



## ECONOMIC IMPACT OF CRUISE SHIP PASSENGERS VISITING BAR HARBOR (MAINE) IN 2016

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Executive Summary: This study examines the economic impact of cruise ship passengers visiting Bar Harbor in 2016. The economic impact figures account for passenger expenditures on a variety of goods and services (e.g., meals and drinks, souvenirs, books and paper goods, shore excursions) and the multiplier effects associated with the economic activity of businesses (and their workers) where the visitors spend money.

The impact figures do not capture the economic activity related to the spending of crew and—among other things—the purchases made by the ships (i.e., cruise lines), fees for services by local ship agents, dockage fees for the tenders, payments to local ship pilots, payments for ship maintenance and repairs, and payments for services provided by government agencies. As an example of a local activity that is not included in the economic impact analysis, the Town of Bar Harbor collected \$686,472 in passenger fees in 2016.

The passenger economic impact analysis is based on 2,231 mail surveys that were completed and returned by visitors associated with 31 ship visits over 24 days between May and October. Guests were surveyed from a mix of small (e.g., American Glory, with a capacity of 49 passengers) and large ships (e.g., Regal Princess, with a capacity of 3,560 passengers), as well as passengers across a variety of cruise lines (e.g., Celebrity, Crystal Cruises, Holland America, Norwegian Cruise Lines, Oceania, Silversea Cruises).

Some of the key study results are summarized below:

- ⇒ Cruise ship passengers visiting Bar Harbor are highly educated and affluent, and most of them are at least 50 years of age.
- ⇒ The passengers are avid cruisers, but most of them had not visited Bar Harbor before the cruise ship visit—this latter point is no surprise, given that most of the passengers live far away from Maine.
- ⇒ The passengers tend to travel in small groups and follow a plan of sites to visit, based on information gathered by reading information from on-line sources.

Executive Summary, continued:

- ⇒ Over 80 percent of the survey respondents were off the ship for at least four hours, which includes the time spent on cruise-line sponsored shore excursions. Excluding the time that passengers spent on tours, the survey shows that about 50 percent of the respondents were exploring the local area for at least four hours.
- ⇒ About 44 percent of the survey respondents took a walk along the shore path.
- ⇒ Survey results indicate that about 60 percent of the respondents walked past the Village Green, whereas only one-in-ten ventured as far as the Hannaford supermarket (on Cottage Street) and Havana restaurant (on Main Street).
- ⇒ About 60 percent of the survey respondents visited Acadia National Park while in port.
- ⇒ Over 96 percent of the respondents visited at least one store or restaurant/bar, and about one-third of the passengers visited 10 or more places. Over three-quarters of the passengers surveyed spent money in one to four stores and restaurants/bars, and about 13 percent made purchases in five to nine stores and restaurants/bars.
- ⇒ About 46 percent of the survey respondents took a cruise-line sponsored tour. Of these passengers, about 86 percent reported that they shopped in Bar Harbor and 72 percent indicated that they ate in Bar Harbor.
- ⇒ The survey respondents spent an average of \$108—and \$74 of this amount does not include expenditures on cruise-line sponsored tours. The largest expenditure items, other than cruise-line sponsored tours, are meals and drinks, clothing items, and general souvenirs.
- ⇒ Based on a limited sample of passenger counts, an estimated 138,285 cruise ship passengers set foot in Bar Harbor in 2016.
- ⇒ The cruise ship passengers had an estimated annual economic impact—including multiplier effects—of \$20.2 million in local spending, 379 jobs (full- and part-time, and seasonal) and \$5.4 million in labor income.

## 1. BACKGROUND AND INTRODUCTION

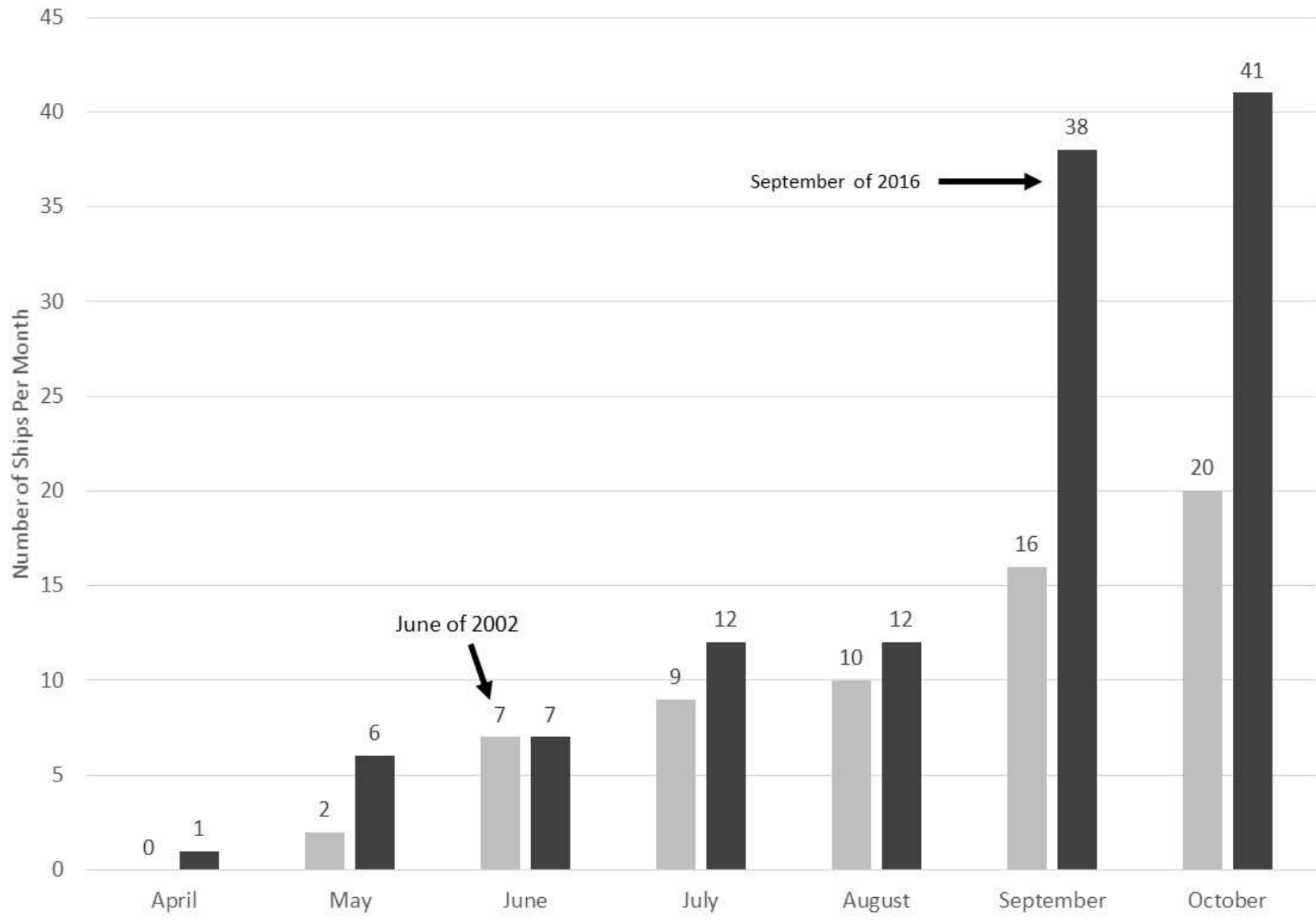
Bar Harbor is a popular port-of-call on autumn New England and Eastern Canadian cruise ship itineraries. In 2016, Bar Harbor had 117 cruise ships that were scheduled to visit port, with a combined capacity of about 163,000 passengers and 69,000 crew members.<sup>2</sup> As shown below in Figure 1, the cruise ship visits in 2016 were concentrated during the fall months of September (38 visits) and October (41 visits)—68 percent of the scheduled visits were in these months. Figure 1 also shows remarkable growth in the number of ships visiting Bar Harbor between 2002 and 2016. For example, Bar Harbor welcomed 36 cruise ships in September and October of 2002 (Gabe, Lynch and McConnon, 2003), and this number increased to 79 planned visits during the fall months of 2016. Overall, the number of planned visits almost doubled from 64 cruise ships in 2002 to 117 visits in 2016.

