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).

65 FUND BALANCE - Cruise Ship Reserve Fund

Account Number	Account Description	Actual Year Before Last: FY18	Actual Last Year FY19	Budgeted This Year FY20	Estimated This Year FY20	Requested Next Year FY21	Requested Budget Change From Estimate	Requested Budget Change From Budget
	Starting Fund Balance	276,356	385,550	537,473	540,350	615,536	13.9%	14.5%
	Revenues & Other Sources	919,293	1,023,708	1,133,840	1,191,708	1,106,127	-7.2%	-2.4%
	Expenditures & Other Uses	810,099	868,908	1,146,863	1,116,522	973,500	-12.8%	-15.1%
	Ending Fund Balance	385,550	540,350	524,450	615,536	748,163		
	Reserved for Encumbrances (Env. Monitoring):	7,264	2,590	0	0	5,000		
	Reserved for Encumbrances (Cottage St. Landscape):	3,216	0	0	0	0		
	Reserved for Encumbrances (UMO Econ Study):	6,000	0	0	0	0		
	Designated Fund Balance For Future Operations Expense	92,837	183,245	257,308	332,116	380,526	14.6%	47.9%
	Designated Fund Balance For Future Capital Expense	276,233	354,514	268,142	283,420	362,637	28.0%	35.2%
	Increase or (Decrease)							
	Unassigned Fund Balance	0	0	0	(0)	(0)		
	(Use of) / Add to Fund Balance	109,194	154,800	(15,900)	91,086	132,627	45.6%	-934.1%

Notes:

A. Money may not be expended from reserve funds (Fund Balance) without Town Meeting approval. Reserve funds may be encumbered or designated by Town Council action.

B. New cruise ship port fees were implemented July 1, 2009. All cruise ships disembarking are required to pay a Passenger Service Fee and a Port Development Fee. As required by law, these fees can be used only for facilities and services directly benefitting cruise ship passengers, although the general public may also derive some benefit from them.

65 REVENUES - Cruise Ship Fund

(* = See Page CS-5)

Account Number	Account Description	Actual Year Before Last: FY18	Actual Last Year FY19	Budgeted This Year FY20	Estimated This Year FY20	Requested Next Year FY21	Requested Budget Change From Estimate	Requested Budget Change From Budget
Operating Revenues								
65-4363	Passenger Service Fees *	495,343	555,910	625,391	657,310	619,917	-5.7%	-0.9%
Capital Revenues								
65-4364	Port Development Fees *	423,950	467,798	508,448	534,398	486,209	-9.0%	-4.4%
65-4366	Grant Income	0	0	0	0	0		
65-4367	Ferry Terminal Reimbursements	0	0	0	0	0		
	Total Non-Tax Revenue	919,293	1,023,708	1,133,840	1,191,708	1,106,127	-7.2%	-2.4%
	Total Revenues & Other Sources	919,293	1,023,708	1,133,840	1,191,708	**1,106,127**	-7.2%	-2.4%

Town Meeting increased Pass Fees from $2.37 to $2.46 as of 7/1/19 (CPI-U-FY19 year's COLA of 2.0%)
New est Fees as of 7/1/20 ($4.46 x 2.2% which was FY20 COLA used) = $4.55 total. New Pass Fee -$2.55
Final Cruise Ship Committee hearing on this budget was on _____/2019

10 EXPENDITURES - Cruise Ship Fund

Account Number	Account Description	Actual Year Before Last: FY18	Actual Last Year FY19	Budgeted This Year FY20	Estimated This Year FY20	Requested Next Year FY21	Requested Budget Change From Estimate	Requested Budget Change From Budget
	DIRECT EXPENSES			(* = See Page CS-6)				
Contract Services								
5334	Environmental Monitoring *	736	8,673	5,000	0	11,000		120.0%
5337	Cottage St. Landscape Design	2,965	0	0	0	0		
5356	Ferry Terminal Study	18,600	0	0	0	0		
5358	Visitor Wayfinding Services *	58,542	59,635	60,866	60,866	62,204	2.2%	2.2%
5359	Industry Relations *	0	0	7,000	7,000	7,000	0.0%	0.0%
Other								
5448	Supplies - Cones, Trsh Lids, Misc.	15,210	11,727	4,000	4,000	4,400	10.0%	10.0%
5459	Supplies - Patrol Boat	407	0	1,000	384	1,000		0.0%
5512	Util-Inet/WIFI Park access	0	259	1,000	384	1,000		0.0%
5517	Fuel - Patrol Boat	0	0	4,000	4,000	4,000	0.0%	0.0%
5659	Repairs/Service - Patrol Boat	3,308	3,268	3,800	3,800	3,800	0.0%	0.0%
5808	Cruise Maine Dues *	10,868	8,000	13,000	8,000	9,000	12.5%	-30.8%
5810	CLIA/Other Dues	690	349	600	690	600	-13.0%	0.0%
5822	Insurance: Marina Landing + 1/2 FT	6,737	6,563	9,737	5,250	6,000	14.3%	-38.4%
5824	Insurance: Patrol Boat	2,612	2,700	2,612	2,900	2,900	0.0%	11.0%
5844	Workshop Reg/Conferences-Admin	0	0	1,523	1,523	1,523	0.0%	0.0%
5845	Training - Security Boat	0	0	5,250	5,250	5,250	0.0%	0.0%
5846	Travel - Rooms & Meals-(1/2 PBoat)	2,155	0	5,600	5,600	5,600	0.0%	0.0%
5906	Contingency	0	0	25,000	10,000	25,000	150.0%	0.0%
5924	Island Explorer Contribution-2% cola	19,864	19,864	20,261	20,261	20,706	2.2%	2.2%
5924	Lifeflight Foundation Contribution	0	0	1,300	1,300	1,328	2.2%	2.2%
	Total Direct Expenses	142,694	121,038	171,549	141,208	**172,311**	22.0%	0.4%
	ALLOCATED EXPENSES: OPERATIONS			(* = See Chart CS-7 to 9)				
4816	Administrative Services *	23,177	23,278	25,659	25,659	*31,335*	22.1%	22.1%
4845	Port Security Services *	127,321	141,404	146,882	146,882	*158,279*	7.8%	7.8%
4853	Harbor Management Services *	64,402	60,035	63,772	63,772	*63,070*	-1.1%	-1.1%
4870	Comfort Station Services *	45,885	42,299	47,901	47,901	*48,117*	0.4%	0.4%
4877	Public Works Services *	93,478	91,337	85,608	85,608	*93,395*	9.1%	9.1%
	Total Operating Expense Allocations	354,263	358,353	369,822	369,822	**394,197**	6.6%	6.6%
	Total Passenger Services Expenses	496,957	479,391	541,371	511,030	566,508	10.9%	4.6%
							55,478	*25,137*

How The Department Operation Expense Allocation Works:
Estimates are made each year as to the required resources from each of the above departments (labor, equipment, outsourced contracts, etc.) For labor, we add an estimated payroll benefit percentage. Number of cruise ship days, two cruise days, etc., are calculated based upon known reservations and various estimates are made to document the impact on each department. This is done once per year at budget time, approved by the Cruise Ship Committee and eventually by Town Meeting to transfer these $ to the General Fund to cover said costs.

