Town of Bar Harbor Cruise Tourism Destination Management Plan

Prepared for the Maine Department of Transportation
Maine Port Authority and Town of Bar Harbor

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Final Report

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2007 Bar Harbor Cruise Tourism Destination Management Plan

Preparation of the Town of Bar Harbor's *Cruise Tourism Destination Management Plan (CTDMP)* has been a multi-faceted effort involving many meetings, discussions, workshops and collaboration with stakeholders and residents of the Town of Bar Harbor. The Bermello Ajamil & Partners, Inc. (B&A) Study Team would like to thank all who participated in this rewarding endeavor.

This plan was prepared for the use of the Town of Bar Harbor residents, stakeholders, municipal agencies and cruise industry partners. The information presented in this document reflects available data on the cruise industry and our interpretation of cruise market trends and operations as they relate to the specific wants and needs of the Town of Bar Harbor, as of the date of this plan submission. It may serve as an example to other municipalities in their efforts in assessing their potential opportunities for cruise-tourism expansion, tourism management philosophies and outreach efforts.

While there are numerous elements discussed within the management plan, our focus ultimately was on those operational areas affecting the delivery of the Bar Harbor tourism products and producing impacts on the Town of Bar Harbor infrastructure and its citizens. Overall, for long-term success in achieving the goals of the Town, there must be continued cooperation amongst the Community of Bar Harbor inclusive of the local residents, Town of Bar Harbor, retailers, venues, tour operators, transportation providers and cruise lines. Recommendations and commentary provided within the report are intended to provide a working platform for future goals and objectives for the Town of Bar Harbor related to cruise and in some cases land-based tourism as well as provisions for minimizing cruise tourism impacts while addressing the concerns of the community and cruise industry within the framework of the report as requested by the Maine Department of Transportation as the Project Manager.

The findings and recommendations within this report are assembled through research, site inspections, stakeholder meetings, Town of Bar Harbor Town Council meeting feedback, workshop feedback and individual citizens responding with comments and questions throughout the process.

Contents

Chapter 1 Project Overview

In 2006, the Maine Department of Transportation retained Bermello-Ajamil & Partners, Inc. (B&A) to assist in the preparation of a Cruise Tourism Destination Management Plan (CTDMP) for the Town of Bar Harbor, Maine. The CTDMP provides for an analysis of the Town of Bar Harbor's existing cruise industry conditions and growth potential, together with suitable guidelines and recommendations for future cruise tourism operations planning and development, in concurrence with stakeholder input aimed at promoting community and regional tourism industry sustainability. The following goals were established as part of the study proposal:

- ***Provide best management practices and solutions*** to the movement of people during the town's cruise ship tourism season; and,

- ***Continue the development of the cruise tourism business*** in a manner that:
  - Maintains the character of the Town;
  - Is sustainable for the cruise industry;
  - Takes into account land-based tourism operations; and,
  - Provides consideration for the needs of the local citizens, fishermen and businesses.

The Maine DOT in conjunction with local Town of Bar Harbor stakeholders formulated a number of project study items to consider as part of the overall project. They included, but are not limited to the following items:

- Review current operations and offer recommended capital, operational and fiscal improvements;

- Prepare a plan that identifies how best the Town's cruise activities can be managed as a sustainable enterprise;

- Present traffic management options that ease congestion and disruption to downtown traffic network while enhancing cruise guest experience;

- Recommend a method for collecting accurate data on revenue generated by cruise ships, passenger spending and overall satisfaction;

- Review and comment on security needs for anchorages, tendering operations and docking facilities;

- Review existing and anticipated future environmental issues of air and water quality associated with cruise operations to the Town and recommend best management practices that can be used to eliminate, off-set and/or minimize any determined impacts; and,

- Conduct a multi-stakeholder workshop in Bar Harbor to obtain a broad perspective of the overall community's perspective on the cruise industry, its opportunities, challenges and drawbacks.

