

Agenda
Bar Harbor Cruise Ship Committee
Thursday January 9, 2020 @ 1:00 PM
Bar Harbor Municipal Building — Council Chambers

- I. CALL TO ORDER WITH ROLL CALL**
- II. PUBLIC COMMENT PERIOD (UP TO 15 MINUTES)**
- III. APPROVAL OF MEETING MINUTES (December 10, 2019)**
- IV. ADOPTION OF AGENDA**
- V. REGULAR BUSINESS**
 - a. Updated SOP**
 - b. CCNA update**
 - c. Final budget**
 - d. Draft of year-end review report (to include environmental monitoring and Professor Gabe's report)**
 - e. Air monitoring recommendation to Town Council**
- VI. OTHER BUSINESS**
- VII. COMMITTEE COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS**
- VIII. ADJOURNMENT**

Minutes
Bar Harbor Cruise Ship Committee
Tuesday December 10, 2019 @ 1:00 PM
Bar Harbor Municipal Building — Council Chambers

Attendance:

Chair Eben Salvatore and committee members Stephen Coston (Town Councilor), “Skip” Prentice Strong, Jeff Dobbs (Town Councilor), Katy DeGrass, Jim Willis (Chief of Police), Sandy McFarland, Sarah Flink, Ken Smith and Michele Gagnon (Planning Director).

Amy Powers, Charlie Phippen (Harbormaster), Greg Gordon, and Martha Searchfield were excused.

Presently, there are three vacancies on the committee.

As of August 1, 2019, Skip Strong and Amy Powers are non-voting members. Ms. Gagnon did not vote. Therefore, the voting membership for the meeting was eight.

Town staff in attendance included Manager Cornell Knight, Stan Harmon, and Katie Rodgers.

I. CALL TO ORDER

Chair Salvatore called the meeting to order at 1:02 PM.

II. ADOPTION OF AGENDA

Mr. Willis made a motion to adopt the agenda as prepared. Mr. Dobbs seconded the motion. The motion carried unanimously (8-0).

III. APPROVAL OF MINUTES (October 24, 2019)

Mr. Dobbs made a motion to adopt the minutes from the October 24, 2019 meeting. Mr. Willis seconded the motion. The motion carried unanimously (8-0).

IV. PUBLIC COMMENT PERIOD

James O’Connell asked why is it that the town works to accommodate cruise ship passengers when the cruise ship industry is not a good steward of the environment.

V. STAFF REPORTS

Mr. Willis explained that he adjusted the FY 2021 Police Department budget to mirror how the department operated this past season. He added that his plan is to have one dedicated police officer down at the harbor on cruise ship days. He added that this is consistent with the recently submitted CLIA report.

VI. REGULAR BUSINESS

- a. Air emission monitoring at the harbor and recommendation to the Town Council**

Mr. Salvatore referred to an informal cruise ship analysis that was part of the package back in 2015 which included information on air emission monitoring. Mr. Dobbs mentioned that the best place to measure air emission would be Schoodic. It was decided that Mr. Salvatore would report to the Council on what the cruise ship committee has learned. Mr. Salvatore also mentioned that Jane Disney will be the scientific representative for the committee.

b. Professor Gabe's Study

Todd Gabe, a Professor of Economics at the University of Maine, presented his research on the effects of cruise ship passengers on sidewalk pedestrian traffic in Bar Harbor. The paper will be submitted to an academic journal. He gathered data based on the principle of the moving observer over a distance of 100 feet. He found a correlation (as expected) between cruise ship passengers and pedestrian traffic on the sidewalks. The impacts of cruise ship passengers disappears at about 2,000 feet from Harbor View Park. The more cruise ship passengers there are, the slower the walking speed. This is felt within 1,400 feet from Harbor View Park. On average, using a weighted method, within 100 feet of Harbor View Park, Mr. Gabe observed three people on non-cruise ship days and was able to cover the 100-foot distance in 20 seconds. He observed 11 people on cruise days with the 3,500-passenger cap and covered the distance in 22 seconds; and finally he observed 12 people on cruise ship days with the 4,200-passenger cap and covered the distance in 25 seconds.

Jill Goldthwait mentioned that, in her experience, there are a lot more than 12 people within arm's length on cruise ship days. Mr. Gabe explained that this number is weighted across the entire year (12 months) and the entire tourism district, thus providing a baseline. For example, he said that one of the data count (not weighted) showed 54 people within 100 feet on Cottage Street after 7 PM. And, at that time, his walking speed dropped to 1.6 feet per second.

Stephanie Clements from Friends of Acadia asked for unweighted data. She would like to have the average number of passengers there is within 100 feet only during the summer months.

There was also interest in knowing what the impacts are when exceeding the passenger cap in August.

c. CLIA budget comments

Mr. Salvatore acknowledge an email dated October 23, 2019 was received regarding passenger fees.

d. FY 2021 Budget review

Town Manager Cornell Knight explained the changes to the proposed FY 2021 budget dated 12/9/2019.

VII. PUBLIC COMMENT PERIOD

Mr. O'Connell made comments (consistent to an email he sent the committee on 12/8/2019).

VIII. ITEMS FOR NEXT AGENDA

- a. Updated SOP
- b. CCNA update
- c. Final budget
- d. Draft of year-end review report (to include environmental monitoring and T. Gabe's report)

IX. SET MEETING DATE AND TIME

The next meeting was scheduled for January 9, 2019 at 1:00 PM.