The cruise ship passengers visiting Bar Harbor generate a sizable impact on the local economy. In 2002, cruise ship passengers had a local economic impact—including multiplier effects—of an estimated \$12.1 million in sales revenue, and the passenger impact increased to an estimated \$13.7 million in revenue in 2005 (Gabe, Lynch, McConnon and Allen, 2003; Gabe and Allen 2006). The purpose of this study is to examine the economic impact of Bar Harbor’s cruise ship passengers in 2016. Economic impact is defined as the local spending, employment and labor income (e.g., wages and salaries) associated with the cruise ship passengers, as well as the multiplier effects that are supported by the expenditures of businesses where the passengers make purchases (and the spending of workers employed in these businesses).

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<sup>2</sup> These figures are from the 2016 cruise ship schedule as of June 17, 2016. From time to time, cruise ship visits are cancelled (these events are accounted for in the economic impact analysis presented later in the report) and sometimes new ones are added. Passenger and crew counts are based on the ships’ total capacities.

Figure 1. Cruise Ships Scheduled to Visit Bar Harbor: 2002 (light shade) and 2016 (dark shade)



The cruise ship passenger impact figures do not capture the economic activity associated with the spending of crew and—among other things—the purchases made by the ships (i.e., cruise lines), fees for services by local ship agents, dockage fees for the tenders, payments to local ship pilots, payments for ship maintenance and repairs, and payments for services provided by government agencies. As an example of a local activity that is not included in the economic impact analysis, the Town of Bar Harbor collected \$686,472 in passenger fees in 2016.

The analysis is based on surveys of cruise ship passengers that “got off the ships” in Bar Harbor in 2016. Surveys were distributed to 4,768 passengers from 31 ship visits over 24 days between May and October.<sup>3</sup> We surveyed guests from a mix of small (e.g., American Glory, with a capacity of 49 passengers) and large ships (e.g., Regal Princess, with a capacity of 3,560 passengers), as well as passengers across a variety of cruise lines (e.g., Celebrity, Crystal Cruises, Holland America, Norwegian Cruise Lines, Oceania, Silversea Cruises). Of the surveys that were handed out, 2,231 were completed and returned by mail—this gives a response rate of about 47 percent. The survey included questions about the activities passengers pursued while in port (e.g., walk along the shore path, cruise-line sponsored tour), how much money the passengers spent (and the number of stores visited), and several questions about the passengers themselves (e.g., demographics, travel habits).<sup>4</sup>

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<sup>3</sup> We handed out surveys on two days in May, two days in June, three days in July, eight days in August, four days in September and five days in October. Days with multiple ships were May 30<sup>th</sup> (Grandeur of the Seas and Independence), June 26<sup>th</sup> (Independence and Veendam), July 10<sup>th</sup> (Independence and Veendam), October 18<sup>th</sup> (Regal Princess and Serenade of the Seas), October 21<sup>st</sup> (Rotterdam, Sirena and Silver Whisper) and October 25<sup>th</sup> (AIDAdiva and Serenade of the Seas). Appendix A shows the exact dates and ships surveyed.

<sup>4</sup> Appendix B includes a copy of the questionnaire.

## 2 CRUISE SHIP PASSENGERS VISITING BAR HARBOR

Table 1 presents information on the demographic characteristics of the cruise ship passengers that visited Bar Harbor in 2016. With a median age of 65 years old—and 88 percent of the survey respondents over 50 years old—the cruise ships appear to cater to a “mature tourist.” The passengers also tend to be highly educated (e.g., over 70 percent have at least a four-year college degree) and affluent (over one-half of the survey respondents reported an annual household income of \$100,000 or more).