~ ~ Cruise Ship Fund Continued on Next Page ~ ~

Account Number	Account Description	Actual Year Before Last: FY18	Actual Last Year FY19	Budgeted This Year FY20	Estimated This Year FY20	Requested Next Year FY21	Requested Budget Change From Estimate	Requested Budget Change From Budget
	ALLOCATED EXPENSES: CAPITAL			(* = See Page CS-9)				

These accounts utilize cruise ship Port Development Fees to compensate the Capital Improvement Program (CIP) Fund for the following capital improvements provided for the enjoyment & safety of cruise ship passengers. More detail on projects is in the CIP narratives of the CIP budget

	Transfer to the CIP Fund							
6120	WiFi in the Parks Improvements	0	0	6,000	6,000	0		
6130	Municipal Bldg Renovations	5,000	5,000	5,000	5,000	5,000	0.0%	0.0%
6162	Comprehensive Plan	0	40,000	5,000	5,000	0		
6164	Lower Main St. Streetscape	25,000	10,000	110,000	110,000	35,000	-68.2%	-68.2%
6166	Cottage St. Streetscape	10,000	10,000	110,000	110,000	35,000	-68.2%	-68.2%
6200	Ambulance Replacement	0	15,000	15,000	15,000	15,000	0.0%	0.0%
6220	Fire Engine Replacement	0	5,000	5,000	5,000	5,000	0.0%	0.0%
6232	Radio Command Console (in Disp)	0	0	0	0	20,000		
6234	Police Cruiser Replacement	10,000	10,000	10,000	10,000	10,000	0.0%	0.0%
6235	Port Security/Harbormaster Boat Resrv	25,870	12,870	12,870	12,870	12,870	0.0%	0.0%
6240	Downtown Signs Debt Service	22,400	21,875	21,350	21,350	21,350	0.0%	0.0%
6246	Public Safety Bldg PD Renovations	0	0	50,000	50,000	0		
6264	Breakwater Repairs	0	10,000	0	0	0		
6266	Town Pier & Fencing Reserve	12,894	12,894	12,894	12,894	12,894	0.0%	0.0%
6269	Harbor Committee Ferry Term. Consult	0	0	10,000	10,000	10,000	0.0%	0.0%
6300	Benches, Lights, etc. -Parks	15,000	15,000	15,000	15,000	15,000	0.0%	0.0%
6302	Grant Park Reserve	5,000	5,000	5,000	5,000	7,500	50.0%	50.0%
6304	Barker Park Debt Service-'10	6,300	6,300	6,300	6,300	6,300	0.0%	0.0%
6318	Village Green Bandstand Resv.	1,467	1,467	1,467	1,467	1,467	0.0%	0.0%
6334	Harborview Park Debt Service-'10	1,911	1,911	1,911	1,911	1,911	0.0%	0.0%
6335	Harborview Park Renovations	5,000	5,000	5,000	5,000	35,000	600.0%	600.0%
6336	Downtown Signage Reserve	10,000	10,000	10,000	10,000	10,000	0.0%	0.0%
6352	Restroom Const. Debt Service-'10	25,800	25,800	25,800	25,800	25,800	0.0%	0.0%
6353	Restroom Renovations Reserve	7,500	32,500	15,000	15,000	15,000	0.0%	0.0%
6258	Ferry Terminal Improvements	14,000	60,000	30,000	30,000	10,000	-66.7%	-66.7%
6426	Sidewalk Reconstruction	90,000	72,000	90,000	90,000	70,000	-22.2%	-22.2%
5448	Museum in the Strts Reserve/Phase II	20,000	1,900	1,900	1,900	1,900	0.0%	0.0%
6518	Ferry Terminal Debt Service	0	0	25,000	25,000	25,000	0.0%	0.0%
	Total Capital Expense Allocations	313,142	389,517	605,492	605,492	**406,992**	-32.8%	-32.8%
	Total Expenditures & Other Uses	810,099	868,908	1,146,863	1,116,522	973,500	-12.8%	-15.1%
	Cruise Ship Fund							

Cruise Ship Fund Details

New cruise ship port fees were implemented July 1, 2009. By law, these fees can be used only for facilities and services directly benefitting cruise ship passengers, although the general public can also use these facilities and some of the services. The Cruise Ship Fund was established as a component of the General Fund to better track these revenues and expenses, while assuring that fees unspent in one year are carried forward to the next year as fund balance within the Cruise Ship Fund. Expenditures from Fund Balance are approved via the annual Town Meeting budget process. All cruise ship fees and related revenues are recorded directly in the Cruise Ship Fund. However, cruise ship expenses are incurred for both capital and operating purposes and are incurred by numerous departments, making expense budgeting more complicated and difficult. In order to maintain budgetary control and accountability, cruise ship expenses are primarily recorded in the appropriate department and/or fund, and inter-fund transfers are made in amounts equal to the expense. However, direct cruise ship expenses are charged directly to the Cruise Ship fund (e.g. Dues, Wayfinding services, Island Explorer, travel, marina insurance & patrol boat expenses, etc.). Cruise Ship Fund is a component of the General Fund.

Cruise Ship Visit History & Projections

Projections

FY20 - This Fiscal Year	Ships			Passengers *			
Month	Anchored	Small Ships <200	Totals	Anchored	Small Ships	Totals	source
July-Nov-'19	107	20	127	204,544	2,502	207,046	< Part Act/part est 10/30/19
Apr-Jun-'20	39	9	48	58,878	1,275	60,153	< Reservations
Total	146	29	175	263,422	3,777	267,199	< This Fiscal Year

FY21 - Next Fiscal Year	Ships			Passengers *			
Month	Anchored	Small Ships <200	Totals	Anchored	Small Ships	Totals	
July-Nov-'20	126	23	149	229,433	3,006	232,439	< Reservations
Apr-June-'21	22	6	28	32,476	900	33,376	< Reservations
Cancels	(12)	(13)	(25)	(20,953)	(1,758)	(22,710)	< No Shows: Full Year **
Total	136	16	152	240,956	2,148	243,105	< Next Fiscal Year
cancelled-%'s	8%	45%					< Change

* Passengers are recorded at the vessel's "lower berth" capacity, not the actual number boarding.
** Adjustment for No Shows (cancelled reservations) is made at historical averages. **Small Ships = <200 pass**

Historical Trends 10 Years

Fiscal Year	Ships Large	Ships Small	Ships Totals	Fiscal Year	Passengers * Anchored	Passengers * Small S	Passengers * Totals	
FY10	74	22	96	FY10	142,174	1,692	143,866	
FY11	87	22	109	FY11	176,511	1,894	178,405	24.0%
FY12	79	21	100	FY12	142,060	1,845	143,905	-19.3%
FY13	110	21	131	FY13	138,926	1,800	140,726	-2.2%
FY14	107	18	125	FY14	165,806	1,541	167,347	18.9%
FY15	102	18	120	FY15	152,750	1,533	154,283	-7.8%
FY16	89	21	110	FY16	140,578	1,935	142,513	-7.6%
FY17	107	13	120	FY17	174,322	1,241	175,563	23.2%
FY18	134	14	148	FY18	210,909	1,400	212,309	20.9%
FY19	138	19	157	FY19	233,899	0	233,899	10.2%
Est-FY20	146	29	175	Est-FY20	267,199	0	267,199	14.2%

Cancelled Reservations	Reservations	Cancelled	Rate
	Large Ships	> 200 pass	
CY16	96	7	7%
CY17	126	10	8%
CY18	152	13	9%
CY19	160	14	9%
	Historical Four Year Average		8%