X. ADJOURNMENT

The meeting was adjourned at 2:56 PM by a motion by Mr. Smith, seconded by Mr. Dobbs. It passed unanimously (8-0).



2019 Cruise Ship Committee Annual Report

Per the adopted Cruise Ship Committee Mission we advise the Town Council as follows:

A. “ Conduct a yearly review of Cruise Season to identify operational and environmental issues”

Operational-

- We have received and reviewed a report titled “Cruise Tourism & Traffic Report” submitted by Operations & Maritime LLC. This report was commissioned by CLIA as a result of several meetings with Town officials. Some of the items were implemented on a trial basis during the Fall season. Several stakeholders worked with the Town during this trial period with the common goal of improving the operation for all. We are working on making these improvements permanent by updating the Ground Ops SOP prior to the 2020 season.
- The Committee passed a motion (September 12 meeting) to engage Tom Crikelair in providing assistance with the long term recommendations identified in the CLIA report and coordinate with Acadia National Park’s Transportation Plan. This motion can be incorporated into the subsequent Council action of deferring an almost identical request from the Chamber to study the same.
- There are some longer term improvements that were part of the CLIA report we have not yet reviewed.
- Several other minor operational items were discussed and addressed through-out the season.
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Environmental-

- We conducted a preliminary review of Air Quality Monitoring at your request. The detail of that are addressed below. There are no other environmental issues to report on at this time.

- MDEP representatives toured the Zaandam on July 19th. They were guided by Michael Kaczmarek, SVP of Marine Technology for Carnival Cruise Lines.
- B. “Conduct a yearly review of passenger service fees, port development fees, and the use and allocation of these funds”
- We have reviewed the FY 20 budget and recommend approval as presented.
 - We do not recommend a fee increase for FY20 at this time.
- C. “Maintain and further industry relations and communications”
- Committee Member Skip Strong and Charlie Phippen continue to monitor the possibility of improving the breakwater. The Army Corp of Engineers has surveyed the site and will report back with their findings.
 - Committee Members ___ and ___ attended the 2018 CCNE Symposium
 - Committee Members --- attended Sea Trade in___
- D. “Provide Yearly Report to Council”
- included
- E. “ Make recommendations to the Town Council regarding Cruise Ship visitation”
- We are not recommending any change regarding visitation at this time. We anticipate that the implementation of some of the longer term improvements identified in the CLIA report will require Council discussion and action. We should have these on paper soon for discussion.

2019 re-cap

- There were 177 ship visits reserved with a total LBC of 275,198 Passengers
- 54 of the ships were foreign arrivals
- We had 18 ships that canceled (mostly poor weather)- 23,498 passengers

2020 season

- There are 197 ships booked
- Total LBC reserved is 296,046
- 61 Foreign Arrivals
- First ship April 25 (Victory II)
- Last ship November 3 (Silver Whisper)
- There are 4 Maiden Voyage calls
 - Norwegian Pearl -5/27 965' 2376 pax
 - Norwegian Breakaway -9/2 1068' 3963 pax
 - Sky Princess -9/22 1083' 3560 pax
 - Azora -9/29 620' 298 pax

2019 activity:

1. The Committee met 9 times in 2019
2. Reviewed *Cruise Tourism & Traffic Report* per Council request
 - a. Identified and implemented many short term items
 - b. Identified long term items for future discussion
 - c. Dismissed items for no further action
3. Received updates from the Harbor Master and Captain Skip Strong on the potential Breakwater Repair project

4. A 10 mile extension of the approach to the existing shipping channel was implemented by the Penobscot Bay & River Pilots and CLIA member lines per organized discussions with Me Dept of Marine Resources representatives and local fishermen. The extensions to both the eastern and southern approaches to Frenchman Bay have made it on to both - the raster and vector charts.
5. Received request from Council regarding Air Quality
 - a. Reviewed a Maine DEP Air Emissions Study
 - b. Received several updates and data regarding the existing station on Mcfarland Hill
 - c. Reviewed cost estimates on monitoring equipment as provided by MDEP's Andy Johnson.
 - d. Reviewed monitoring efforts done by other ports
 - e. Reviewed CLIA provided exhibits regarding Air emissions data provided by CLIA regarding design, operation and oversight of Air Emissions and Advanced Gas Scrubber Technology.
 - i. "Sustaining the Seas we Sail" (attached)
 - ii. Several other informative documents regarding air emissions.
 - f.
6. Reviewed "Effects of Cruise Ships on Sidewalk Pedestrian Traffic in Bar Harbor?", a study done by Professor Todd Gabe. This was a Council request from 2017.

Air Monitoring Program Details

Motion from Council Aug 6 2019 meeting- *"Ask the Town Manager to work with the Cruise Ship Committee on an air-monitoring program and report back to the Town Council."*

We first discussed this request at our August 15 meeting. Cornell reported that he had discussed the idea of Bar Harbor installing an Air Quality station near the Town Pier with Andy Johnson of Maine DEP. Mr. Johnson is the Director of Air Quality Assessment Division with the DEP. Mr. Johnson met with Cornell in Bar Harbor on September 5th and reviewed the concept, as well as possible locations for monitoring equipment.

As Cornell gathered information he made contact with several other DEP individuals that had already reviewed how Cruise Ships impact air quality in Bar Harbor, using data from an air quality station that already exists in Bar Harbor. We were provided a copy of a 2015 analysis conducted by the DEP of the possible impacts from cruise ships. The report analyzed data each day for 5 ½ months. The end result was summarized as “there wasn’t a consistent enough signal at this site to warrant a more thorough analysis of the data”. A copy of the report is attached.