Although the cruise ship passengers are primarily from the United States (about 87 percent of the sample reported a U.S. location of residence), we received surveys from passengers representing 22 countries.<sup>5</sup> Within the United States, surveys were returned from passengers residing in all 50 states, as well as the District of Columbia and Puerto Rico. The top 25 states for cruise ship passengers are shown in Table 2, and we see that the largest numbers are from Florida, California, Pennsylvania, New York, Maryland and Texas. It’s interesting that about 13 and 7 percent of the U.S. survey respondents are from the Pacific West (Alaska, California, Hawaii, Oregon and Washington) and Mountain West (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming) regions, respectively. As noted in past studies (Gabe, Lynch, McConnon and Allen, 2003; Gabe and McConnon 2009), cruise ships bring visitors to Maine that are from outside the state’s traditional tourism market (e.g., the northeastern and middle-Atlantic United States, and parts of Canada).

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<sup>5</sup> More than 10 surveys were received from passengers residing in the United States, Canada, United Kingdom, Germany, Australia and New Zealand.

Table 1. Demographic Characteristics of Bar Harbor’s Cruise Ship Passengers

Age Distribution	Percentage of Survey Respondents (n = 2,078)
Younger than 25	1.4%
25 to 29	1.2%
30 to 34	1.4%
35 to 39	1.8%
40 to 44	2.7%
45 to 49	3.5%
50 to 54	7.6%
55 to 59	10.8%
60 to 64	18.4%
65 to 69	23.2%
70 to 74	15.8%
75 to 79	8.1%
80 to 84	2.9%
85 to 89	1.1%
90 or older	0.1%
Total	100%

Educational Attainment	Percentage of Survey Respondents (n = 2,181)
Less than high school	1%
High school diploma	14%
2-year college degree	14%
4-year college degree	32%
MA / MS degree	28%
Ph.D. / Professional degree	10%
Total	100%

Annual Household Income	Percentage of Survey Respondents (n = 1,863)
Less than \$25,000	2%
\$25,000 to \$49,999	9%
\$50,000 to \$74,999	18%
\$75,000 to \$99,999	18%
\$100,000 to \$150,000	29%
More than \$150,000	25%
Total	100%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016. The sample size—e.g., n = 2,078—is shown for each question.



Table 2. State of Residence of U.S. Cruise Ship Passengers that Visited Bar Harbor in 2016

State of Residence	Percentage of Survey Respondents (n = 1,896)
Florida	9.7%
California	9.5%
Pennsylvania	7.1%
New York	6.5%
Maryland	6.2%
Texas	5.9%
Virginia	5.2%
New Jersey	3.9%
Ohio	3.6%
Massachusetts	3.2%
Illinois	3.0%
Georgia	2.9%
North Carolina	2.9%
Arizona	2.4%
Tennessee	2.3%
Michigan	2.1%
Washington	2.1%
Missouri	1.7%
Colorado	1.5%
Indiana	1.4%
Utah	1.4%
South Carolina	1.3%
Connecticut	1.3%
Minnesota	1.2%
Wisconsin	1.1%
All Other U.S. Locations	10.8%
Total	100%

Notes: Figures are based on a survey of 2016 Bar Harbor cruise ship passengers that indicated they were from the United States, and provided a location of residence.

Table 3 reports information on the survey respondents' experience with cruise vacations and past visits to Bar Harbor. The passengers appear to be "veteran cruisers," as about 60 percent of the survey respondents have taken at least five cruises. The trip in which the passenger visited Bar Harbor was the first cruise for less than ten percent of the respondents. Although the passengers have taken numerous cruises in the past, seeing Bar Harbor was generally a new

experience. The cruise ship stop in Bar Harbor represented the first visit to town for over two-thirds of the survey respondents and less than five percent have been to Bar Harbor on at least five occasions. Bar Harbor’s inclusion on the itinerary played an important role in the passengers’ selection of cruise vacation. About 11 percent of the passengers indicated that the opportunity to visit Bar Harbor was the “main reason” they selected the cruise, 71 percent noted that Bar Harbor’s place on the itinerary was “moderately important,” and 18 percent claimed that visiting Bar Harbor was “not important” to the cruise vacation they selected.

Table 3. Past Cruises and Visits to Bar Harbor

Number of Cruise Vacations	Percentage of Survey Respondents (n = 2,195)
First cruise	7%
Second cruise	10%
3 or 4 cruises	21%
5 to 9 cruises	32%
10 to 19 cruises	19%
20 or more cruises	11%
Total	100%

Number of Visits to Bar Harbor	Percentage of Survey Respondents (n = 2,202)
First visit	68%
Second visit	21%
3 or 4 visits	8%
5 to 9 visits	3%
10 to 19 visits	1%
20 or more visits	0.3%
Total	100%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016. The sample size—e.g., n = 2,195—is shown for each question.

Table 4 presents information about the travel preferences and habits of the cruise ship passengers visiting Bar Harbor. Overall, the survey respondents tend to travel alone or in a small group, follow a plan of sights to see, read about a location’s attractions, and favor on-line sources

of information. These preferences are mostly similar among passengers of different age groups. The main exception is found for the use of on-line versus printed materials—the vast majority of passengers younger than 50 years of age use on-line sources (86 percent), whereas it’s a much more even split between on-line (55 percent) and printed materials (45 percent) for passengers that are 70 years and older.

**Table 4. Travel Preferences and Habits of Bar Harbor’s Cruise Ship Passengers**

	All Passengers	Younger than 50	50 to 69	70 and older
Alone or small group	91%	92%	93%	88%
Large group	9%	8%	7%	12%
Follow a plan	64%	59%	65%	61%
Explore with no plan	36%	41%	35%	39%
Read about sites	75%	70%	76%	76%
Talk to others	25%	30%	24%	24%
Printed materials	31%	14%	29%	45%
On-line sources	69%	86%	71%	55%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016.

In summary, the personal information collected from the survey suggests that the cruise ship passengers visiting Bar Harbor are highly educated and affluent, and most of them are at least 50 years of age. The passengers are avid cruisers, but most of them had not visited Bar Harbor before the cruise ship visit—this latter point is no surprise, given that most of the passengers live outside of Maine’s tourism market. Finally, the passengers tend to travel in small groups and follow a plan of sites to visit, based on information gathered by reading information from on-line sources.