Over the course of the project period some of these study items were modified due in part to scheduling and other elements intrinsic with such a project. However, a significant aspect of this study was community input and participation that shaped the CTDMP's recommendations. The sustainability of Bar Harbor's local economy and attractiveness is incumbent upon the relationship between Bar Harbor residents and visitors: cruise- and land-based tourists alike. Hence, helping to inform the community and prepare local business and residents for a cruise-tourism presence serves to be mutually beneficial for both local citizens and visitors to the Town of Bar Harbor.

The Town of Bar Harbor's CTDMP is a public project geared towards harnessing the potential opportunities for Bar Harbor as an economically vibrant, attractive tourism destination. Bar Harbor boasts a beautiful scenic landscape and a proud cultural heritage - providing a firm tourism and economic base from which to grow and expand in order to benefit community residents and business-owners alike, as well as all those eager to experience what Bar Harbor and surrounds has to offer. The Acadia National Park is a significant venue that is the main draw of tourists to Mount Desert Island. Originally established in 1916, the donation and purchase of private parcels has created a complex park boundary that is highly integrated into the neighboring towns.[1] Because of this fundamental relationship between Bar Harbor and Acadia National Park any of the recommendations affecting overall tourism generation to either location should be coordinated appropriately. The Park receives more than 2-million recreational visits annually with a vast majority of those occurring from June through October. These are the primary land-based and cruise-tourism seasons for the Northeast, specifically Town of Bar Harbor, Maine. The CTDMP serves as a key informative reference guide for the local citizenry, as well as professional insight for the key stakeholders and agencies that influence the Town of Bar Harbor's future and those cruise line industry entities and operators that utilize the local tourism resources.

[1] "Acadia National Park" – Park News – August 25, 2003, National Park Service, US Dept. of the Interior.

Chapter 2 Recommendations

Recommended management, operations and development strategies are categorized as Action Items and presented in the following Chapter. In many cases we found through observation that the Town of Bar Harbor already adhered to a number of good cruise tourism practices aimed at maintaining the Town's character and developing the overall tourism industry for the benefit of the community. While this Chapter specifically identifies a recommendation and categorizes it accordingly, Chapters 3 and 4 offer background discussion, observations and insight into the recommendations contemplated in this report. In some cases, we were not able to achieve or identify a single best recommendation due to the overall nature of the study objectives (by example – specific parking and traffic solutions) as additional research and site work specifically targeting these areas are required. However, we have offered alternative solutions and discussion items in many cases that go beyond the original scope of the report and cross into the overall tourism realm, having impacts on both land- and cruise-based tourism. Specific items in this Chapter are categorized as follows:

- **Cruise Tourism Policy;**
- **Ground Transportation Area Operations and Management;**
- **Infrastructure Development;**
- **Community Outreach and Surveying; and,**
- **Staffing and Study Requirements.**

Bulleted items are marked as either High Action Items (■); Medium Action Items (■) or Low Action Items (■). Where feasible the management plan recommendations provide linkages in terms of timing and need. Each item is further elaborated on within the CTDMP in the Chapters that follow.

CRUISE TOURISM POLICY:

➢ **CRUISE PARTNERSHIPS (■).** Formalize cruise industry relationships through the development of a communications plan aimed at the key areas of Marketing, Operations and Environmental concerns related to the cruise ship operations in Bar Harbor.

- **Participate in Seatrade.** Representatives from the Town of Bar Harbor should participate in Seatrade Miami as an education tool and source of information from ports with similar issues and cruise line decision-makers.
- **Active in Northeast US Cruise Community.** Participate in conference and educational events within the Northeast region. Conduct information sharing with ports in the region to assist in the development of the region and Town of Bar Harbor as a cruise destination.

- **Interact with CruiseMaine.** Be involved in the decision-making processes within CruiseMaine as the primary cruise port-of-call in the State. Become an active partner and use the body as a source of information for policy-making decisions and an educational tool.

➢ **TRANSPORTATION GUIDELINES (■).** Include within a policy format all of those transportation related elements associated with tourism operations in Bar Harbor. These guidelines are inclusive of traffic movements, parking, operations, monitoring, licensing, and other elements for land and cruise tourism based transportation.