Cruise Ship (>200) Days -reservations	
Days with at least one ship anchored	
FY15	80
FY16	62
FY17	79
FY18	90
FY19	107
FY20	101

Cruise Ship Fund Details

Cancelled Reservations	Reservations	Cancelled	Rate
	Small Ships		
CY15	32	18	56%
CY16	40	14	35%
CY17	35	17	49%
CY19	31	8	26%
	Historical Four Year Average		41%

Cruise Ship Revenues

4363 Passenger Service Fee

These fees are used to pay for such services as bus parking control by police officers, wayfinding services by the Chamber of Commerce, extra restroom cleaning on cruise ship days, cruise industry networking and business development, etc.
COLA increases implemented @ 7/1/19 (2.0%); Use 2.2% @ 7/1/20, based on GF FY20 budget COLA
All cruise ships which anchor in Federal Designated Anchorages will pay a per passenger fee of:

							eff. 7/1/20 $2.55
	This Fiscal Year	*Number*	*Per* Passenger	*Rate*	*Total*	*Estimated This Year*	*Requested Next Year*
FY20 -	Ships Anchored Out	267,199		$2.46		$657,310	
	Next Fiscal Year	*Number*	*Per* Passenger	*Rate*	*Total*		
FY21 -	Ships Anchored Out	243,105		$2.55			$619,917
	Total Cruise Ship Passenger Service Fee Revenue					**$657,310**	**$619,917**
	Passenger Service Expense						
	Total Direct Expenses					*141,208*	*172,311*
	Total Operating Expense Allocations		(Amount Transferred to General Fund)			*369,822*	*394,197*
	Total Cruise Ship Passenger Service Expense					$511,030	$566,508
	Fund Surplus or (Loss) from Service Operations					**$146,280**	**$53,409**

4364 Port Development Fee

These fees are used to pay for capital improvements and/or debt service for projects such as the renovation of Harborview Park, the Village Green Bandstand, the Newport Comfort Station, Grant Park, Agamont Park, creating accessibility improvements to our sidewalks as well as other infrastructure improvements.

All ships, large and small, will pay a per passenger fee of: $2.00

	This Fiscal Year	*Passengers*	*Per*	*Rate*	*Total*	*Estimated This Year*	*Requested Next Year*
FY20 -	All Ships	267,199	*Passenger*	$2.00		$534,398	
	Next Fiscal Year	*Passengers*	*Per*	*Rate*	*Total*		
FY21 -	All Ships	243,105	*Passenger*	$2.00			$486,209
	Total Cruise Ship Port Development Fee Revenue					**$534,398**	**$486,209**
	Port Development Expense						
	Cruise Ship Capital Expense Allocations (Transferred to CIP Fund)					*$605,492*	*$406,992*
	Capital Fund Surplus or (Loss)					**($71,094)**	**$79,217**

Calculation of Anchored Ship (>200) Days: *net of est cancellations*

FY21	**148**	visits;	less 2nd/3rd ships:	**(47)**	**101**	Anchored "Ship" Days
FY21	**101**	Tot Anch. Ship Days:	less May-June	**(21)**	**80**	Fall Anchored Ship Days

Cruise Ship Fund Details

Direct Expenditures

The following expenses are billed directly to Cruise Ship Fund accounts and paid from Passenger Service Fees.

5334 Environmental Monitoring

	Budget This Year	Requested Next Year
FRENCHMAN BAY WATER QUALITY TESTING		
In order to track any pollution in the bay, reduce the likelihood of contamination and to assure the public that clean water remains a focus, water testing of the bay area will be done every other year to check for the level of quality to add to the data gathered over the years. From previous testing, most of the measured pollution has been traced to stream runoff after storm events.		
Perform Testing every two years	5,000	11,000
Total Marine Environmental Monitoring	$5,000	$11,000

5358 Visitor Wayfinding Services

The 2007 Cruise Ship Study highlighted the difficulty that cruise ship passengers have finding their way around our community and recommended that the Town improve signage, increase the visibility of our downtown Visitor Center and provide roving Information Specialists to answer visitor questions and encourage a return visit. Since 2009, the Town has partnered with the Bar Harbor Chamber of Commerce, which now rents downtown office space, hires and trains staff and oversees the entire operation. In return, the Town shares the cost of these services.

FY14 - The Cruise Ship Committee requested additional funding to offset the cost of providing visitor information staff aboard the cruise ship during their visits. The Chamber provided staff to over a dozen requests by the cruise ship industry that year and predicted that such requests would increase significantly in the future.

FY15 - The Chamber agreed to accept ownership of the visitor information kiosk.

FY19 **Wayfinding Budget**	Prior Year 50%	Town Share w/COLA	FY20 COLA 2.2%	Requested Next Year
Downtown Visitor Center - Rent & Maintenance	23,629	24,149		
- Elec./Phone/Internet/Supplies/Cleaning				
Visitor Information Staff:				
Downtown Visitor Center Staff (most cruise ship days)	11,236	11,483		
Extra Staff on 3 Ship Days or Over 4,000 passengers	2,247	2,296		
Waterfront Information Booth	11,236	11,483		
Downtown Bus Drop-off Staff (most cruise ship days)	8,427	8,612		
Extra Staff on 3 Ship Days or Over 4,000 passengers	1,685	1,722		
On-board Ships	1,405	1,436		
Total Wayfinding Expenses	59,866	61,182		61,182
Waterfront Information Booth - Moving & Maintenance	1,000	1,022		1,022
Total Visitor Wayfinding Services (Town Share)				$62,204

5360 Industry Relations

	Requested This Year	Requested Next Year
PROMOTIONAL MATERIALS	0	2,000
HOSTING CRUISE SHIP AGENTS AND INDUSTRY REPRESENTATIVES	0	2,000
SPONSORSHIP OF CRUISE EVENTS AND CONFERENCES	0	3,000
Total Industry Relations	$7,000	$7,000

5448 Miscellaneous Supplies/Exps

	Requested This Year	Requested Next Year
Includes all cones, barriers, recycle bins, signs, unexpected purchases directly chargeable to CrShips	4,000	4,400

5808 Cruise Maine Dues

CRUISEMAINE - Maine Office of Toourism (dues payable to Treasurer State of Maine)	$ 9,000.00	$ 9,000

Cruise Ship Fund Details

Allocated Expenses: Operating

The following expenses are charged to General Fund accounts, but are shown as allocated to the Cruise Ship Fund in recognition of those expenses incurred for cruise ship related services. An equal amount of revenues from Passenger Service Fees are then transferred to the General Fund in payment for services rendered.

4816 Administrative Services

The purpose of this account is to compensate the General Fund for the expense of budgets, bookkeeping, billing, accounting and otherwise administering the cruise ship visits, activities and fees. This is the same method used for the Water Fund and Sewer Fund. See Chart in the General Fund budget for further explanation and background.

