking (27)</td>
<td>12</td>
</tr>
<tr>
<td>Wildlife Viewing (28)</td>
<td>23</td>
</tr>
</tbody>
</table>

How important is the opportunity to participate in these NBT activities when selecting your destination?

<table>
<thead>
<tr>
<th>Importance</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>106</td>
<td>69.3</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>31</td>
<td>20.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>9</td>
<td>5.2</td>
</tr>
<tr>
<td>Somewhat unimportant</td>
<td>6</td>
<td>3.9</td>
</tr>
<tr>
<td>Very important</td>
<td>2</td>
<td>1.3</td>
</tr>
</tbody>
</table>
NBT Sites

- In terms of natural sites visited,
  - Public Beach access/ocean (n = 58)
  - Visiting SC State Park Areas (n = 40)
  - Local municipal parks (n = 28)
  - Marshes, Creeks, & Wetlands (n = 23)
  - Historic sites/plantations (n = 25)

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Somewhat unimportant</td>
<td>7</td>
<td>4.7</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>6.7</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>25</td>
<td>16.7</td>
</tr>
<tr>
<td>Very important</td>
<td>106</td>
<td>70.7</td>
</tr>
</tbody>
</table>

How important were natural sites, such as those presented above, in choosing to visit SC coast.
Still trying to understand importance...

- Approximate amount of 'awake' time spent participating in NBT activities and/or at NBT sites relative to overall trip:
  - M = 43.85% of their time spent engaging (SD = 30.25%)
  - 10.5% of the sample indicated that exactly ¼ their time was directly connected to NBT, while 63.2% suggested it was less than half their awake time.

- If the NBT activities/sites were not available, would you still have selected this site as your destination?
  - I am not sure/undecided (5.2%)
  - No (47.4%)
  - Yes (47.4%)

Outside of NBT, what activities are the doing?

<table>
<thead>
<tr>
<th>Activity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping (1)</td>
<td>39</td>
</tr>
<tr>
<td>Fine dining (2)</td>
<td>36</td>
</tr>
<tr>
<td>Visiting friends and family (3)</td>
<td>14</td>
</tr>
<tr>
<td>Urban sightseeing (4)</td>
<td>6</td>
</tr>
<tr>
<td>Rural sightseeing (5)</td>
<td>12</td>
</tr>
<tr>
<td>Visiting museums (e.g., art, kids, historic, history) (6)</td>
<td>6</td>
</tr>
<tr>
<td>Visiting old homes/mansions/churches (7)</td>
<td>4</td>
</tr>
<tr>
<td>Amusement park, water park (8)</td>
<td>4</td>
</tr>
<tr>
<td>Nightlife/Dancing/Bars (9)</td>
<td>12</td>
</tr>
<tr>
<td>Art Galleries (10)</td>
<td>5</td>
</tr>
<tr>
<td>Spas/Health clubs (11)</td>
<td>3</td>
</tr>
<tr>
<td>Theater/drama performances (12)</td>
<td>2</td>
</tr>
<tr>
<td>Festival/special community event (13)</td>
<td>7</td>
</tr>
<tr>
<td>Concerts/Musical Performances (15)</td>
<td>4</td>
</tr>
<tr>
<td>Sporting event (16)</td>
<td>0</td>
</tr>
<tr>
<td>Visiting wineries/breweries (17)</td>
<td>5</td>
</tr>
<tr>
<td>Visiting local farms/trying local foods (18)</td>
<td>8</td>
</tr>
<tr>
<td>Birthday/Wedding-related celebrations (19)</td>
<td>4</td>
</tr>
<tr>
<td>I will not/did not participate in any of these activities during this trip (20)</td>
<td>41</td>
</tr>
</tbody>
</table>
Travel Behavior and Tripographics

- A total of 6 respondents in the sample represented those who were staying overnight as part of their trip who stayed an average of 4 days (SD = 4.90; median = 2) on the coast in places that were not their home.