➢ **CRUISE PASSENGER THROUGHPUT POLICY (■).** While already in place for 2 ships per day, we recommend revising the policy to establish daily caps based on seasonality (summer and fall seasons), passenger capacity based on the tourism capacity of Bar Harbor and Acadia National Park (as the main tourism asset of the area) and other factors in conjunction with the cruise line industry.

➢ **CRUISE FEES (■).** Bundle all cruise related fees into one source inclusive of anchorage and tender fees, security, transportation fees and others controlled through the Town of Bar Harbor cruise operation.

➢ **COMPREHENSIVE PLAN (■).** Incorporate key recommendations and assessment items of the CTDMP into the Town of Bar Harbor's Comprehensive Plan. Items may include traffic, parking and other issues.

➢ **HARBORSIDE TENDER FACILITIES (■).** As part of the approvals criteria for the development of the overall site plan, a stipulated requirement should be to include adjacent to the pier site, upland Ground Transportation Area able to support the movement of tender passengers through the facility.

- **ENVIRONMENTAL MONITORING PROGRAM** (■). Establish recurring environmental monitoring program for cruise operations. Sample, test and monitor wastewater discharge from docking and anchored vessels, stack emissions, solid waste disposal (if any), and overall water quality to sustain acceptable standards dictated by the appropriate rules, regulations, and publications applicable to Bar Harbor operations. Monitoring is an important part of the overall system of checks and balances and one which the cruise industry has encouraged.

- **TOWN OF BAR HARBOR TOURISM ENTITY** (■). This is aimed at serving tourism as a whole. Track, manage, assess issues, market, and train and formalize tourism development process for the Town of Bar Harbor. Members may include numerous stakeholders inclusive of Tour Operators, Cruise Lines, Acadia National Park and others.

- **MOTOR COACH LICENSE FEE** (■). Initiate a license fee system for all motor coaches entering the Town of Bar Harbor inclusive of land and cruise tourism operators.

- **INFRASTRUCTURE DEVELOPMENT / MAINTENANCE FUND** (■). Establish a mechanism whereby through a fee or lump sum system a fund is established to pay for items related to cruise tourism infrastructure requirements to assist in sustainability and operational issues amongst others.

    - **Identify Items.** Through an evaluation process in conjunction with the cruise line industry and key cruise tourism stakeholders identify infrastructure items for short, mid- and long-term implementation using the fund.

- **CRUISE TOURISM WORKSHOP** (■). As part of an annual process conduct a cruise tourism workshop with stakeholders to review and adjust guidelines as necessary based on infrastructure and other changes; discuss issues impacting the Town of Bar Harbor; conduct a review of the oversight process of guidelines, operations and environmental issues; and provide training and information programs for the local community and cruise tourism stakeholders.

- **TRANSPORTATION PROVIDERS TRAINING PROGRAM** (■). Assist tour operators and transportation providers in the development of training programs based on transportation guidelines, policies and other elements associated with cruise tourism operations and management in the Town of Bar Harbor.

GROUND TRANSPORATION AREA OPERATIONS AND MANAGEMENT:

PARKING AND TRAFFIC FLOW

- **PARKING AND QUEUING AREAS** (■). Establish specific parking and queuing zones for motor coaches within the Town of Bar Harbor for cruise and land-based coaches such as those adjacent to the Agamont Park GTA on Newport Drive. Sites include Newport Drive, West Street, Main Street (all adjacent to the current GTA) and within Harborside as stipulated for a new tender facility. A coach queuing area should be established at the Ball Park.

- **ONE WAY MOTOR COACH MOVEMENT** (■). One way motor coach movement within the Town of Bar Harbor is encouraged. Specifically, inbound from Hwy #3 to Eden Street and inbound via Mt. Desert Street, turning North along Main Street to the GTA and then outbound via West Street only. Inbound from Acadia National Park motor coaches can move along Cromwell Drive to Main Street and out West Street.