						Requested Next Year
Cruise Ship Fund's Share of Normal Finance Department Expenses (See Admin Chart) (based on FY20 bud)						20,418
Free Wi-Fi in the Parks Lic & cap costs						1,000
Paper & Supplies						300
Cruise Ship Fund's Share of Management Expenses			Days Per Year	Salary Per Day	Total	
Technical Systems Admin. (WiFi in Parks) -allocation	FY20-Bud		2	$318.21	636	
Finance Director -Budgets	FY20-Bud		6	$383.83	2,303	
Planner: Prep, Attend, Minutes	FY20-Bud		3	$322.08	966	
Town Manager (Budget, Meetings, Etc.)	FY20-Bud		7	$437.65	3,064	
Total Wages and Salaries					6,969	
	Benefits	Rate		38.0%	2,648	
Cruise Ship Fund's Share of Management Expenses						9,617
Total - Administrative Services						**$31,335**

4845 Port Security Services

Police Department *Details*	*Hours/ Ship Day*	*Times per Year*	*Hours/ Meeting*	*Hours/Days Year*	*Hourly Rate*	*Annual Total*
1045 5334 **Portion of Police Chief's salary/benefits dedicated to cruise operations**						
Police Chief Attending meetings		3	3	9	$73.00	657
Chief- Cruise Operations Supervision @ 1 hour/visit	1	(CS days)	0.5	101	$73.00	3,687
1045 5105 **Portion of Police Officer's wages dedicated to cruise operations**						
Lt. DK Supervision/Scheduling @ 1 hour/visit	1	(CS days)	0.5	101	$31.90	1,611
Special Services Sergeant		1/3rd of wages		700	$30.08	21,056
Security Details: 1 officer (mostly by Lt. P) @ 9 hours/visi	9	41	CrShip days	369	$41.80	15,424
2 officers - crossing guards	18	90	2 ship days	1,620	$17.90	28,998
3 officers - crossing guards	27	20	2 ship days	540	$17.90	9,666
Security Boat Patrol: 2 officers *2 hrs.* ships/2 OT	4	47	2 ship days	188	$38.00	7,144
Backfill 2 Sec.Boat officers for 1 week of Training	1		OT Shft-$344	7	$350.00	2,450
P.T. Patrol Officers Field Training (3) -(prior to patrol assignment)		3	320	960	$18.30	17,568
Total Salaries & Wages						108,261
Benefits		38.0%				39,489
1045 5410 PD Uniforms for 3 Part Time Officers						2,000
1045 5704 PD Equipment for 3 Part Time Officers						7,000
Fire Department						
Emergency Management / EMS:						
1042 5110 Paramedic and EMT-Pier Waiting Time 11 hrs x 2 x $25						550
Related ambulance equipment time 11 hrs @ $50						550
Supplies, Training & Travel						430
Total - Port Security Services						**$158,279**

Cruise Ship Fund Details

Allocated Expenses (Cont'd)

4853 Harbor Management Services

Requested Next Year

115 Cruise Ship Days Next Year - (98 in the FY19 Budget)

Details	*Hours/ Ship Day*	*Hours Per Week*	*Hours/ Meeting*	*Hours/ Year*	*Hourly Rate*	*Annual Total*
Wages						
1053 5105 **Portion of Harbor Master's time dedicated to cruise ships**						
Cruise ship scheduling and related administration		10		520	$27.74	14,425
Prepare for and attend Cruise Ship Cmt meetings			4	12	$27.74	333
Attending port security meetings			3	9	$27.74	250
Operations Supervision (Cruise Ship Days)	6	101		606	$27.74	16,810
Public relations related to cruise ship visitation		1		52	$27.74	1,442
Dissemination of printed materials: time and printing		1		50	$27.74	1,387
Miscellaneous: Comfort station issues, etc.	1			101	$27.74	2,802
Total Harbor Master's time dedicated to cruise ships				1350		$37,449
Total hrs= 2080+ 83 OT	2.163	% of Total Hours per Year		62.4%		
Benefits Town's Overall Benefits Rate	38.0%					14,231

Port Security Building Operating Expenses *(dedicated Hmaster/Customs use)*

FY19Bud	1053 5602 & 5618	Building & Eqpt repairs	*1,900*
	1053 5504	Electricity	*12,000*
	1053 5528	Telephone & Cellular	*950*
	1053 5530	Water & Sewer	*3,400*
	Total Port Security Building Operating Expenses		18,250
	Share Allocated to Cruise Ships (Same as HM time)		62.4%
	Cost Allocated to Cruise Ships		11,390

Total - Harbor Management Services $63,070

Requested Next Year

4870 Comfort Station Services

Newport Drive and Pier Comfort Stations Total contract

1070-5310 ***Cleaning:*** *Base and Extra represent 63% of the total cleaning contract. Two cleanings per day are added when large cruise ships call.* 102 cr ships in FY20 $ 62,804

0.63 $ 39,567

1070-5408	Cleaning Supplies	20% of annual exp		*2,794*
Utilities (1 Sum. Qtr):		Electric-2 accts	*6 bills*	*718*
(FY19 act)		Sewer	*2 bills*	*2,887*
		Water	*2 bills*	*2,151*

Total - Comfort Station Services $45,885 $48,117

Requested Next Year

4877 Public Works Services

Details	*Workers*	*Hours/ Ship Day*	*Average O.T. Rate Next Yr.*	*Cost/ Ship Day*	*Ship Days July-Oct Only Next Year*		*Annual Total*
Superintendent - scheduling		20	*$35.14*				703
Street Sweeping							
Equipment Operator	1	3	*$32.00*	$96.00	80		7,680
Sweeper		3	$142.00	$426.00	80		34,080
Sidewalk Washing							
Labor	2	2	*$32.00*	$128.00	80		10,240
Water Truck		2	$98.00	$196.00	80		15,680
Trash Pick Up							
Contract Out- total est $35,000		$ 35,000		50%	35,000		17,500
1077-5454 Trash liners (10% of annual cost)							436
Subtotal - wages and **added benefits** @		38%				18,623	7,077

Total - Public Works Services $93,395

2019 Cruise Ship Committee Annual Report

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

A. <u>" Conduct a yearly review of Cruise Season to identify operational and environmental issues"</u>

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.
-

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.

DRAFT

- 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.

DRAFT

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

<u>2019 activity</u>:

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

DRAFT

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.

DRAFT

<u>Air Monitoring Program Details</u>

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 b 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 weather 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)

DRAFT

- 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.

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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.

cruising.org

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.

- 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.