We were also provided cost estimates of \$86,000 for the base line equipment needed to conduct our own testing, along with a variety of sources for the equipment.

So far a suitable site to house the equipment has not been identified. In addition to the equipment cost there would need to be regular calibrating and monitoring of the station. DEP would help analyze the data but not provide daily monitoring.

The report used data from the air monitoring site on McFarland Hill. There is a second station on Cadillac Mountain.

The wind direction is almost always away from town.

We anticipate the Maine Department of Environmental Protection will release a Vessel Air Emissions Study in 2020. This report will likely provide better details on the issue which we will review and advise.

Impact Study Details

- This was requested by Council on January 17, 2017 during a discussion regarding the future planning for cruise ships and whether our current caps were aligned with the industry trends. 4 dates were approved to exceed the summer caps and it was agreed that the Cruise Ship Committee would formulate a way to measure the impact.
- Professor Gabe personally conducted over 2000 collections of data. (report attached)

- The impact of cruise ships in general decreases as you move away from Harborplace.
- At 250 feet away the impact of the Anthem of the Seas vs. the current cap is 1 person per 100 feet (figure 5).
- For every 100 passengers the sidewalk traffic increases .09 people per 100 feet.
- The busiest data points were in the evenings after the ships had departed.

DRAFT

SUSTAINING THE SEAS WE SAIL

The Cruise Industry's Commitment to Protecting and Preserving the Environment



Sustainability lies at the heart of all we do. Every day, the global cruise industry is hard at work protecting and sustaining the environment through bold leadership, innovative stewardship, and strong strategic partnerships.

The global cruise industry has committed to reduce the rate of carbon emissions across the industry fleet 40 percent by 2030 over a 2008 baseline.

We embrace the International Maritime Organization (IMO)'s ambition for carbon-free shipping as soon as possible this century. Our commitment to reduce the rate of carbon emissions is the first step toward that goal.

CLIA Cruise Lines are pursuing emissions reductions through a host of ambitious goals and new innovations.

- Carnival Corporation & plc achieved its 25% carbon intensity reduction goal in 2017, three years ahead of its 2020 target date. Carnival Corp. & plc encompasses major brands including Carnival Cruise Line, Princess Cruises, Holland America Line, Seabourn, Cunard, AIDA Cruises, Costa Cruises, P&O Cruises and P&O Australia.
- Royal Caribbean Cruises Ltd. has committed to reduce the rate of carbon emissions by 35% by 2020. RCL encompasses major brands: Royal Caribbean International, Celebrity Cruises, Silversea, TUI Cruises, Pullmantur, and Azamara Club Cruises.
- Royal Caribbean Cruises Ltd is also working with the Swiss-Swedish leading power technology company ABB to develop and deploy the world's first fuel cell system, an emissions-free approach to electricity, on a luxury cruise ship.
- AIDA Cruises launched the first cruise ship to be fully powered by liquefied natural gas (LNG) in December 2018. It is the first of 25 LNG ships on order industry-wide.
- When possible, CLIA Cruise Lines use electric shore power when in port – significantly reducing ship emissions. The Port of Montreal recently invested more than \$11 million dollars to install shore power capabilities for wintering vessels and cruise ships with an expected reduction of 2,800 tonnes of greenhouse gas emissions per year.

What other industries do on land, we must do at sea – a challenge that requires constant innovation.

- CLIA Cruise Lines use advanced water treatment systems and never discharge untreated sewage at sea – a policy which exceeds international maritime regulations.
- Cruise ships recycle 60 percent more waste per person than the average person does on land. In fact, CLIA Cruise Lines recycle 80,000 tons of paper, plastic, aluminum and glass each year.
- Many cruise lines conserve water by capturing condensation and recycling it for uses such as deck washing, machine operations and laundry. Water-reduction technology, including sink aerators, reduced-flow dishwashers and low-consumption laundry also help conserve water.

Sustaining the Seas We Sail

- 93% of the cruise industry has eliminated plastic straws or provides them only on demand.**
- Many CLIA Cruise Lines have made a commitment to reducing or eliminating single use plastics.
 - MSC Cruises replaced plastic straws with 100% compostable or biodegradable alternatives and has committed to replacing all single-use plastics with available alternatives by March 2019.
 - Silversea and Oceania produce water on board, eliminating the need for plastic water bottles.
 - Many CLIA Cruise Lines have moved away from single-use toiletries in staterooms.
- Waste cooking oil is typically strained to remove debris and then collected and brought ashore for recycling in the bio-diesel market where feasible.

No industry has a stronger interest in protecting the oceans we sail and the destinations we visit than the cruise industry. It is not simply our responsibility: operating sustainably is a business imperative.

To advance environmental sustainability, the global cruise industry has forged significant partnerships with global conservation groups and NGOs.

- Carnival Corporation has supported The Nature Conservancy's Mapping Ocean Wealth program since 2014. The program measures the benefits of ocean habitats, like coral reefs and mangroves, to local economies and promotes environmental conservation of these valuable resources.
- Seabourn's partnership with UNESCO promotes sustainable tourism at World Heritage sites. Seabourn provides guests with onboard educational talks by experts, offers guided tours of these sites, and coordinates financial support from the tours to UNESCO's World Heritage Fund.
- MSC Cruises has partnered with Marevivo, an Italian marine conservation association that works worldwide to advance sustainable development, biodiversity conservation and marine protected areas.
- Norwegian Cruise Line partnered with relief organization All Hands and Hearts to raise over \$2.5 million for hurricane recovery in the Caribbean,

supporting community relief efforts such as the rebuilding of pre and primary schools in Morne Prosper Village, Dominica.