- **EMPTY TOURISM TRANSPORTATION VEHICLES** (■). These vehicles should avoid circulating through the Town of Bar Harbor residential areas once passengers are dropped off in the area. Instead, the vehicles should be encouraged to utilize the queuing area at the Ball Park or other area outside the Town until required for pick-up.

- **DOWNTOWN DROP-OFF AREA** (■). A cruise tourism passenger drop-off area should be established adjacent to the Village Green. Preferred sites would be on Mt. Desert Street in front of Window Panes or along the East side of Main Street adjacent to the Park. As single loading / unloading zone would be required.

- **RESOURCE SCHEDULING** (■). Tour operators should schedule vehicles to maximize the efficient use of the vehicle, thus limiting the overall numbers of transportation units required to move cruise passengers within the Town of Bar Harbor. Limit the total number of motor coaches

on the roadways and parked within the town. Use the Ball Park for alternative queuing area when possible.

- **AGAMONT PARK ONE WAY LOOP TRAFFIC** (■). Encourage one-way loop traffic for all tourism transportation vehicles, delivery vehicles and non-local vehicular traffic around Agamont Park from Main Street to Newport Drive to Agamont Lane and along West Street.

- **HANDICAP ZONE USE** (■). Tourism transportation should only use these areas by permit or those vehicles equipped with a wheelchair lift for the loading and unloading of passengers only. No parking or queuing is permitted.

- **TOURISM TRANSPORTATION TRAFFIC FLOW** (■). Motor coaches should not slow or stop for sightseeing opportunities within the Town of Bar Harbor or impeded or slow vehicular traffic within the town. Common courtesy should be used at all times. No stopping or parking on West Street, unless to turn into Harborside or other property. No tourism transportation traffic should use Ledgelawn Avenue as an alternative route or parking area. There should be limited use of residential streets within the Town of Bar Harbor for tourism transportation.

- **LIMITED MOTOR COACH ACCESS ON WEST AND COTTAGE STREETS** (■). Two-way motor coach traffic should be limited / controlled on Cottage and West Streets due to roadway congestion, parking, bicycle and pedestrian uses.

- **TAXI AND SMALL TOUR VEHICLE LOADING AREA** (■). Establish a parking zone for loading and unloading of cruise passengers for 4 to 6 vehicles along the Northeast parking area of Harbor Place. Move these vehicles from the front of the building during peak tour operations hours (8 – 10:00AM) to assist in the flow of passengers to the GTA.

- **PARKING SPACE REMOVAL** (■). Remove the 2 bottom parking spaces on the west corner of Main Street adjacent to West Street (on cruise ship days only) to ease movement of coaches and traffic in area and as a preventive accident measure.

- **TOUR TRANSPORTATION COMMON COURTESY** (■). Tourism vehicles should avoid impeding pedestrian and vehicular traffic throughout the Town of Bar Harbor with specific emphasis on the corners or West & Main, Cottage & Main and Mt. Desert & Main Streets.

- **ROADWAY SAFETY PROCEDURES** (■). Transportation providers should use caution within the Town of Bar Harbor with pedestrians, bicycles and parked vehicles along the narrow streets, such as West Street) and others throughout the community. Common courtesy should be instilled in all drivers.

REGULATIONS AND MONITORING

- **ENGINE IDLING** (■). Limit engine idling to less than 5-minutes at all queuing and loading areas for all tourism transportation within the Town of Bar Harbor. Monitor, advise and fine transportation providers as required.

- **NOISE AWARENESS** (■). Tourism Transportation providers should be aware of noise in association with their operations primarily in the early AM hours. Attention should be paid to back-up signals, horn and other coach noises. Effort should be given to minimize noise through assistance with backing in the queuing area of the GTA, limited engine idling, and use of the horn throughout the town.

- **VENUE TOUR SCHEDULING** (■). Tour Operators, transportation providers and the Town of Bar Harbor should work cooperatively with Acadia National Park to schedule cruise (and land-based coaches if possible) to limit congestion and overcrowding issues associated with the key Park venues, specifically Cadillac Mountain, Jordon Pond House and Thunder Hole. Parking areas and roadways may also be affected.