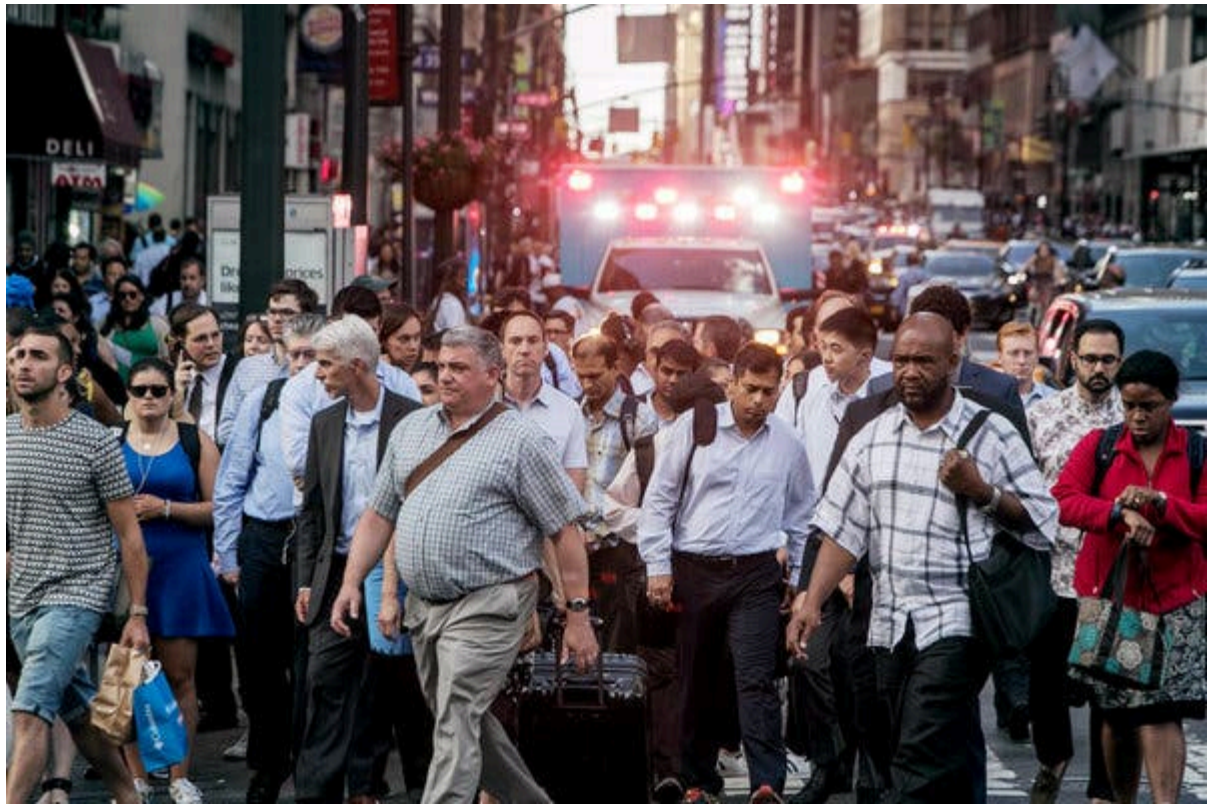
CLIA Cruise Lines lead a range of efforts to sustain and improve ocean health, marine life, and marine environments.

- 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!



Source: New York Times

Todd Gabe

Bar Harbor Cruise Ship Committee

December 10, 2019

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

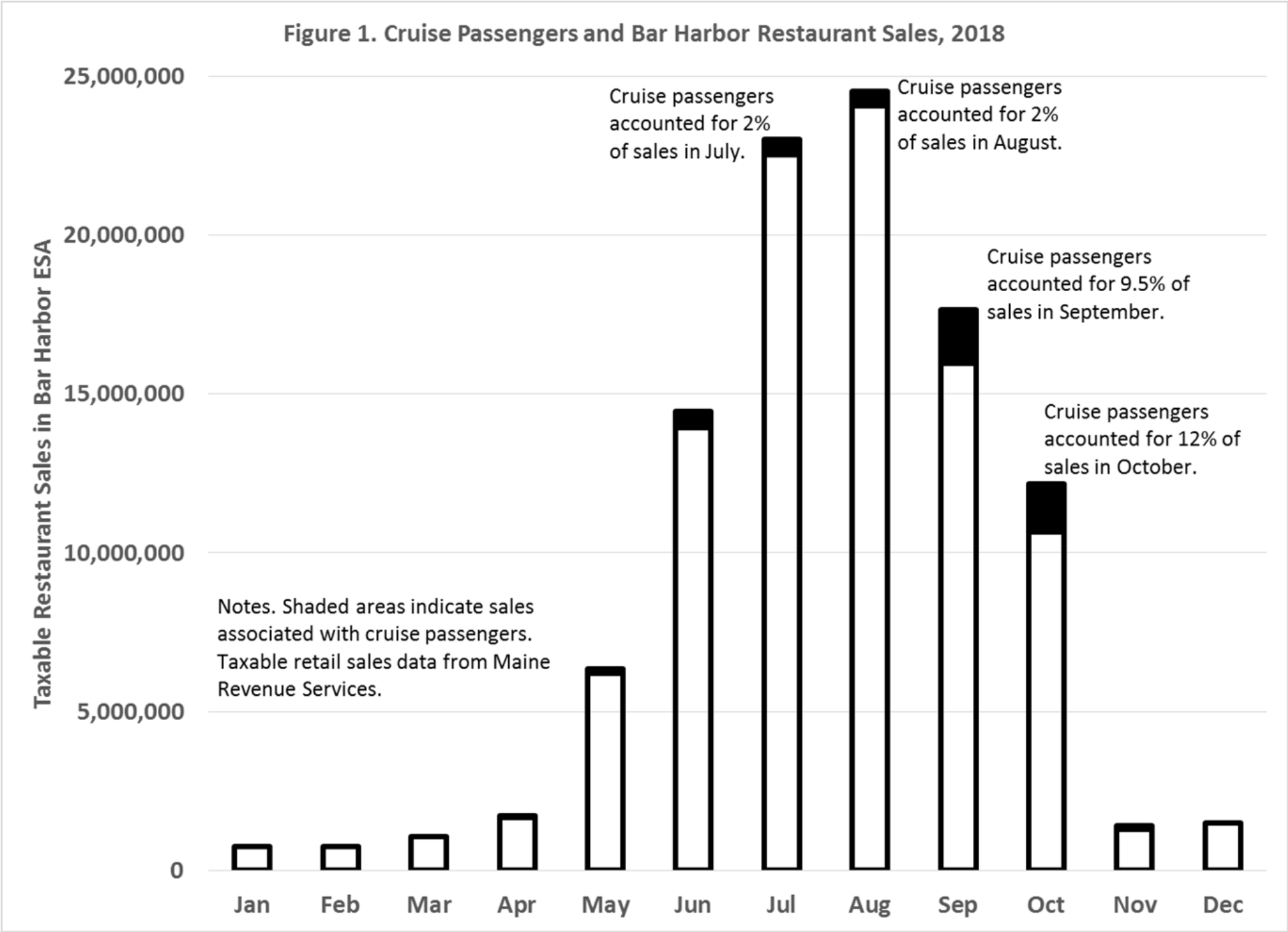


Figure 1. Cruise Passengers and Bar Harbor Restaurant Sales, 2018
Taxable Restaurant Sales in Bar Harbor ESA
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Cruise passengers accounted for 2% of sales in July.
Cruise passengers accounted for 2% of sales in August.
Cruise passengers accounted for 9.5% of sales in September.
Cruise passengers accounted for 12% of sales in October.
Notes. Shaded areas indicate sales associated with cruise passengers. Taxable retail sales data from Maine Revenue Services.