- Type of accommodations
  - RV/ Campground (n = 4)
  - Staying with friends and family (n = 2)

<table>
<thead>
<tr>
<th>When did you begin planning your trip to the SC Coast?</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the last 2 weeks</td>
<td>140</td>
<td>91.5</td>
</tr>
<tr>
<td>Within the last month</td>
<td>9</td>
<td>5.9</td>
</tr>
<tr>
<td>Within the last 3 months</td>
<td>4</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Expenditures and Demographics of the Sample

- Overall expenditures per travel party = Mean = $75 (SD = $128.19); Median = $40

- Respondents:
  - 60.4% women
  - 86.4% white; 6.5% African American/ Black, 2.6% Latino/Hispanic
  - Average age: 47.9 (median = 50.0)
  - 63.6% married/ CLU
  - 58.4% no children/ no children living at home; 17.5% have one child and 16.2% have two
  - 44.6% of respondents had a HHI after taxes between $50,000 - $99,999
  - 34.4% with a 4-year college degree, and another 14.3% have achieved education beyond that
APPENDIX J – INTERCEPT SURVEY RESULTS – TABLES, FIGURES, AND FURTHER ANALYSES

Socio-Demographic Profiles

Table J1. Demographic Profile of Intercept Survey Respondents – Tourists (n = 188)

<table>
<thead>
<tr>
<th>Profile Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68</td>
<td>36.2</td>
</tr>
<tr>
<td>Female</td>
<td>120</td>
<td>63.8</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single (never married)</td>
<td>48</td>
<td>25.5</td>
</tr>
<tr>
<td>Married/ Common Law Union</td>
<td>120</td>
<td>64.2</td>
</tr>
<tr>
<td>Widowed/Divorced/ Separated</td>
<td>19</td>
<td>10.2</td>
</tr>
<tr>
<td>Children in the Household (under 25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No children/ No children at home</td>
<td>115</td>
<td>61.5</td>
</tr>
<tr>
<td>1 child</td>
<td>23</td>
<td>12.3</td>
</tr>
<tr>
<td>2 children</td>
<td>33</td>
<td>17.6</td>
</tr>
<tr>
<td>3 children</td>
<td>10</td>
<td>5.3</td>
</tr>
<tr>
<td>4 children</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td>5 children or more</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Race/ Ethnicity</td>
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<td></td>
</tr>
<tr>
<td>American Indian/ Alaska Native</td>
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<td>.5</td>
</tr>
<tr>
<td>Asian/ Asian American</td>
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<td>3.2</td>
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<tr>
<td>Black/ African American</td>
<td>19</td>
<td>10.1</td>
</tr>
<tr>
<td>White</td>
<td>155</td>
<td>82.4</td>
</tr>
<tr>
<td>Other (Arabic, Latinx, bi-racial)</td>
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<td>3.7</td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 25,000</td>
<td>10</td>
<td>5.8</td>
</tr>
<tr>
<td>25,000-49,999</td>
<td>29</td>
<td>17.0</td>
</tr>
<tr>
<td>50,000-74,999</td>
<td>32</td>
<td>18.7</td>
</tr>
<tr>
<td>75,000-99,999</td>
<td>32</td>
<td>18.7</td>
</tr>
<tr>
<td>100,000-149,999</td>
<td>49</td>
<td>28.7</td>
</tr>
<tr>
<td>150,000-199,999</td>
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<tr>
<td>200,000 and over</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Education Level</td>
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<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>High school graduate</td>
<td>19</td>
<td>10.2</td>
</tr>
<tr>
<td>2-year/Associate’s degree</td>
<td>27</td>
<td>14.4</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>33</td>
<td>17.6</td>
</tr>
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<td>4 year/ Bachelor’s degree</td>
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<td>35.8</td>
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<td>Master’s degree</td>
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</tr>
<tr>
<td>PhD or similar terminal, professional degree</td>
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<td>1.1</td>
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<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 49.30 (SD = 14.78)</td>
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<td></td>
</tr>
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</table>
Table J2. Demographic Profile of Intercept Survey Respondents – Residents (n = 154)