- As part of their five-year partnership, Royal Caribbean Cruises Ltd. and the World Wildlife Fund are collaborating on campaigns to build greater passenger awareness about ocean conservation.
- CLIA is a member of United for Wildlife and the U.S. Wildlife Trafficking Alliance to help travelers recognize and avoid purchasing illegal wildlife products.

The cruise industry is committed to the health of the world's oceans, marine life, and marine environments.

CLIA Cruise Lines lead a range of efforts to sustain and improve ocean health, marine life, and marine environments.

- Norwegian Cruise Line is helping restore severely degraded coral reefs in the Great Stirrup Bay, Cayman Islands. Norwegian supports local efforts to grow reef fragments in nurseries which will help renew local reefs, and is working with researchers to collect crucial data and implement proven restoration techniques.
- In 2018, Silversea launched a partnership with ORCA, one of the UK's leading marine conservation charities. Silversea is assisting ORCA by helping them collect critical sightings data of whales, dolphins, and porpoises.
- Holland America Line teamed up with NOAA and the University of Alaska Southeast to offer guests a unique experience to view humpback whales and other wildlife aboard small research vessels. While guests gain an understanding of the local wildlife from guides, plankton samples, feeding patterns, and other data is collected and used to further the organizations' understanding of the species and habitat.
- Royal Caribbean, in partnership with WWF, conducted Fishery Improvement Projects in Peru and Ecuador, establishing better standards for mahi-mahi fishing in the region, and helping these communities achieve Marine Stewardship Council certification.

* In the U.S.

** By capacity for fleets with greater than 2,000 cabins.

Effects of Cruise Ships on Sidewalk Pedestrian Traffic in Bar Harbor

This is NOT Bar Harbor...
it's New York!