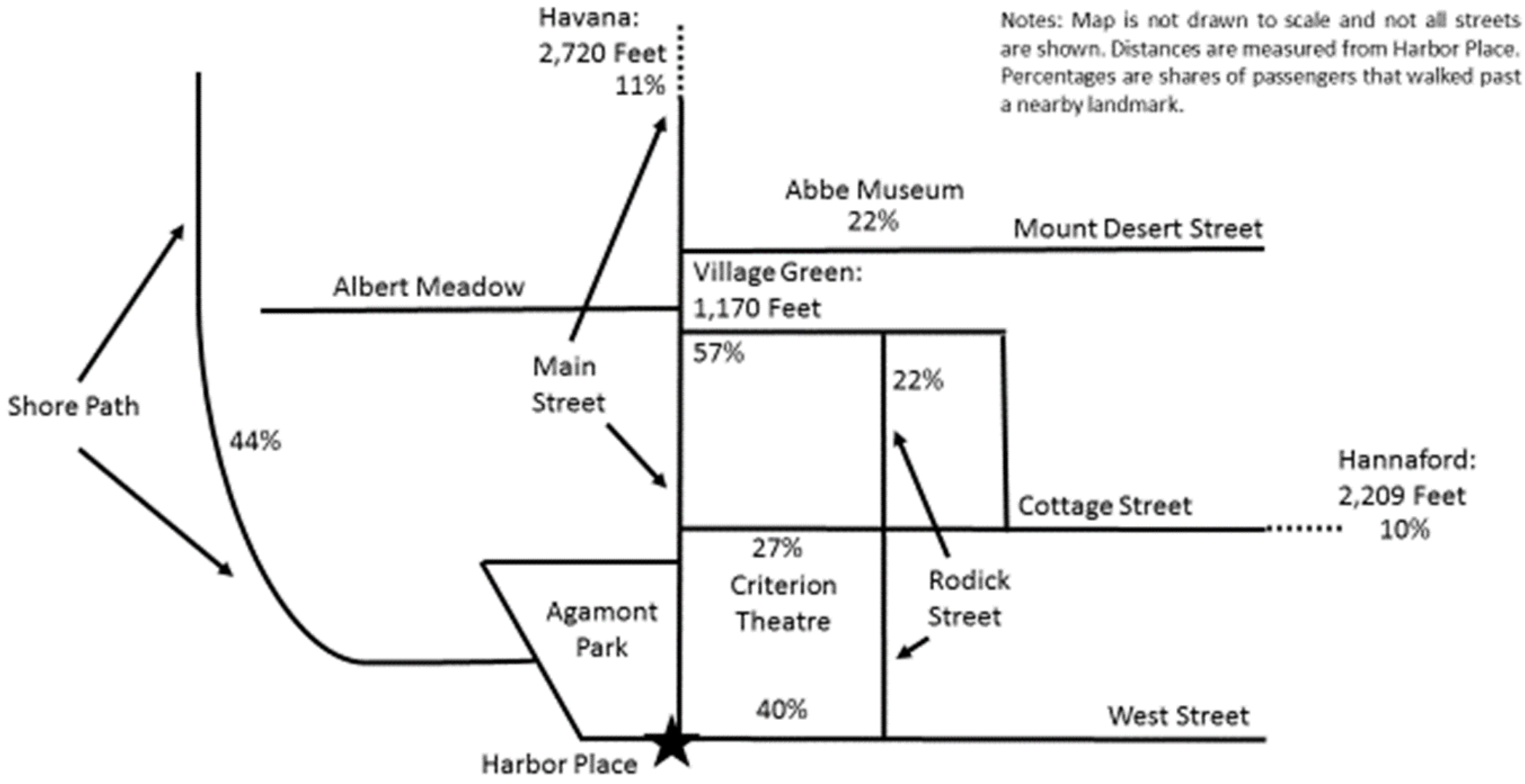
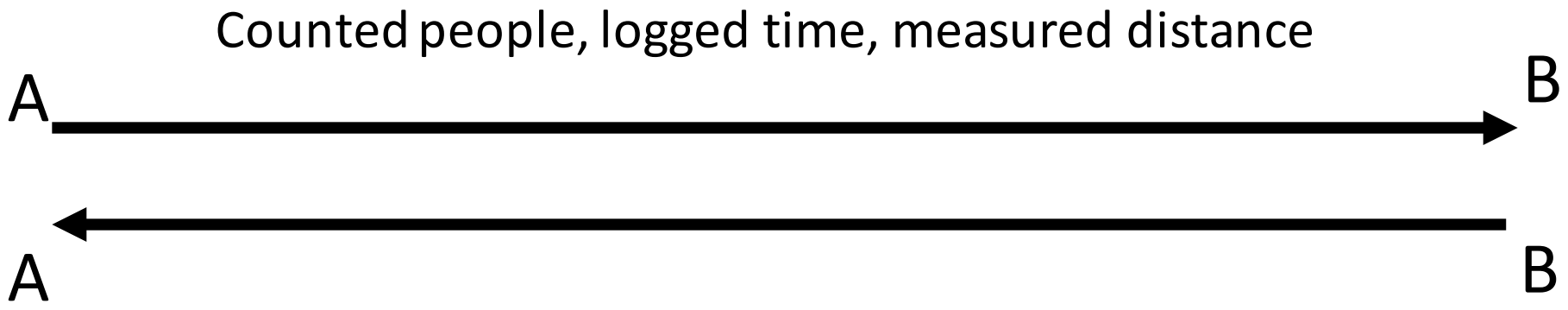