<table>
<thead>
<tr>
<th>Profile Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>61</td>
<td>39.6</td>
</tr>
<tr>
<td>Female</td>
<td>93</td>
<td>60.4</td>
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<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
</tr>
<tr>
<td>Single (never married)</td>
<td>35</td>
<td>22.7</td>
</tr>
<tr>
<td>Married/ Common Law Union</td>
<td>98</td>
<td>63.6</td>
</tr>
<tr>
<td>Widowed/Divorced/ Separated</td>
<td>20</td>
<td>13.0</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>No children/ No children at home</td>
<td>90</td>
<td>58.4</td>
</tr>
<tr>
<td>1 child</td>
<td>27</td>
<td>17.5</td>
</tr>
<tr>
<td>2 children</td>
<td>25</td>
<td>16.2</td>
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<tr>
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<td>10</td>
<td>6.5</td>
</tr>
<tr>
<td>4 children</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5 children or more</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Race/ Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/ Alaska Native</td>
<td>3</td>
<td>1.9</td>
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<tr>
<td>Asian/ Asian American</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Black/ African American</td>
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<td>6.5</td>
</tr>
<tr>
<td>White</td>
<td>133</td>
<td>86.4</td>
</tr>
<tr>
<td>Other (Arabic, Latinx, bi-racial)</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 25,000</td>
<td>8</td>
<td>5.8</td>
</tr>
<tr>
<td>25,000 -49,999</td>
<td>24</td>
<td>17.3</td>
</tr>
<tr>
<td><strong>50,000-74,999</strong></td>
<td>33</td>
<td>23.7</td>
</tr>
<tr>
<td>75,000-99,999</td>
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<td>20.9</td>
</tr>
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<td>100,000-149,999</td>
<td>23</td>
<td>16.5</td>
</tr>
<tr>
<td>150,000-199,999</td>
<td>12</td>
<td>8.6</td>
</tr>
<tr>
<td>200,000 and over</td>
<td>10</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>High school graduate</td>
<td>31</td>
<td>20.1</td>
</tr>
<tr>
<td>2-year/Associate’s degree</td>
<td>19</td>
<td>12.3</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>25</td>
<td>16.2</td>
</tr>
<tr>
<td><strong>4 year/ Bachelor’s degree</strong></td>
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<td>34.4</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>16</td>
<td>11.7</td>
</tr>
<tr>
<td>PhD or similar terminal, professional degree</td>
<td>4</td>
<td>2.6</td>
</tr>
</tbody>
</table>

**Age**  
M = 47.89 (SD = 16.37)
Figure J1. Origin of tourists based on zipcodes

Table J3. State origin of tourists based on zipcodes

<table>
<thead>
<tr>
<th>State</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC</td>
<td>28</td>
</tr>
<tr>
<td>NY</td>
<td>12</td>
</tr>
<tr>
<td>GA</td>
<td>10</td>
</tr>
<tr>
<td>PA</td>
<td>10</td>
</tr>
<tr>
<td>MA</td>
<td>8</td>
</tr>
<tr>
<td>OH</td>
<td>8</td>
</tr>
<tr>
<td>FL</td>
<td>6</td>
</tr>
<tr>
<td>IN</td>
<td>6</td>
</tr>
<tr>
<td>MI</td>
<td>5</td>
</tr>
<tr>
<td>TN</td>
<td>5</td>
</tr>
<tr>
<td>VA</td>
<td>5</td>
</tr>
<tr>
<td>NJ</td>
<td>4</td>
</tr>
<tr>
<td>MD</td>
<td>3</td>
</tr>
<tr>
<td>MN</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Out of State: 135
Primary Motivation – Outdoor Recreation
Looking specifically at the respondents who identified their primary motivation as outdoor recreation, we found no significant differences in the demographic profile (i.e., age, education, race/ethnicity, gender, income, marital status) to that of all other respondents. Descriptively, those who primary motivation was outdoor recreation had an average travel party of 2.76, compared to staying an average of 4.58 nights for the broader sample (27.8% of the sample stayed two night, and another 22.2% stayed three nights).