### 3. TIME SPENT IN PORT

Most of the ships visiting Bar Harbor arrive in the morning between 7am and 10am, and depart the same day between 3pm and 7pm.<sup>6</sup> Results of the survey indicate that 28 percent of the respondents (that got off the ship) disembarked within the first hour that it was in port, and another 30 percent got off the ship during the second hour. About one-quarter of the survey respondents returned to the ship during the last hour it was in port, and about 36 percent of those surveyed got back on the ship between one and two hours prior to its departure.<sup>7</sup>

We see in Table 5 that about 27 percent of survey respondents spent between five and six hours in Bar Harbor, and about 70 percent spent between four and seven hours off the ship. Although we'll examine cruise-line sponsored tours in more detail later in the report, for now we'll adjust the hours spent in port to account for the time that the passengers spent on shore excursions. After this adjustment, we see that about 20 percent of the passengers spent three to four hours in Bar Harbor while not on a cruise-line sponsored tour, and about 70 percent of the survey respondents explored Bar Harbor for less than five hours while not on a tour.

Results of the survey indicate that about 55 percent of the respondents “had enough time to see all they wanted” in Bar Harbor, while 45 percent felt they needed additional time in port. Of those that desired more time, about 26 percent would have liked an additional two hours or less, 30 percent wanted between two hours and up to another day of additional time, 19 percent wanted

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<sup>6</sup> Some of the smaller ships, which dock at the Town Pier, stay in Bar Harbor until late at night. For example, the cruise ship Independence typically stayed in port from 7am until 4:30am on the following day.

<sup>7</sup> Our survey methods might have slightly undercounted the percentage of passengers that boarded the ship during the last hour in port. This is because, on some occasions, we handed out our daily allotment of surveys before the last person returned to the ship.

a full day of additional time, and 25 percent desired two days or more of additional time to explore Bar Harbor.

Table 5. Time Spent in Bar Harbor

Hours Spent in Bar Harbor	Percentage of Survey Respondents (n = 2,178)
Less than 2 hours	1%
2 to 3 hours	5%
3 to 4 hours	12%
4 to 5 hours	21%
5 to 6 hours	27%
6 to 7 hours	20%
7 to 8 hours	10%
8 hours or more	4%
Total	100%

Hours Spent in Bar Harbor, Not on Tour	Percentage of Survey Respondents (n = 2,178)
Less than 2 hours	15%
2 to 3 hours	16%
3 to 4 hours	21%
4 to 5 hours	18%
5 to 6 hours	16%
6 to 7 hours	9%
7 to 8 hours	4%
8 hours or more	2%
Total	100%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016. The sample size—e.g., n = 2,178—is shown for each question.

Table 6 presents information on some of the activities (other than cruise-line sponsored tours) that passengers pursued while in port. About six percent of the passengers rode the Island Explorer bus service, and about 44 percent of the respondents took a walk along the shore path. Focusing just on those passengers that visited Bar Harbor on days that the Island Explorer was in operation, the share riding the bus increases to eight percent. Many passengers wrote in the margins

of the survey that they were “unaware” of the free bus service. Over one-half of the survey respondents looked at signs posted around Bar Harbor (see examples below). About one-third of the passengers read “Museum in the Streets” signs—these provide written descriptions about nearby sites—and five percent read more than five of these signs. About 40 percent of the passengers used one or two wayfinder signs to help find their way—these signs have arrows pointing in the direction of town landmarks—and about four percent of those surveyed used the point-of-interest signs more than five times.

Examples of the “Museum in the Streets” and wayfinder signs.



Table 6. Activities (Non-Tour) Pursued while in Bar Harbor

Island Explorer		Percentage of Survey Respondents (n = 2,219)
Rode the Island Explorer		6%
Did not ride the Island Explorer		94%
Total		100%
Island Explorer (Days of Operation)		Percentage of Survey Respondents (n = 1,713)
Rode the Island Explorer		8%
Did not ride the Island Explorer		92%
Total		100%
Shore Path		Percentage of Survey Respondents (n = 2,197)
Walked the Shore Path		44%
Did not walk the Shore Path		56%
Total		100%
“Museum in the Streets” Signs Read		Percentage of Survey Respondents (n = 2,207)
Zero		48%
1 or 2		33%
3 to 5		14%
More than 5		5%
Total		100%
Wayfinder Signs Used		Percentage of Survey Respondents (n = 2,214)
Zero		42%
1 or 2		40%
3 to 5		14%
More than 5		4%
Total		100%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016. The sample size—e.g., n = 2,219—is shown for each question.

Although acquiring data about the local sites that passengers explored while in Bar Harbor is not an exact science, the survey included a series of pictures (and asked passengers to circle the places they “walked past”) to obtain a general idea of the parts of town where the passengers roamed. This information is summarized in Figure 2, which has Harbor Place (indicated with a star) shown as the point where many of the passengers “enter” Bar Harbor.<sup>8</sup> We see in Figure 2 that a common “route” followed by passengers is to walk up Main Street in the direction of the Village Green—57 percent of the survey respondents indicated that they “walked past” this park in the center of town. Lower percentages took a walk along the shore path—44 percent, as shown in Table 6—and 40 percent took a “right-hand turn” from Harbor Place and walked down West Street.

As passengers walk up Main Street in the direction of the Village Green, they encounter Cottage Street after about 230 steps from Harbor Place. Over one-quarter of the survey respondents (27 percent) indicated they walked past the Criterion Theatre (on Cottage Street, located about 140 steps from the corner of Main and Cottage Streets), but only 10 percent of the survey respondents walked down Cottage Street as far as the Hannaford supermarket (which is about 640 steps from the corner of Main and Cottage Streets). Just over one-fifth of the passengers (22 percent) walked along Rodick Street in the block that is shown “above” Cottage Street in Figure 2.