Todd Gabe
Bar Harbor Cruise Ship Committee
December 10, 2019



Source: New York Times

Think about the last “big event” you attended



Source: Daily Free Press



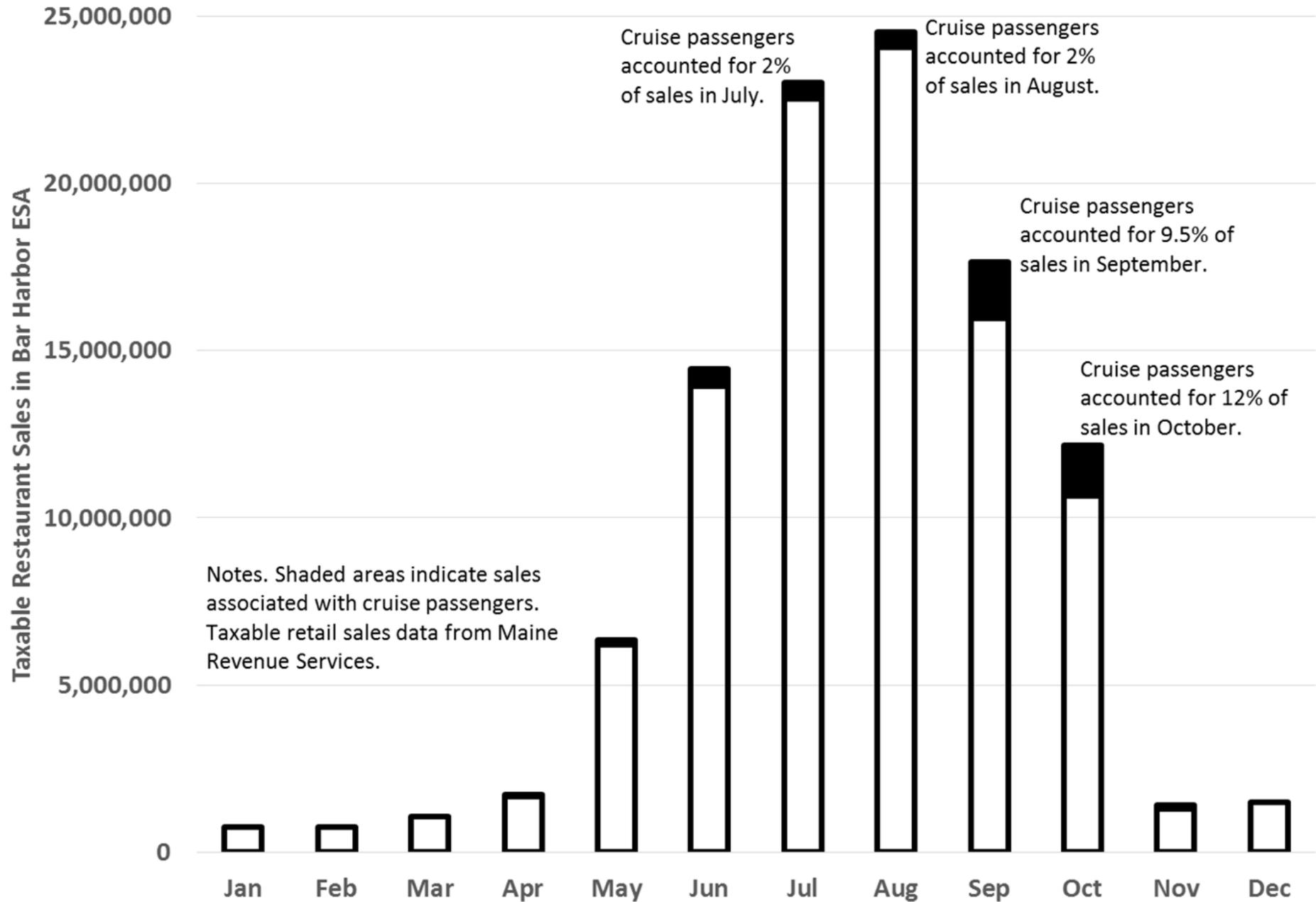
Source: Associated Press

Cruise passengers in Bar Harbor

- About 180 ships in 2018, with about 250,000 passengers
- Over 60 percent of passengers in September and October
- Daily cap of 3,500 passengers in July and August
- “Demonstration project” of 4,180 passengers on August 27, 2018



Figure 1. Cruise Passengers and Bar Harbor Restaurant Sales, 2018



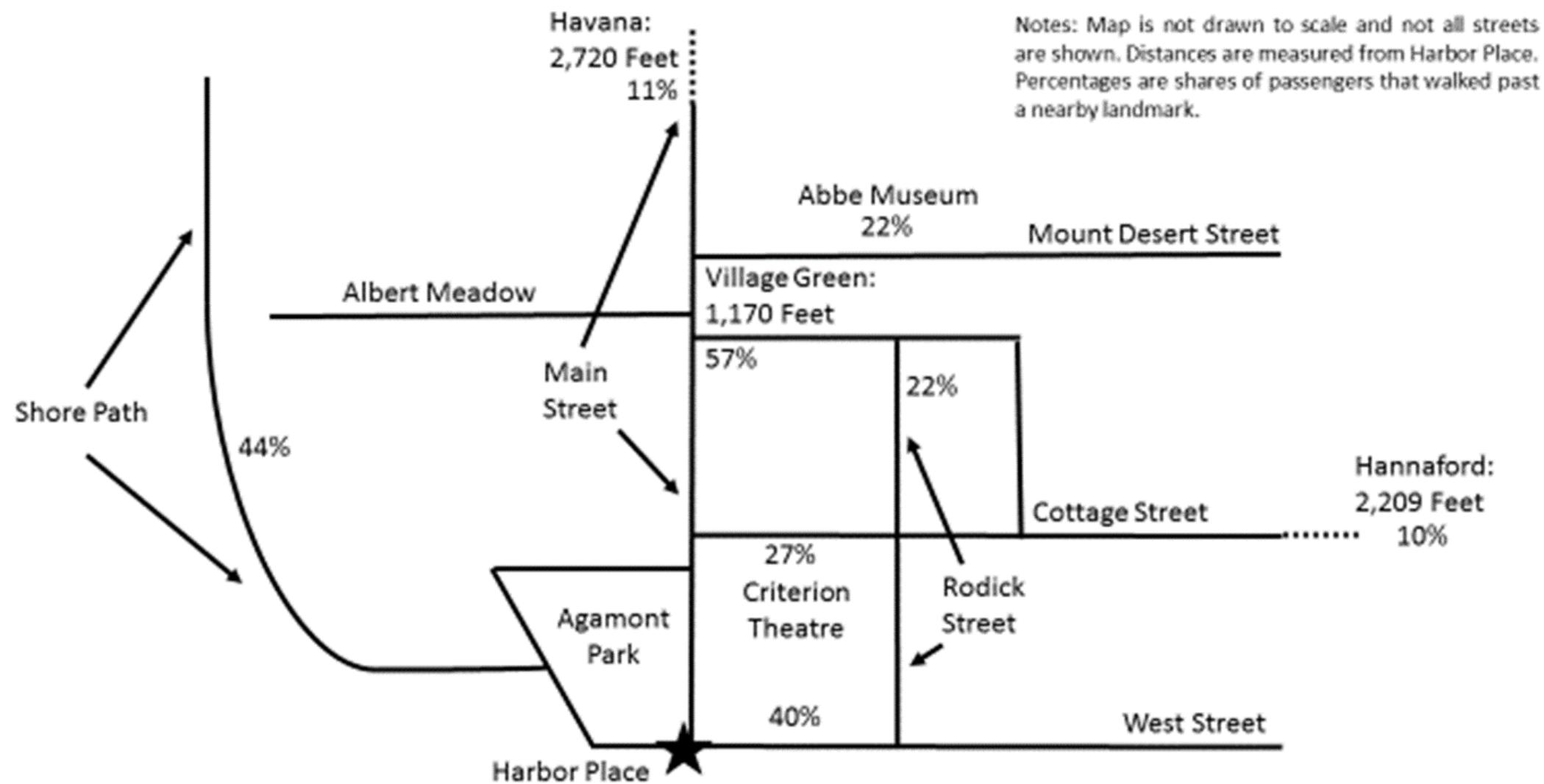
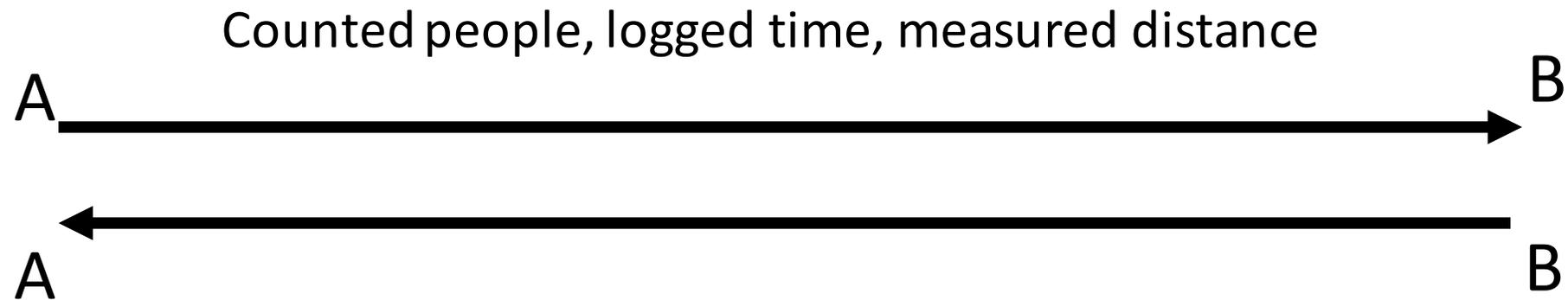