While there was also no statistically significant difference between total trip expenditures between those whose primary motivation was outdoor recreation to the rest of the sample, there were significant differences detected in categories of expenditure. It was found that those whose primary motivation was outdoor recreation spent more in the categories of ‘Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but not airfare’ (M = 20.33, SD = 77.66; sig. = .001, t = 1.797) as well as ‘Retail Purchases (souvenirs, books, clothing, sporting goods, etc.’; M = 87.06, SD = 413.36; sig. = .047; t =0.786). Conversely, they spent significantly less in the category of ‘Admission and/or entry fees for historical sites, zoos, museums, etc.’ (M = 4.61, SD = 14.57; sig. = .002; t = -1.777).

NBT Activities and the Decision to Travel to the SC Coast
Respondents were asked whether they would still have selected the SC Coast as their destination for this trip if NBT activities (e.g., hiking, camping, kayaking, ocean-wading/swimming, spending time on the beach/beachcombing) were not available. The importance of this question is that it positions NBT activities within the context of the larger tourist decision-making process. After removing a small percentage that was undecided whether they would have traveled to this destination (5.3%), the sample was evenly split as to whether they would have selected the SC Coast or not: 48.9% indicated they would have still selected the destination while
45.7% said they would not. Subsequently we wanted to understand the expenditure patterns of those who would not have visited without these activities.

While there was also no statistically significant difference between total trip expenditures between those who indicated they would not travel to the SC coast if NBT was not available to those who said they would, there were significant differences detected in categories of expenditure. It was found that those who would not still choose the SC Coast as their destination if NBT activities were not available spent statistically significantly more money in the following categories: ‘Overnight Camping, RV fees, and Related Charges’ (M = 10.829, SD = 55.33; sig. = .000, t = 2.459); ‘Groceries and takeout food’ (M = 69.56, SD = 139.14; sig. = .001, t = 2.531); ‘Other transportation expenses (taxis, Uber, Lyft, parking, auto repairs) but not airfare’ (M = 7.569, SD = 46.62; sig. = .006, t = 1.443); and ‘Retail Purchases (souvenirs, books, clothing, sporting goods, etc.)’ (M = 54.759, SD = 219.16; sig. = .003, t = 1.784). Comparatively, those who would still choose the SC Coast regardless of availability of NBT activities spent more in ‘Admission and/or entry fees for outdoor parks and protected areas’ (M = 20.928, SD = 99.64; sig. = .009, t = -1.436).

Comparison of Residents and Tourists
Residents of the eight-county region and tourists were compared across a number of questions. First, when asked whether the respondent considered themselves a nature-based tourist or recreationist on this trip, residents were found to be significantly more likely to label themselves as such (M = 2.79, SD = .408; sig. = .009, t = 1.295). Likewise, respondents were asked if ‘nature, natural space, and/or a nature-based recreation activity a primary motivation for selecting this location for their trip’; residents, again, were found to be statistically significant in agreement that nature was a primary motivation (M = 2.82, SD = .405; sig = .000, t = 3.102). However, this makes sense when we consider residents were primarily day-trippers, thus they had a more singular focus and motivation for their visits to these sites in which they were intercepted.

Nature-based tourism activity participation was also compared between residents and tourists. It was found that tourists were participating at a significantly higher rate over residents in the following NBT activities (lower means indicate higher participation – reverse coded): Road biking/ cycling (M = 1.91, SD = .288; sig. = .001, t = 1.635); Tennis (M = 1.97, SD = .162; sig. = .000, t = 2.051); Golfing (M = 1.92, SD = .192; sig. = .000, t = 2.182); Kayaking (M = 1.87, SD = .335; sig. = .000, t = 1.726); Ocean wading/ swimming (M = 1.65, SD = .477; sig. = .000, t = 4.763); Boating (M = 1.78, SD = .418; sig. = .000, t = 3.751); Visiting historic sites/ plantations/ gardens (M = 1.67, SD = .472; sig. = .000, t = 4.621); Visiting zoos/ aquariums (M = 1.92, SD = .272; sig. = .000, t = 2.512); Birdwatching (M = .009, SD = .317; sig. = .009, t = 1.287); and Wildlife viewing (M = 1.78, SD = .415; sig. = .001, t = 1.547). It was also found that residents participated in one NBT activity at a greater rate, which was ‘Walking dogs/pets’ (M = 1.91, SD = .288; sig. = .002, t = -.1.569).