- **TOURISM VEHICLE FLUIDS** (■). Tourism transportation providers should monitor any engine oil / fluid leaks when operating in the Town of Bar Harbor inclusive of queuing, loading and unloading areas.

- **OVERLAND (land-based) TOUR MOTOR COACH SYSTEM** (■). Establish a system to address related issues with the Town of Bar Harbor and Acadia National Park concerning motor

coach transportation providers' guidelines, licensing, scheduling and monitoring. Notification can be done in conjunction with the Town of Bar Harbor, Tourism Entity, Chamber of Commerce, Acadia National Park and/or National Transportation Association (NTA).

- **TOURISM TRANSPORTATION MONITORING PROGRAM** (■). Establish self-monitoring program for tour operations (cruise and land-based) in conjunction with local police to enforce the guidelines as presented within the Town of Bar Harbor.

MANAGEMENT

- **GROUND TRANSPORTATION AREA (GTA) EFFICIENT USE MANAGEMENT** (■). Encourage increased cooperation between cruise vessel staff and Tour Operator(s) to increase the efficient use of the GTA. Promote onboard grouping of shore excursion coach tour loads and movement via single tender moves to the loading area. Encourage overall cooperation amongst tour operators, transportation providers, taxis and other as a common courtesy to the overall efficiencies of the area.

- **AGAMONT PARK GTA LOADING AREA** (■). Allow up to three motor coaches to load and unload along West Street adjacent to Agamont Park and Harbor Place. Curb area should be modified to allow to accommodate the entrance and exit to loading area for motor coaches. Allow up to four motor coach loading / unloading spaces along the east side of Main Street adjacent to Agamont Park for AM cruise tour departures.

- **HARBORSIDE / AGAMONT PARK GTA'S** (■). It is recommended that the Harborside tender facility site serve as the primary (ONLY) GTA for the Town of Bar Harbor. The GTA should move from Agamont Park to the Harborside Site with Agamont Park continuing to serve as a motor coach parking / queuing area.

  - **Harborside GTA.** A GTA to accommodate tender operations should be a pre-requisite for approvals of the planned tender facility. A loading / unloading area should be provided within the Harborside site area with adequate space to accommodate up to two large cruise vessels (approximately 5,000 – 6, 500 passengers daily). This solution would likely provide the least impact to the Town of Bar Harbor and provide the utmost in overall cruise passenger and land-based visitor satisfaction.

  - **Harborside Tender Site / Agamont GTA.** This arrangement would produce numerous conflicts and impacts to the Town of Bar Harbor and produce poor visitor satisfaction results for cruise passengers and land-based visitors.
  - **Harborside and Harbor Place Tender Sites / Agamont GTA.** This arrangement provides for numerous conflicts and will likely increase the impacts on the Agamont Park and adjacent areas due to pedestrian traffic issues along West Street and GTA issues.

  - **Harborside GTA Traffic Flow.** Traffic transportation flow should be provided one way only along West Street as illustrated in the Traffic Flow recommendation. All coaches either come to the site by way of Main Street or via the motor coach parking area at Agamont Park, through Agamont Lane and down West Street.

- **TOURISM TRANSPORTATION PARKING AND QUEUING RESTRICTIONS** (■). Restrict queuing and parking along Agamont Drive and north side of Newport Drive.

- **HARBOR VIEW PARK GTA LOADING AREA** (■). Increase use of the area along the north side of West Street adjacent to the water's edge for tour loading / unloading. Modify curb area to accommodate up to 3 motor coaches.

- **AGAMONT PARK GTA LIMITS** (■). Reduce the use of Agamont Park as a coach queuing area for PM cruise tour operations. Restrict the use of West Street adjacent to the Town Pier Parking and Agamont Park for land-based motor coach loading / unloading. This activity should be moved to the Motor coach queuing area on Newport Drive. All tourism transportation should be encouraged to use the Ball Park for queuing and parking operations.