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<sup>8</sup> Most of the ships visiting Bar Harbor anchored in the harbor, and the passengers rode tenders from the ship to Harbor Place. The smaller ships (e.g., American Glory, Independence, Grande Caribe) docked at the Town Pier, which is located next to Harbor Place. On days with multiple large ships in town, one or more vessels used Harbor Place (for the tenders) and a different ship brought passengers ashore at a dock next to the Harborside Hotel.



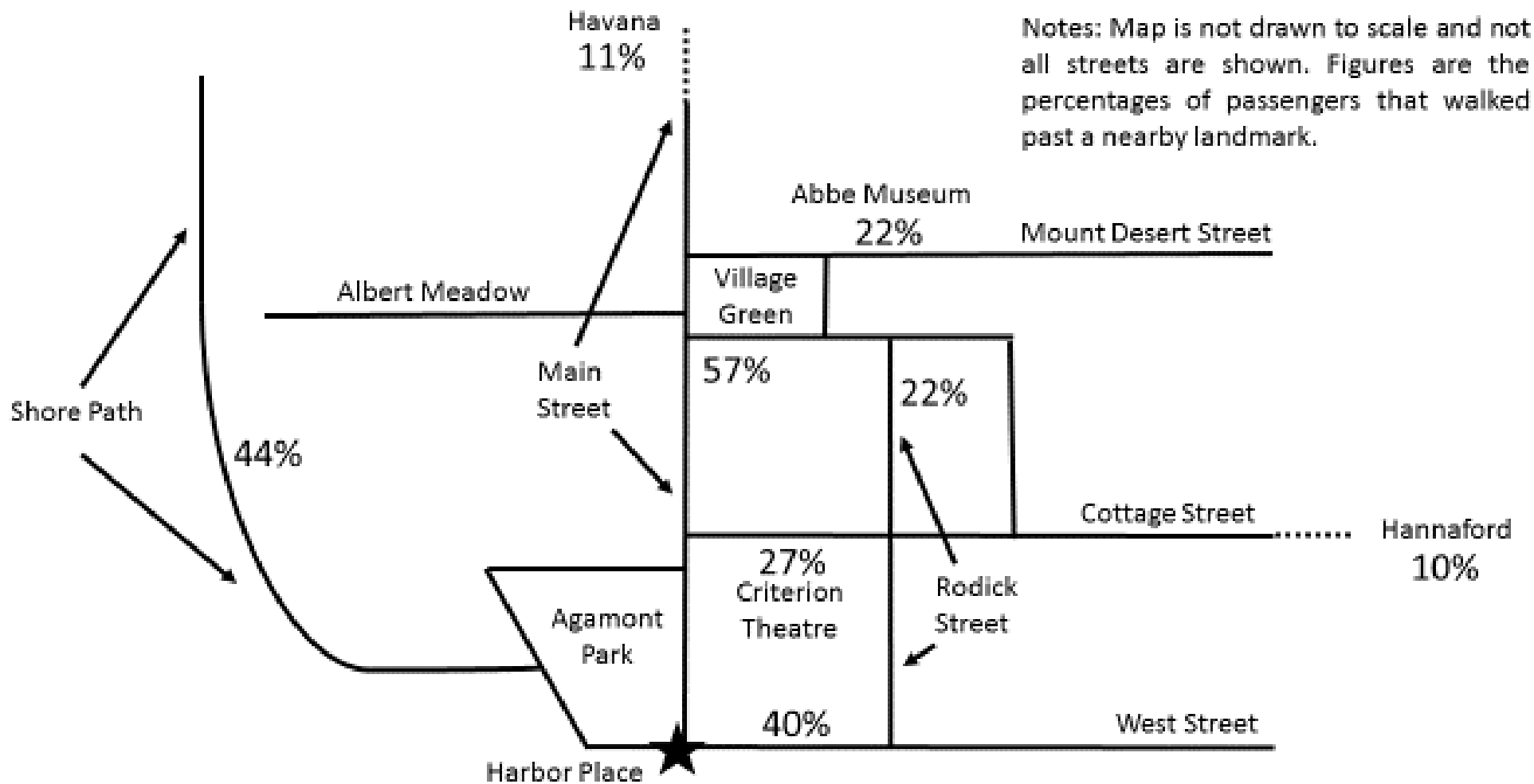


Figure 2. Bar Harbor Landmarks that Passengers “Walked Past” while in Port.

Looking at the top of Figure 2 (and “above” the Village Green on Main Street), we see that 11 percent of the survey respondents walked as far as the Havana restaurant (this is about 600 steps from the Village Green) and 22 percent of the passengers walked past the Abbe Museum. In summary, the results of the survey indicate that about 60 percent of the respondents made it to the Village Green, while about one-in-five walked past locations such as the Abbe Museum and along Roddick Street. Only one-in-ten respondents ventured as far as the Hannaford supermarket (on Cottage Street) and the Havana restaurant (on Main Street)—these sites are about 900 and 1,100 steps away from Harbor Place, respectively, where most passengers enter town.

Along with exploring Bar Harbor by foot, many passengers toured other parts of Mount Desert Island and Acadia National Park. According to the survey of cruise ship passengers, about 60 percent visited Acadia while in port. About 28 percent of respondents indicated that they had visited Acadia during a past visit to Bar Harbor—this percentage is just a little bit lower than the percentage of passengers who indicated that they had previously visited Bar Harbor (see Table 3). In other words, this means that most of the passengers with past trips to Bar Harbor had already visited Acadia National Park.

According to the survey, about 46 percent of the passengers took a cruise-line sponsored tour. By matching the tour names (that the passengers wrote on the surveys) to information on Bar Harbor shore excursions posted on the cruise line websites, we were able to estimate the amount of money spent on cruise-line sponsored tours and the time the passengers were on the tour (the time spent on tours was used to come up with the “adjusted” figures in Table 5). The passengers that reported taking a cruise-line sponsored tour spent an average of about \$75 on the excursion. Figured across people that took tours and those that did not, the survey respondents spent an average of \$34 on cruise-line sponsored tours. Focusing again on survey respondents that took a

tour, these passengers spent an average of three hours on the tour. Figured across all passengers (including those that did not take a shore excursion), the survey respondents spent an average of 1.4 hours on a cruise-line sponsored tour.