NBT Typology and Expenditure Categories
Respondents were provided a menu of nature-based and cultural activities. Nineteen items reflecting nature-based activities were included in the analysis along with 15 non-nature-based coastal activities (those activities that had fewer than 5 participants were not included; total number of items was 34).
Table J4. Exploratory Factor Analysis of Nature-Based and Other Touristic Activities (n = 188)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item (15 items)</th>
<th>Factor Loading</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor1</td>
<td>The Tourist Gazer</td>
<td></td>
<td>.582</td>
</tr>
<tr>
<td>Rural Sightseeing</td>
<td>.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wildlife Viewing</td>
<td>.549</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birdwatching</td>
<td>.515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban sightseeing</td>
<td>.483</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting historic sites, plantations, and/or gardens</td>
<td>.403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor2</td>
<td>The Restorative Experiential Outsider</td>
<td></td>
<td>.597</td>
</tr>
<tr>
<td>Visiting wineries/breweries</td>
<td>.653</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photography/ Art</td>
<td>.651</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kayaking</td>
<td>.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picnicking</td>
<td>.436</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor3</td>
<td>Active Nature Users</td>
<td></td>
<td>.648</td>
</tr>
<tr>
<td>Jogging/ Running</td>
<td>.847</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking dogs or pets</td>
<td>.757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor4</td>
<td>Traditional Outdoor Coastal Visitor</td>
<td></td>
<td>.523</td>
</tr>
<tr>
<td>Recreational Fishing</td>
<td>.603</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golfing</td>
<td>.601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tennis</td>
<td>.550</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initial screening of the principle component factor analysis found the Kaiser-Meyer-Olkin (KMO) to be above the appropriate threshold (KMO = .609) and Bartlett’s Test of Sphericity was significant ($p > .000$). PCA was used because of its ability to address data that is not normally distributed and reduce error variance from variables while allowing us to reduce the data to fewer dimensions through grouping correlated variables for further analysis. Subsequently a principle axis factoring extraction with Promax rotation was conducted. After studying the pattern matrix, scree plot, and Cronbach’s alpha reliability, only four factors with eigenvalues greater than 1.0 were retained; the model only explains 30.79% of the total variance (after dropping four factors and other items that did not load, 15 items were kept in the model). The threshold of acceptability for factor loadings was .4 (Tabachnick & Fidell, 2007).

While respondents may participate in activities that crossover these profiles (i.e., participate in activities in multiple factors/profiles), they were grouped into the profile in which they had the strongest association (those with equal connection to profiles were not included in this analysis). The Restorative Experiential Outsider represents 40.6% of respondents, the Traditional Outdoor Coastal Visitor reflects 13.4%, the Active Nature Users reflects 12.8%, and the Tourist Gazer represents 4.3% of the sample. There was not a significant difference in total expenditures between groups, however, differences were detected in expenditure categories: ‘Gas and oil (for vehicle, RV, boat, etc.)’ ($F = 4.871$, sig. $= .003$), and ‘Admission and/or entry fees for historical sites, zoos, museums, etc.’ ($F = 3.033$, sig. $= .032$). Further post-hoc analyses indicate that the Restorative Experiential Outsider spend significantly less on ‘Gas and Oil’ as compared to Active Nature Users (sig. $= .008$) and the Traditional Outdoor Coastal Visitor (sig. $= .002$). The Restorative Experiential Outsider spends significantly more on admission and/or
entry fees for historical sites, zoos, museums, etc., as compared to Active Nature Users (sig. = .024) and the Traditional Outdoor Coastal Visitor (sig. = .027).