- **PEDESTRIAN ZONE** (■). Consideration should be given to the development of a pedestrian only loading zone immediately in front of Harbor Place to assist in the safe and secure movement of cruise passengers and land-based visitors through this area during high congestion times to / from Agamont Park, GTA loading area and sidewalk system to the core downtown area. Short-term, the removal or limitation of two vehicle parking spaces immediately in front of the main Harbor Place entrance may assist in the ease of cruise passenger movement out of the facility in the AM tour load hours.

MARINE OPERATIONS

- **TENDER OPERATIONS PLANNING** (■). The Town of Bar Harbor should work cooperatively with the cruise lines and private tender facility operators to provide advance information concerning tendering guidelines inclusive of tender route maps, no-wake zone enforcement, docking/undocking recommendations, oversight and monitoring.

- **TENDER UTILIZATION** (■). Through a joint effort with the cruise line and Tour Operator encourage maximum utilization of tenders to avoid inner harbor congestion, high concentration of emissions and increased wakes throughout Frenchman Bay.

- **TENDER EMISSIONS** (■). Encourage the use of low sulfur fuels in tenders to reduce emissions and request cruise lines to monitor all fluids that may potentially leak into Frenchman Bay. Comply with vessel visible emission standards and take all available steps to minimize emissions while in port.

- **TENDER WAKE REDUCTION** (■). Encourage cruise line to use an alternative docking method for loading and unloading passengers within the inner harbor. The goal is to not use the bow or stern line as a spring line and then hold the boat against the dock with a throttled engine. This effort will reduce noise, emissions and wake production within the inner harbor.

- **INNER HARBOR TENDER OPERATIONS** (■). Establish a maximum tender capacity for the inner harbor area to avoid congestion and minimize accidents.

- **COURTEOUS USE OF TENDER FLOATS** (■). Tender drivers should act in a safe and responsible manner when utilizing the Town of Bar Harbor inner harbor and private float facilities to minimize wake production, noise emissions and operate in a way that exhibits common courtesy to all others.

- **RADIO COMMUNICATIONS** (■). Communication amongst fishermen, cruise vessels and tender drivers is encouraged to avoid accidents within the inner harbor and Frenchman Bay.

- **VESSEL PUBLIC ANNOUNCEMENT AND SIGNALS** (■). Minimize external announcements and signals while anchored or berthed in Frenchman Bay unless required by US Coast Guard or safety/security issues.

- **CITY TENDER FLOAT FACILITIES** (■). Utilizing an existing or new area adjacent to the Town Pier for tender operations is not recommended. There are significant financial implications as well as direct impacts to the fishing fleet, parking area, traffic circulation and taxation/revenues associated with the possibility of pulling business from a private facility operator.

- **TENDER DRIVER EDUCATION** (■). Provide the cruise lines with an educational pamphlet illustrating the impacts of the tender operations on the local fishing fleet, lobster pots, boat ramp use, etc. as a tool to assist in reducing conflicts with these entities.

PEDESTRIAN TRAFFIC MOVEMENT

- **WAY-FINDING SIGNAGE AND KIOSKS** (■). Provide an increase in way-finding signage throughout the Town of Bar Harbor in key locations to provide information and encourage pedestrian movement and flow throughout the community, specifically tourism and retail areas. Staffed tourism kiosks in primary access areas to the Town, such as Harbor Place, Harborside, Agamont Park, and the Village Green as examples provides for additional information and survey collection source sites.

    - **Organize walking tours.** As part of the way-finding signage system, organize a series of short walking tours throughout the Town using signage as part of a self-guided tour.

    - **Tourism information kiosks.** This provides locations for cruise and land-based visitors to receive information on current events in Bar Harbor act as sources for survey instruments and provide a linkage for future marketing of Bar Harbor to visitors.

- **ISLAND EXPLORER TOWN CIRCULAR ROUTE** (■). Develop a circular Island Explorer bus route through the Town of Bar Harbor to assist in the movement of visitors throughout the community, thereby reducing traffic and parking issues and promoting broader economic impacts in the town.