To learn more about the other activities pursued by people that took cruise-line sponsored tours, we asked these passengers if they also shopped and ate in Bar Harbor. Of the passengers that took a cruise-line sponsored shore excursion, about 86 percent reported that they shopped in Bar Harbor and 72 percent indicated that they ate in Bar Harbor.

#### 4. ECONOMIC IMPACT OF BAR HARBOR CRUISE SHIP PASSENGERS

Cruise ship passengers generate a local economic impact through the purchases they make in Bar Harbor (and the multiplier effects associated with the spending of the businesses where passengers spend money, and the expenditures of workers in these businesses). As shown in Table 7, over 96 percent of the survey respondents visited at least one store or restaurant/bar, and about one-third of the passengers visited 10 or more places. Over three-quarters of the passengers surveyed spent money in one to four stores and restaurants/bars, and about 13 percent made purchases in five to nine stores and restaurants/bars.

To obtain information about places to shop and eat in Bar Harbor, about 48 percent of the survey respondents indicated that they looked at local marketing materials prior to their arrival in town. Of the passengers that looked at marketing materials, about 35 percent indicated that they had no effect on where they shopped and ate, 34 percent indicated they had a small effect, and 23 percent and 8 percent noted moderate and large effects of the marketing materials, respectively.

About one-quarter of all survey respondents indicated that luggage restrictions affected their purchasing decisions and two percent bought items that they had shipped. The luggage restrictions arise from the fact that the passengers are “living out of a suitcase” on the ship and many flew in an airplane to the port of departure (e.g., Baltimore, Montreal, New York). Survey results show that 61 percent of the passengers flew to the port of departure, 29 percent drove, and 10 percent used another form of transportation.

Table 7. Number of Shops and Restaurants / Bars Visited by Cruise Ship Passengers

Shops and Restaurants / Bars—Visited	Percentage of Survey Respondents (n = 2,122)
Zero	4%
1 to 4	31%
5 to 9	32%
10 to 14	20%
15 to 19	6%
20 or more	7%
Total	100%

Shops and Restaurants / Bars—Spent Money	Percentage of Survey Respondents (n = 2,128)
Zero	7%
1 to 4	79%
5 to 9	13%
10 to 14	0.7%
15 to 19	0.5%
20 or more	0.2%
Total	100%

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016. The sample size—e.g., n = 2,122—is shown for each question.

Table 8 presents information on the expenditures made by Bar Harbor cruise ship passengers. Based on the survey results, we estimate that respondents spent an average of \$108—and \$74 of this amount does not include expenditures on cruise-line sponsored tours. The largest

expenditure items, other than cruise-line sponsored excursions, are meals and drinks, clothing items, and general souvenirs. It is important to note that the average expenditures are based on individuals that did and did not report expenditures for a particular category. For example, the average expenditure of \$8.02 on art does not mean that most (or even many) of the passengers spent that amount on art items. Rather, this average is based on a relatively small percentage of passengers (13 percent) that purchased a piece of art, while most did not.

Table 8. Bar Harbor Cruise Ship Passenger Expenditures

Expenditure Category	Average Expenditure Per Passenger (n = 2,167)
Meals and drinks	\$24.60
Clothing	\$14.36
Souvenirs	\$11.83
Art and jewelry	\$8.02
Recreation and transportation	\$5.34
Groceries and pharmacy items	\$2.44
Books and paper goods	\$2.17
Home furnishings	\$1.70
Other	\$3.64
Cruise-line sponsored tours	\$34.10
Total	\$108.21

Notes: Figures are based on a survey of cruise ship passengers that visited Bar Harbor in 2016.

The total expenditures made by all cruise ship passengers is estimated by multiplying the average spending figures in Table 8 by the number of passengers that “got off the ship” in Bar Harbor. To come up with an estimate of the number of passengers that entered town, we used counts of the number of passengers that we observed getting off the ship (for large vessels, tenders are used to ferry passengers from the ship to the shore) along with information on the share of

passengers that disembarked at certain time intervals. For example, we counted about 329 passengers that got off the Veendam in the first hour that the ship was in port on August, 7, 2016. This count, combined with information from the survey showing that 28 percent of the passengers get off the ship within the first 60 minutes, suggests that 1,175 passengers from the Veendam visited Bar Harbor on that day. This is 87 percent of the Veendam’s capacity.<sup>9</sup> Using this sort of information from 41 passenger counts that were conducted over the course of the summer and fall (in which we came up with a range of percentages of passengers getting off the ship), we estimate that 138,285 cruise ship passengers set foot in Bar Harbor in 2016.<sup>10</sup>

Table 9. Economic Impact of Cruise Ship Passengers that Visited Bar Harbor in 2016

	Direct Impact	Multiplier Effects	Total Impact
Spending	\$14,963,520	\$5,280,046	\$20,243,566
Employment	329	50	379
Labor Income	\$3,813,346	\$1,571,449	\$5,384,795

Notes: The direct spending figure of \$15.0 million is the average per-passenger expenditure multiplied by the estimated number of passengers that got off the ships in Bar Harbor. The direct employment and labor income figures—and the multiplier effects—are estimated using an economic impact model of the local region. The multiplier effects account for the “non-local” component of spending on retail goods and cruise-line sponsored tours. The direct employment of 329 workers, which is a combination of full- and part-time jobs, is adjusted to account for the fact that the cruise ships visited Bar Harbor over a six-month period of April 29 to October 29.

<sup>9</sup> A study by Business Research and Economic Advisors (2012) found that an average of 88 percent of cruise passengers got off the ship across a variety of ports, with a range of “85 percent or less” to “90 percent or more” of the passengers disembarking the ship in certain ports.