Figure 2. Bar Harbor Landmarks that Passengers "Walked Past" while in Port

Data collection

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



- Average speed of 4.88 feet per second

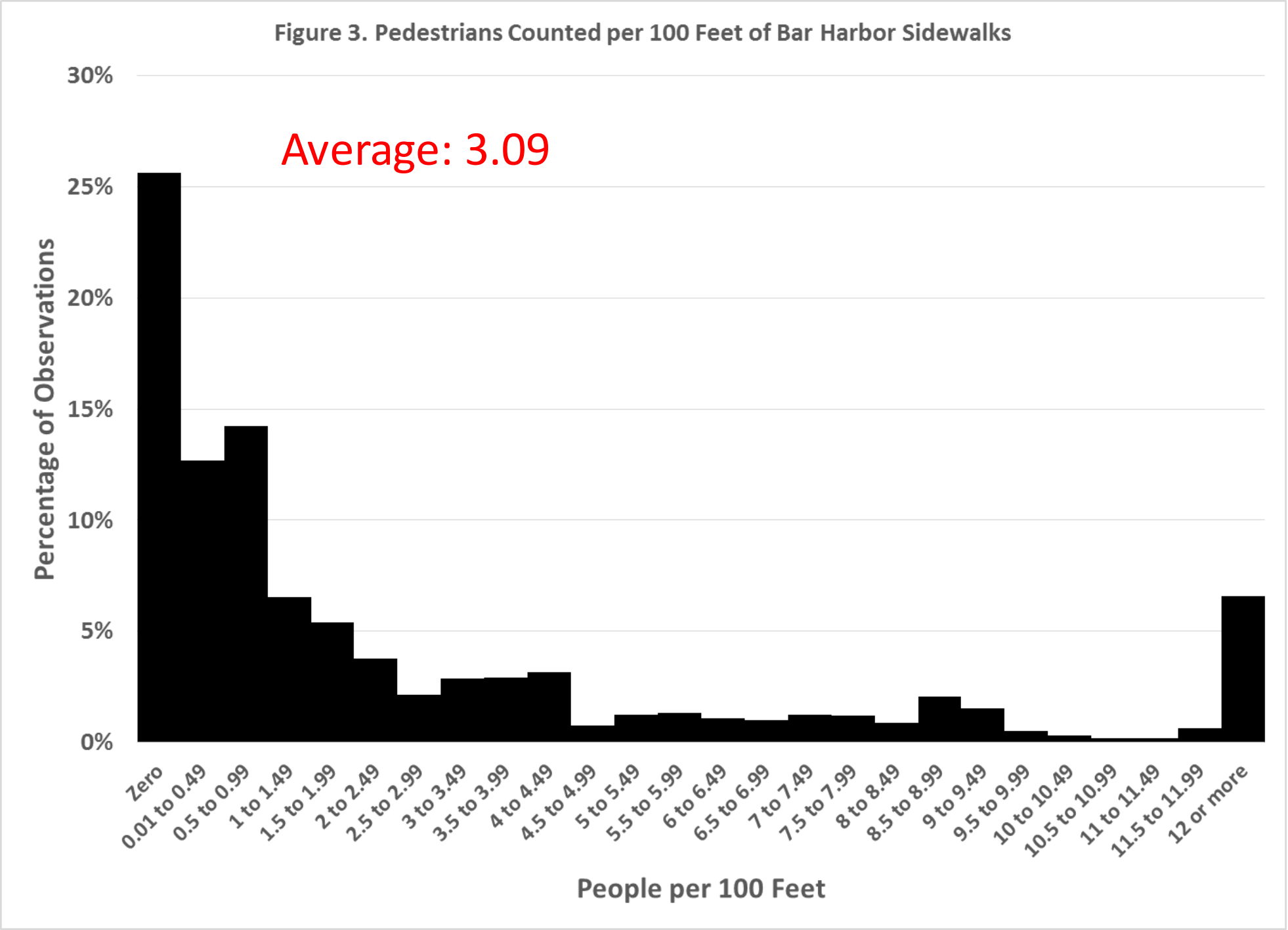


Figure 3. Pedestrians Counted per 100 Feet of Bar Harbor Sidewalks
Average: 3.09
30%
25%
20%
15%
10%
5%
0%
Percentage of Observations
Zero
0.01 to 0.49
0.5 to 0.99
1 to 1.49
1.5 to 1.99
2 to 2.49
2.5 to 2.99
3 to 3.49
3.5 to 3.99
4 to 4.49
4.5 to 4.99
5 to 5.49
5.5 to 5.99
6 to 6.49
6.5 to 6.99
7 to 7.49
7.5 to 7.99
8 to 8.49
8.5 to 8.99
9 to 9.49
9.5 to 9.99
10 to 10.49
10.5 to 10.99
11 to 11.49
11.5 to 11.99
12 or more
People per 100 Feet

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	

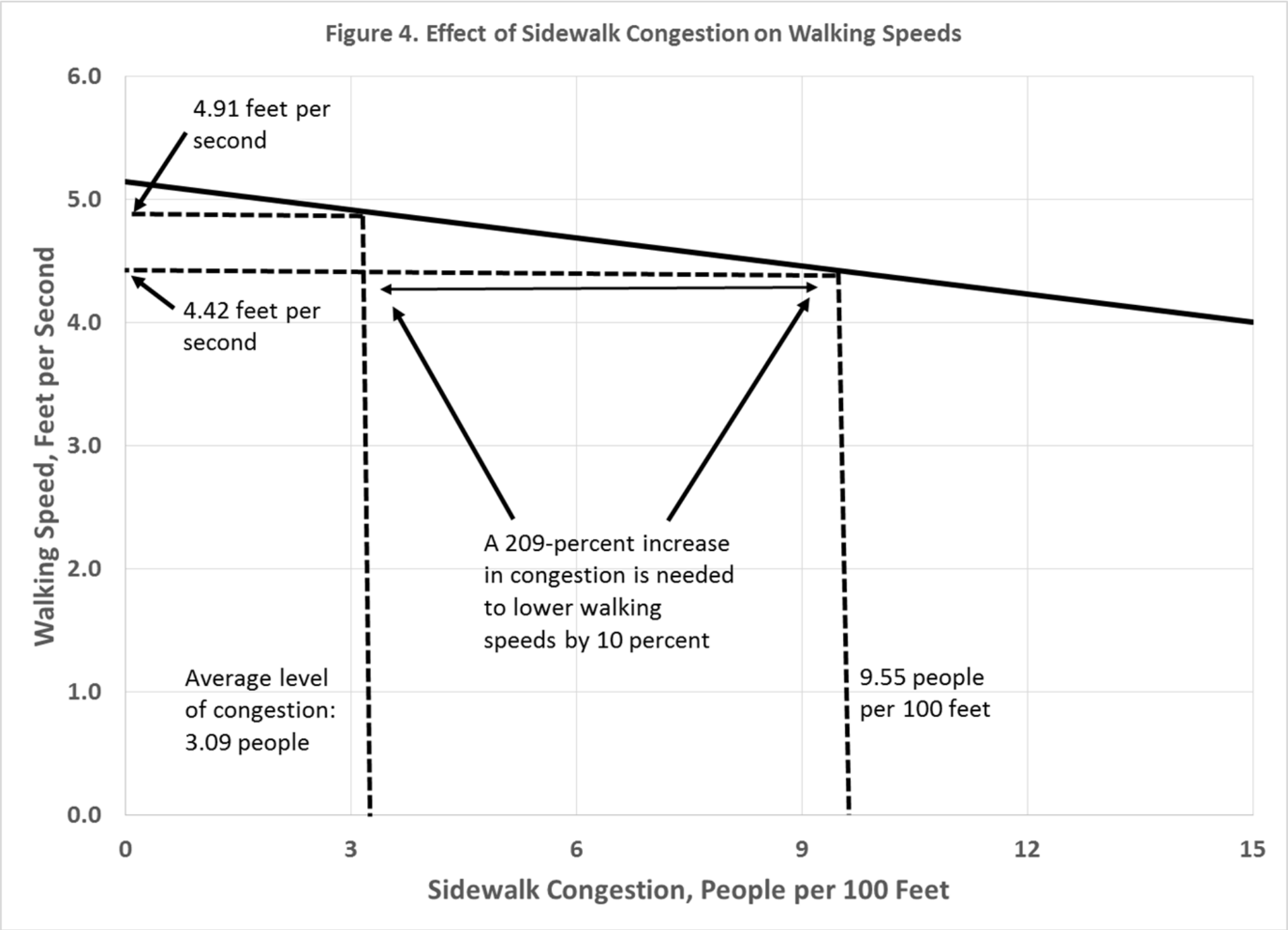


Figure 4. Effect of Sidewalk Congestion on Walking Speeds
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Walking Speed, Feet per Second
4.91 feet per second
4.42 feet per second
A 209-percent increase in congestion is needed to lower walking speeds by 10 percent
Average level of congestion: 3.09 people
9.55 people per 100 feet
0
3
6
9
12
15
Sidewalk Congestion, People per 100 Feet

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)

Testa's CherrySTONES

- 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)