Figure 2. Bar Harbor Landmarks that Passengers "Walked Past" while in Port

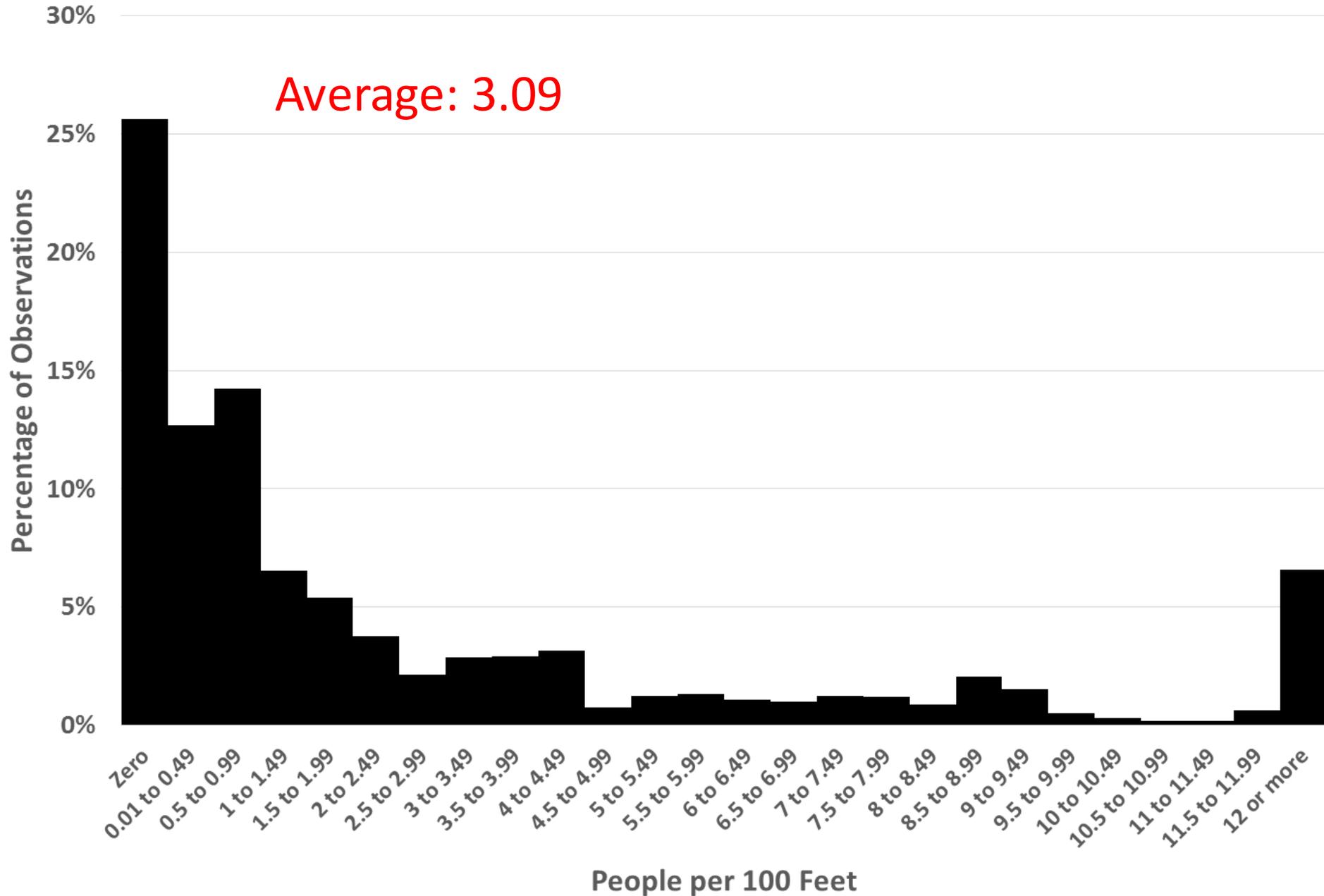
Data collection

- Over 2,000 pedestrian counts on sidewalks, 7/2017 to 12/2018.