<sup>10</sup> This estimate of 138,285 passengers accounts for the ships that had to cancel their visits due to weather (e.g., the Independence cancelled several visits because of high winds) and the total passenger count is based on an assumption that “all” of the passenger disembarked from the small ships that docked at the town pier (e.g., these ships do not use tenders and some of them are in Bar Harbor for close to 24 hours). Although the visitor count does not include Independence passengers on the days the ship cancelled due to weather, some of these people may have visited Bar Harbor because the ship docked elsewhere and “bussed” the passengers into town.

Table 9 presents information on the estimated local economic impact of the cruise ship passengers that visited Bar Harbor in 2016. The direct spending figure of \$15.0 million is the average per-passenger expenditure multiplied by the estimated number of passengers that got off the ships in Bar Harbor. In order to translate this spending into a local economic impact, the expenditures made on retail goods and tours are adjusted to account for the “non-local” component of spending on retail goods and cruise-line sponsored tours. After making these adjustments, the direct spending of cruise ship passengers visiting Bar Harbor in 2016 supported an estimated 329 jobs and \$3.8 million in labor income.<sup>11</sup> Including multiplier effects, explained below, the cruise ship passengers had an estimated annual economic impact of \$20.2 million in local spending, 379 jobs (full- and part-time, and seasonal) and \$5.4 million in labor income.

The multiplier effects shown in Table 9 are the additional spending, employment and labor income (e.g., wages and salaries) in the area that are supported by the purchases of businesses and workers that are impacted by the cruise ship passengers. The IMPLAN model, which is used to estimate the multiplier effects, is an input-output framework that traces the flows of expenditures and income through the economy with a complex system of accounts that are uniquely tailored to the region. Underlying these accounts is information regarding transactions occurring among local businesses, the spending patterns of households, and transactions occurring between local business and households and the rest of the world. Some of the data sources used to develop the IMPLAN model include County Business Patterns of the U.S. Census Bureau, Regional Economic

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<sup>11</sup> The direct employment of 329 workers, which is a combination of full- and part-time jobs, is adjusted to account for the fact that the cruise ships visited Bar Harbor over a six-month period of April 29 to October 29. This means that the direct employment can be thought of as a “seasonal” impact.

Information System (REIS) data and input-output accounts from the U.S. Bureau of Economic Analysis, and ES-202 statistics from the U.S. Bureau of Labor Statistics.

## 5 FINAL THOUGHTS

Bar Harbor’s cruise ship industry has experienced substantial growth over recent decades and, in 2016, the port had a scheduled 117 cruise ship visits, with these vessels having a capacity of about 163,000 passengers and 69,000 crew members. The cruise ship passengers are involved in a wide variety of activities when visiting Bar Harbor—e.g., they shop in local stores, explore the town, walk along the shore path, and visit Acadia National Park. The time spent in Bar Harbor appears to have left a favorable impression on the passengers. As noted in a previous section, about 44 percent of the survey respondents would have liked to have had at least one more day in port. Furthermore, survey results show that about 29 percent of the respondents stated an intent to return to Bar Harbor in the next two years.<sup>12</sup>

The survey included an open-ended question about the passengers’ impressions of Bar Harbor and most of the feedback was positive. The most common adjective used to describe Bar Harbor was “beautiful” and many passengers expressed a desire to return.<sup>13</sup> The cover of this report has a word cloud of responses to the open-ended question that asked for comments about Bar Harbor. To make the word cloud, we started with the surveys that included comments to the open-ended question and then took a random sample of about 500 of these respondents. The use of a

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<sup>12</sup> This percentage of passengers expressing a “plan” to return to Bar Harbor is close to the one-third of passengers with similar intentions estimated in our 2002 cruise ship passenger study (Gabe, Lynch, McConnon and Allen, 2003; Gabe, Lynch and McConnon, 2006).

<sup>13</sup> The survey included a question about plans to return to Bar Harbor in the next two years. Some responses to the open-ended question expressed a desire to return, but not within that short of a time frame.



large random sample means that the word cloud is likely to be representative of the entire group of survey respondents.

In addition to the expenditure-based impacts of passengers that are estimated in this report, the cruise ship industry may have other impacts on the local community (e.g., congestion on days when large numbers of passengers visit; showcasing the area to potential future land-based visitors; impacts on the harbor and working waterfront; expenditures made by crew; payments to ship pilots; passenger fees paid to the Town of Bar Harbor). This means that the information presented in this report should be used as a part of the evidence, but not the whole, in evaluating the overall impacts of cruise ship tourism in Bar Harbor.

## APPENDIX A: Survey Dates and Ships

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Date	Ship
May 29	Veendam
May 30	Grandeur of the Seas
	Independence
June 26	Independence
	Veendam
June 27	Grandeur of the Seas
July 8	Veendam
July 10	Independence
	Veendam
July 21	Rotterdam
August 7	Veendam
August 8	Grandeur of the Seas
August 14	Independence
August 18	American Glory
August 19	Veendam
August 20	Grande Caribe
August 21	Veendam
August 28	Independence
September 5	Grandeur of the Seas
September 8	Summit
September 10	Zuiderdam
September 21	Norwegian Gem
October 6	Norwegian Dawn
October 18	Regal Princess
	Serenade of the Seas
October 21	Rotterdam
	Silver Whisper
	Sirena
October 22	Crystal Serenity
October 25	AIDAdiva
	Serenade of the Seas

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## APPENDIX B: Cruise Ship Passenger Questionnaire

Notes: We used multiple versions of the survey with different expenditure questions. For example, the survey that is shown below asks the respondent (Question 11) to “report the money that you personally spent in town.” Other versions of the survey asked about the “money that you and others in your group spent.” The spending figures used in the economic impact analysis are converted into per-passenger expenditure amounts. The surveys also had different sets of pictures (Question 20) to determine the areas of town that the passengers explored.