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

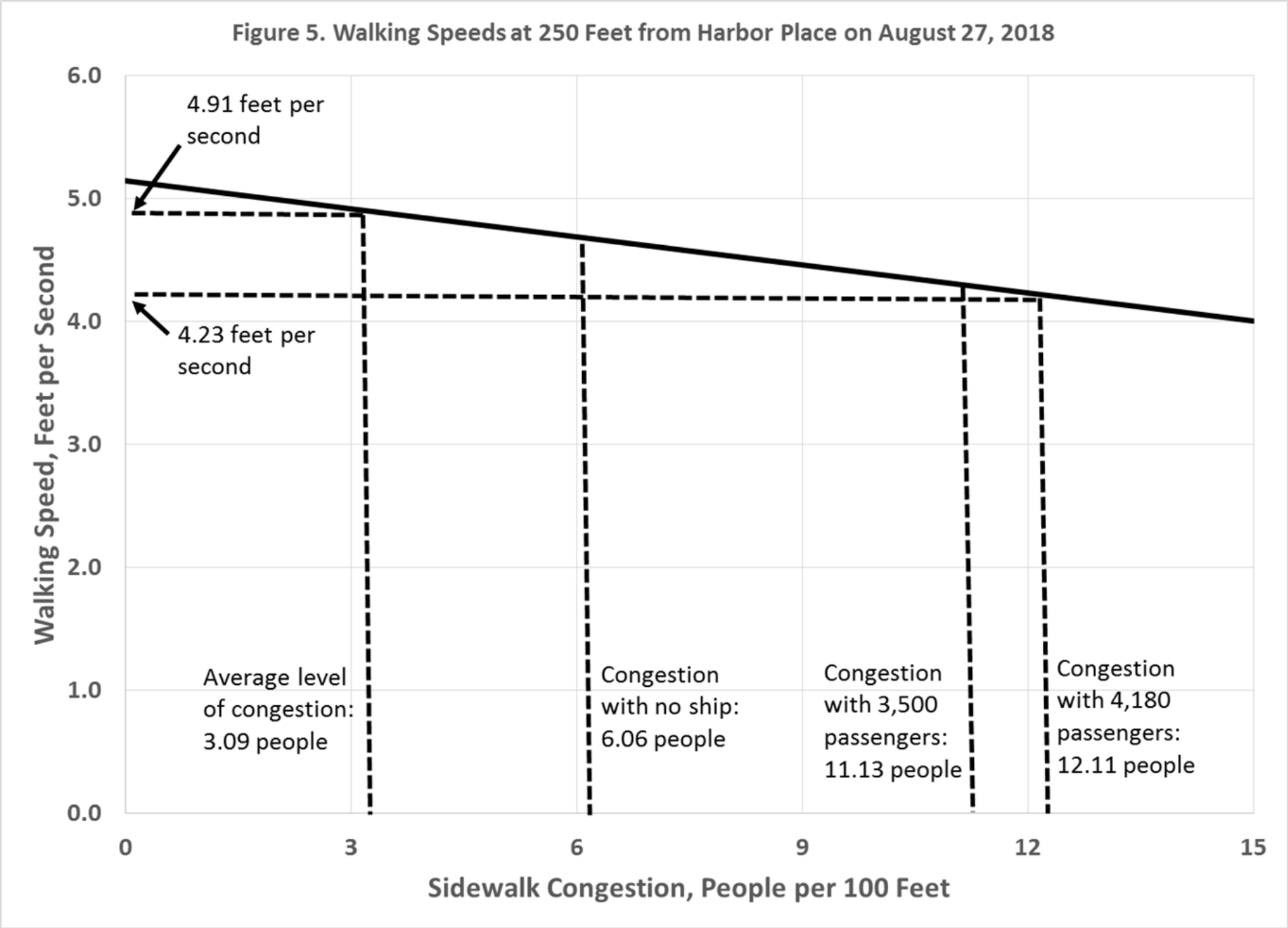


Figure 5. Walking Speeds at 250 Feet from Harbor Place on August 27, 2018
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Walking Speed, Feet per Second
4.91 feet per second
4.23 feet per second
Average level of congestion: 3.09 people
Congestion with no ship: 6.06 people
Congestion with 3,500 passengers: 11.13 people
Congestion with 4,180 passengers: 12.11 people
0
3
6
9
12
15
Sidewalk Congestion, People per 100 Feet

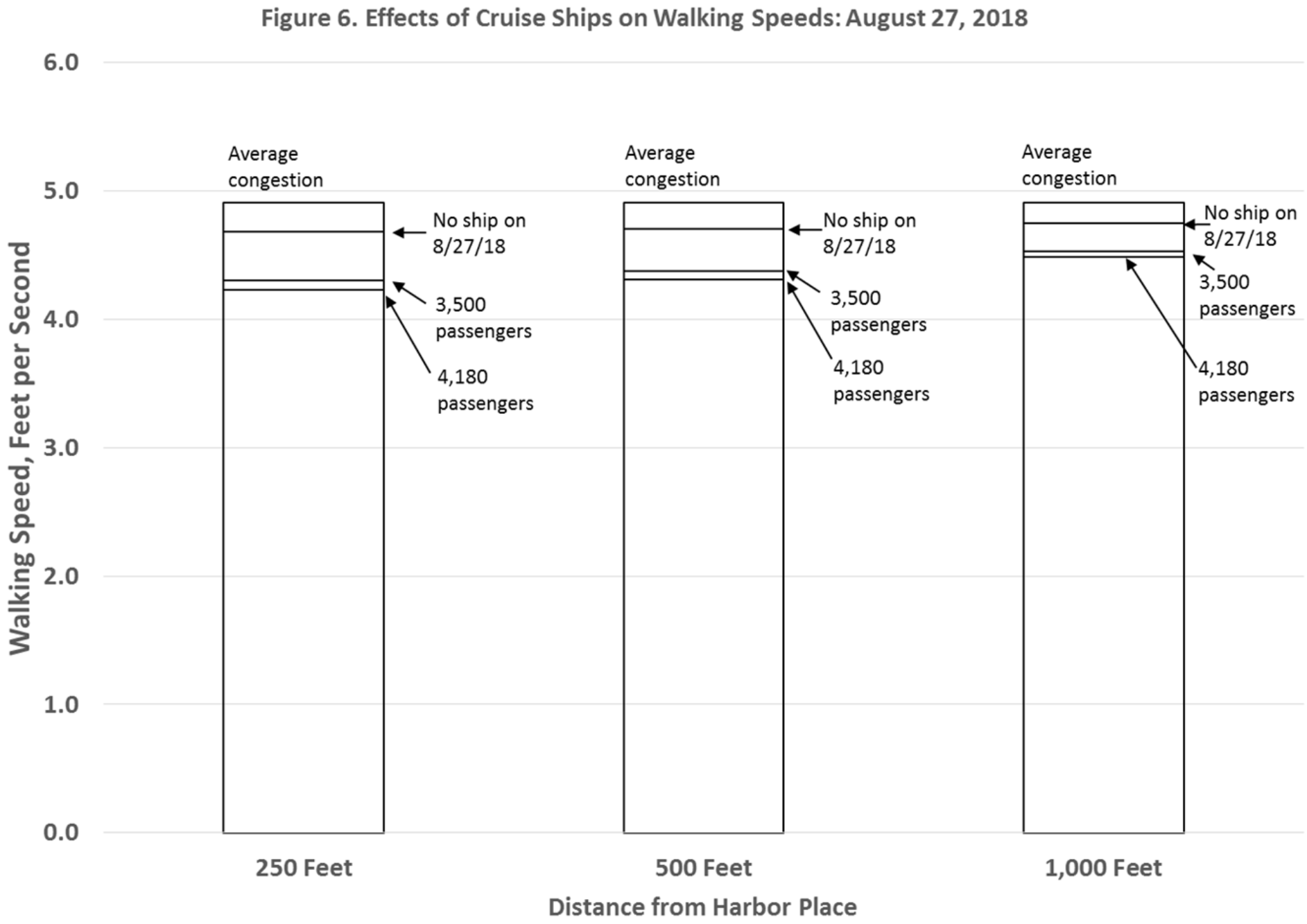


Figure 6. Effects of Cruise Ships on Walking Speeds: August 27, 2018
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Walking Speed, Feet per Second
Average congestion
No ship on 8/27/18
3,500 passengers
4,180 passengers
Average congestion
No ship on 8/27/18
3,500 passengers
4,180 passengers
Average congestion
No ship on 8/27/18
3,500 passengers
4,180 passengers
250 Feet
500 Feet
1,000 Feet
Distance from Harbor Place

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!