- Average speed of 4.88 feet per second

Figure 3. Pedestrians Counted per 100 Feet of Bar Harbor Sidewalks



Effects of pedestrians on walking speeds (n=2,031)

Variable	Estimated Coefficient	Standard Error
Constant	5.145***	0.038
People per 100 Feet	-0.076***	0.004
Treacherous Sidewalks	-0.610***	0.143
Raining	-0.122	0.082
Snowing	0.104	0.253
R-squared	0.280	

Figure 4. Effect of Sidewalk Congestion on Walking Speeds



Effects of passengers on sidewalk pedestrian traffic

- Dependent variable: People per 100 feet
- Explanatory variables: Time of day, street, number of cruise passengers in port, distance from Harbor Place, passengers x distance, day-specific dummy variables (66 different days)



Effects of passengers on sidewalk pedestrian traffic (n=2,031)

	Model 1	Model 2	Model 3	Model 4
Passengers, 100s	0.087***	0.178***	0.079**	0.165***
	(0.006)	(0.015)	(0.033)	(0.035)
Passengers x Dist	NA	-0.00008***	NA	-0.00008***
		(0.00001)		(0.00001)
Day Dummies	No	No	Yes	Yes
R-squared	0.466	0.494	0.662	0.694

Effect equals “zero” at about 2,000 feet from Harbor Place... e.g., near McKay’s (on Main Street)

Effects of passengers on sidewalk pedestrian traffic

- 100 additional passengers increases sidewalk traffic by 0.09 people per 100 feet across entire tourism district (model 1)

- Impacts are 0.14, 0.12, 0.08 and 0.04 at 250, 500, 1,000 and 1,500 feet from Harbor Place (model 4)
- | | | |
|--|---------|---------------|
| | Testa's | CherrySTONES |
| | Geddy's | Stone
Soup |

Effects of passengers on walking speeds (n=2,031)

	Model 1	Model 2	Model 3	Model 4
Passengers, 100s	-0.004	-0.014***	-0.003	-0.013**
	(0.002)	(0.003)	(0.006)	(0.006)
Passengers x Dist	NA	0.00001***	NA	0.00001***
		(0.000002)		(0.000002)
Day Dummies	No	No	Yes	Yes
R-squared	0.123	0.133	0.280	0.290

Effect equals “zero” at about 1,400 feet from Harbor Place... e.g., near Window Panes (on Main Street)

Demonstration project

- Daily cap of 3,500 passengers in July and August
- August 27, 2018
- Anthem of the Seas
- 4,180 passengers