NAME OF SHIP: \_\_\_\_\_

Q1. Approximately what time did you get off the ship? \_\_\_\_\_

Q2. Approximately what time did you re-board the ship? \_\_\_\_\_

Q3. Before this trip, had you ever visited Acadia National Park (e.g., Cadillac Mountain, Thunder Hole, Sand Beach, Sieur de Monts Spring)?  Yes  No

Q4. During this trip, did you visit Acadia National Park?  Yes  No

Q5. Did you take a cruise-line sponsored tour?  Yes  No

If yes, what tour did you take? \_\_\_\_\_

If you took a tour, did you also shop in Bar Harbor?  Yes  No

If you took a tour, did you also eat in Bar Harbor?  Yes  No

Q6. Did you have enough time to see all you wanted in Bar Harbor?  Yes  No

If no, how much more time would you need? \_\_\_\_\_

Q7. Did you ride the Island Explorer (i.e., free bus service)?  Yes  No

Q8. Did you take a walk along the shore path?  Yes  No

Q9. How many “Museum in the Streets” signs did you read?

- Zero  1 or 2  
 3 to 5  More than 5



Q10. How often did you use the point-of-interest (i.e., wayfinder) signs?

- Never  1 or 2 times  
 3 to 5 times  More than 5 times



The next few questions ask about the money you spent, and the stores and restaurants that you visited while in Bar Harbor. Please report the money that you personally spent in town—do not include money paid to the cruise line for a tour or money spent by others in your group.

Q11. Spending on...	Meals and drinks:	\$ _____
	Souvenirs (e.g., magnet, lighthouse):	\$ _____
	Clothing:	\$ _____
	Art and jewelry:	\$ _____
	Groceries and pharmacy items:	\$ _____
	Home furnishings:	\$ _____
	Books and paper goods:	\$ _____
	Recreation and transportation: (e.g., admissions, taxis)	\$ _____
	Other: _____	\$ _____
	Total Spending:	\$ _____

Q12. About how much money did you expect to spend? \$ \_\_\_\_\_

Q13. About how many stores and restaurants/bars did you visit? \_\_\_\_\_

Q14. In about how many stores and restaurants/bars did you spend money? \_\_\_\_\_

Q15. Please list the names of a few stores and restaurants/bars that you visited.

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Q16. Did a luggage restriction affect how much you purchased?  Yes  No

Q17. Did you purchase any goods that you had shipped?  Yes  No

Q18. Please list any goods or services that you would like to have purchased, but were unable to find, in Bar Harbor.

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Q19. Did you look at any Bar Harbor brochures or marketing materials before you arrived?  
 Yes  No

If yes, to what extent did they affect where you shopped and ate?

No effect  Small effect  Moderate effect  Large effect

Q20. Please circle the pictures below if you walked past these places in Bar Harbor.



I did not walk past any of these places

Q21. How important was the stop in Bar Harbor to the cruise you selected?

Not important  Moderately important  It's the main reason I selected this cruise

Q22. Did you fly or drive to your port of embarkation?  Fly  Drive  Other

Q23. Including this trip, how many cruise vacations have you taken? \_\_\_\_\_

Q24. Including this trip, how many times have you visited Bar Harbor? \_\_\_\_\_

Q25. Do you plan to return to Bar Harbor within the next two years?  Yes  No

Q26. Will you travel elsewhere in Maine within the next two years?  Yes  No

Q27. For each of the four choices below, please select the option that best describes you:

- |   |           |   |
|---|-----------|---|
| <input type="checkbox"/> Travel alone or in a small group | <b>OR</b> | <input type="checkbox"/> Travel with a large group                  |
| <input type="checkbox"/> Follow a plan of sights to see   | <b>OR</b> | <input type="checkbox"/> Explore with no plan                       |
| <input type="checkbox"/> Read about sites to see          | <b>OR</b> | <input type="checkbox"/> Talk to others about sites to see          |
| <input type="checkbox"/> Printed materials (e.g., books)  | <b>OR</b> | <input type="checkbox"/> On-line sources (e.g., Facebook, websites) |

Q28. What is your gender and age?  Female  Male \_\_\_\_\_ Years Old

Q29. What is your highest level of education?

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Less than high school | <input type="checkbox"/> High school diploma | <input type="checkbox"/> 2-year college degree       |
| <input type="checkbox"/> 4-year college degree | <input type="checkbox"/> MA / MS degree      | <input type="checkbox"/> Ph.D. / Professional degree |

Q30. What is your annual household income (in U.S. dollars)?

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Less than \$25,000   | <input type="checkbox"/> \$25,000 to \$49,999   | <input type="checkbox"/> \$50,000 to \$74,999 |
| <input type="checkbox"/> \$75,000 to \$99,999 | <input type="checkbox"/> \$100,000 to \$150,000 | <input type="checkbox"/> More than \$150,000  |

Q31. Where are you from? \_\_\_\_\_ (city, state, country)

Comments about Bar Harbor:

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## REFERENCES

- Business Research and Economic Advisors. 2012. "Economic Contribution of Cruise Tourism to the Destination Economies: A Survey-based Analysis of the Impacts of Passenger, Crew and Cruise Line Spending." Prepared for: Florida-Caribbean Cruise Association.
- Gabe, Todd and Thomas Allen. 2006. "Economic Impact of Cruise Ships in Maine: 2005 Passenger and Crew Expenditures in Bar Harbor and Portland." Department of Resource Economics and Policy, University of Maine, Staff Paper 558.
- Gabe, Todd, Colleen Lynch and James McConnon, 2003. "The Impact of Cruise Ship Passengers in Maine: The Example of Bar Harbor." *Maine Policy Review*, Vol. 12, No. 3.
- Gabe, Todd, Colleen Lynch and James McConnon, 2006. "Likelihood of Cruise Ship Passenger Return to a Visited Port: The Case of Bar Harbor, Maine." *Journal of Travel Research*, Vol. 44, No. 3.
- Gabe, Todd, Colleen Lynch, James McConnon and Thomas Allen. 2003. "Economic Impact of Cruise Ship Passengers in Bar Harbor, Maine." Department of Resource Economics and Policy, University of Maine, Staff Paper 518.
- Gabe, Todd and James McConnon, 2009. "Economic Impact of Cruise Ship Passengers in Portland, Maine." School of Economics, University of Maine, Staff Paper 578.