Figure 5. Walking Speeds at 250 Feet from Harbor Place on August 27, 2018

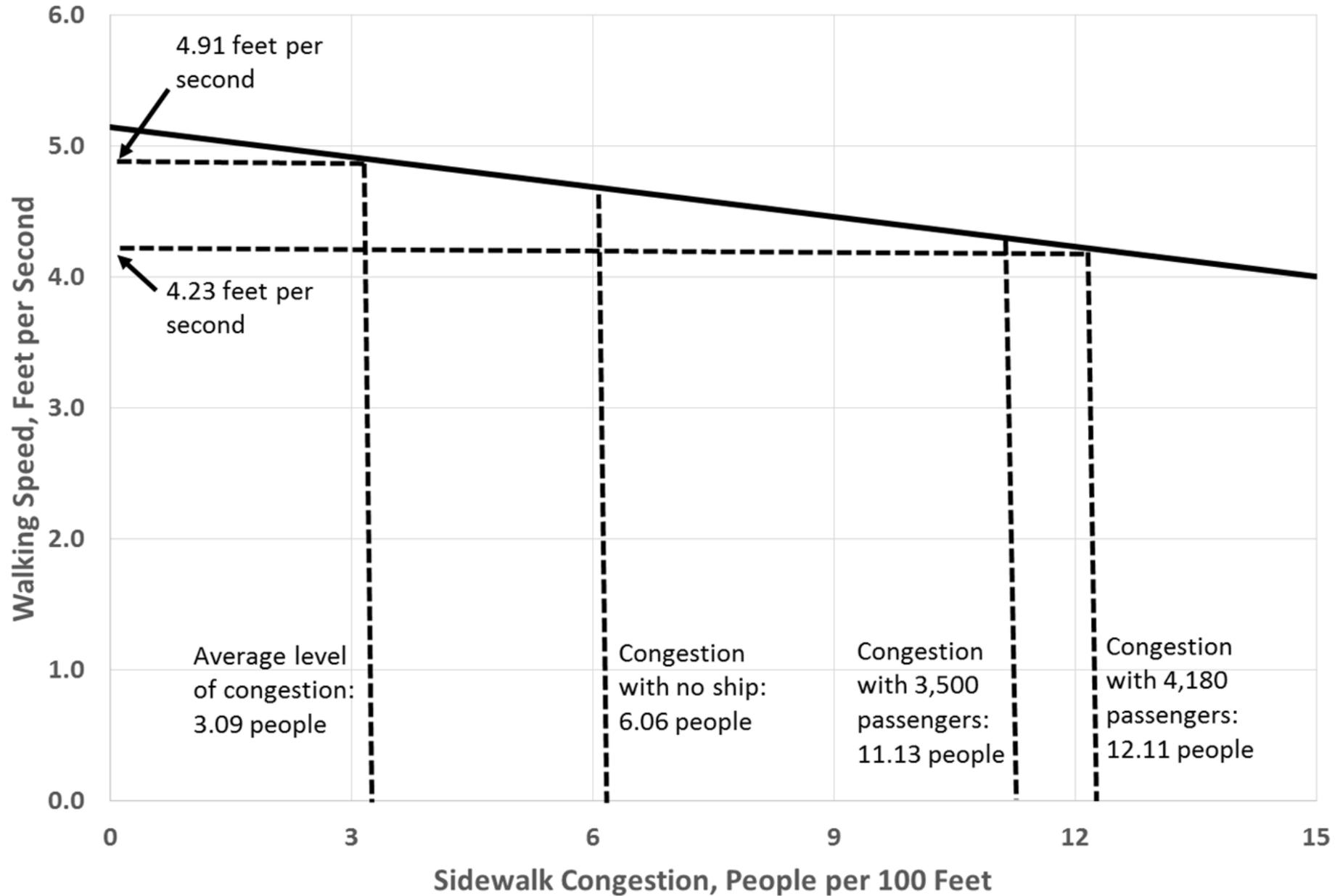
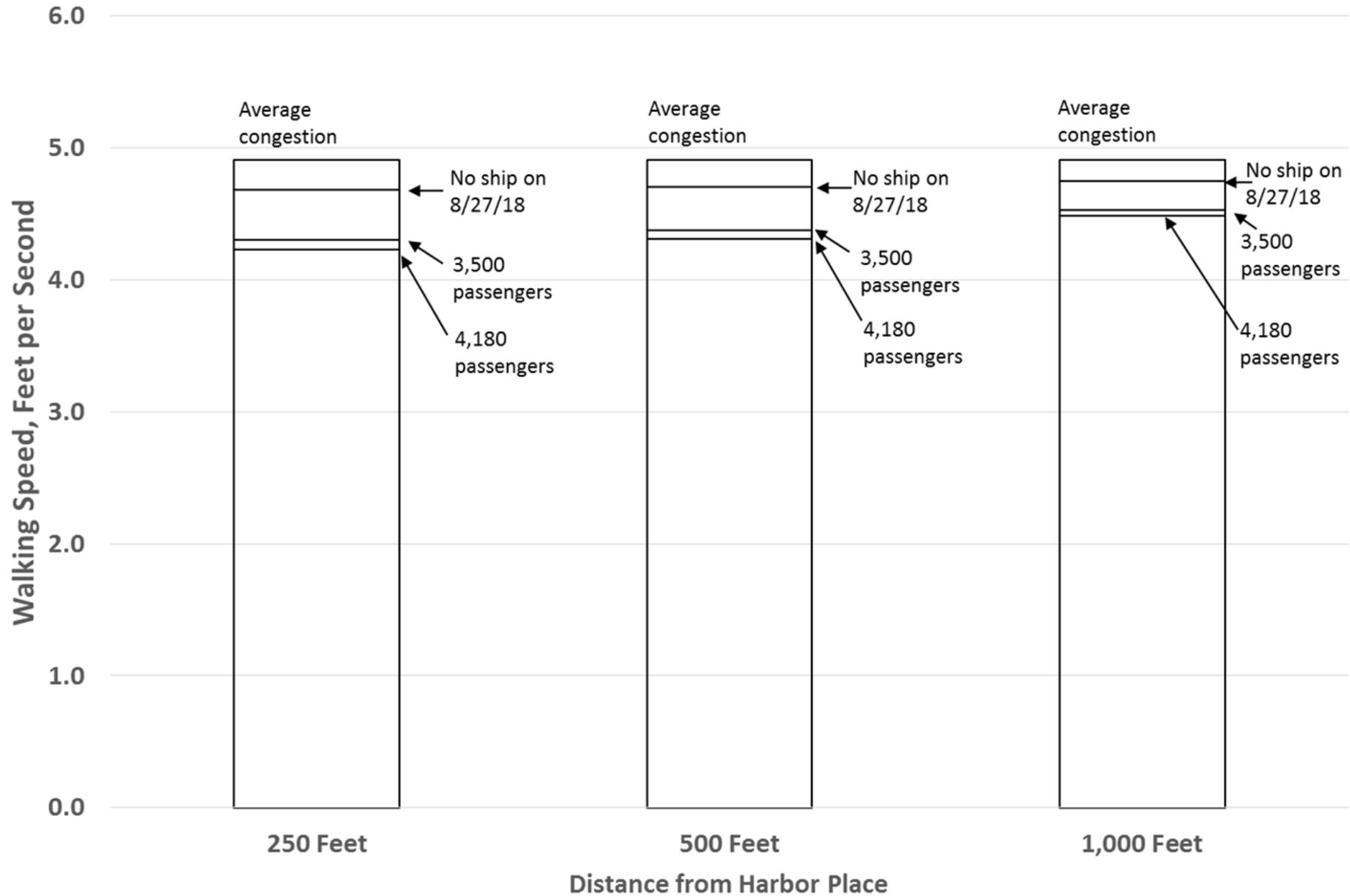


Figure 6. Effects of Cruise Ships on Walking Speeds: August 27, 2018



Time to walk 100 feet...

- At average level of sidewalk congestion, it takes 20.4 seconds to walk 100 feet (at 4.91 feet per second)
- With no ship on 8/27/18, it takes 22.0 seconds to walk 100 feet (from Harbor Place up Main Street)—about 8 percent longer
- With 4,180 passengers on 8/27/18, it takes 24.8 seconds to walk 100 feet (from Harbor Place up Main Street)—about 22 percent longer

Conclusions

- Sidewalk congestion, in general, decreases walking speeds
- Cruise passengers increase sidewalk congestion, but effect depends on location relative to where passengers enter port
- Effects of passengers on walking speeds decrease at greater distances from Harbor Place

Extensions

- Conduct experiments about preferences for sidewalk congestion. Shop and restaurant owners may like seeing people on sidewalks? Residents and visitors may or may not like seeing people on sidewalks?
- While logging pedestrian counts, I counted parked cars around Bar Harbor... Bar Harbor installed parking meters in summer 2019!