- **SIDEWALK ENHANCEMENT** (■). Sidewalks and streetscapes in the Town of Bar Harbor should undergo a beautification effort to create a more pleasurable experience for the walking visitor. These enhancements to sidewalk (inclusive of curb-cuts, delineated pedestrian crosswalks, street furniture, litter bins, etc.), and streetscape beautification in the realm of uniform signage and landscaping treatment will enhance the overall visitor experience.

INFRASTRUCTURE DEVELOPMENT

- **AGAMONT PARK GTA LOADING AREA MODIFICATION** (■). As identified, modify loading area adjacent to Agamont Park on West Street to accommodate 3 motor coaches and make movement easier. Curb cut to be adjusted accordingly.

- **HARBOR VIEW PARK LOADING AREA MODIFICATION** (■). As identified, modify loading area adjacent to Harbor View Park to accommodate a minimum of two motor coaches and expand passenger park waiting area and sidewalk accordingly.

- **STREETSCAPE IMPROVEMENTS** (■). Plan for sidewalk enhancements to address sidewalk congestion issues and allow for easier pedestrian movement and flow throughout downtown area.

- **TRANSIT CORRIDOR IMPROVEMENTS** (■). Specifically address needed street enhancements on West Street to encourage a more pedestrian- and cyclist- friendly corridor, while also looking at potential traffic control measures that would ease traffic congestion.

- **NOVA SCOTIA FERRY PIER PLAN** (■). Prepare a future concept plan for the Nova Scotia Ferry Pier to accommodate the design cruise vessel for berth and tender operations. While we do not recommend implementation of a cruise facility at the site presently, this step would allow for future planning flexibility and perspective. Traffic and pedestrian issues must also be addressed as part of this planning process.

COMMUNITY OUTREACH AND SURVEYING

- **RESIDENT SURVEY** (■). Provide a mechanism for an annual resident survey as a tool for land and cruise tourism impacts that will assist the town to better react to activities that impact residents, local businesses, and industry stakeholders.

- **VISITOR SPENDING SURVEY** (■). Provide for annual visitor spending survey to provide a gauge as to the cruise and land-based tourism spending patterns and impacts associated with each sector of the tourism market. Provide for necessary assistance and implementation of programs to influence future spend in the community.

- **PUBLIC WORKSHOP / MEETINGS** (■). Provide for an annual public tourism meeting / workshop focused on issues affecting the community for cruise and land-based tourism. Offers direct feedback, venue for discussion, and forum to interact with cruise operators, tour operator, transportation providers, venues, Acadia National Park, Chamber of Commerce and others impacting and affected by tourism in the Town of Bar Harbor.

- **VISITOR SATISFACTION SURVEY** (■). Provide for an annual survey of cruise and land-based visitor satisfaction for the Town of Bar Harbor and surrounding venues, such as Acadia National Park. This is an instrument to assist in the development of programs and infrastructure to further enhance tourism offerings to provide for increased visitor satisfaction and community involvement.

- **TOURISM OPERATIONS MONITORING** (■). Develop a public and self-monitoring system based on established guidelines for tourism management and operations. Provide for monitoring feedback through different avenues, such as e-mail, online, phone or others.

STAFFING AND STUDY REQUIREMENTS

- **TOURISM DEPARTMENT / CVB DEVELOPMENT** (■). As identified, establish a tourism entity within the Town of Bar Harbor responsible for Tourism Development, Marketing, and Monitoring and other with reports to the Town of Bar Harbor.

- **TOURISM SUSTAINABILITY STUDY** (■). In conjunction with tourism stakeholders in and surrounding the Town of Bar Harbor conduct a study to determine present and future tourism sustainability guidelines, inclusive of development options, infrastructure requirements, venue expansion, roadway impacts and others.

- **PARKING STUDY** (■). Conduct a study to offer solutions for parking issues throughout the town.

- **TRAFFIC STUDY** (■). Conduct a comprehensive traffic study focused on the future opportunities and options for traffic solutions related to congestion within the Town of Bar Harbor. This will assist in anticipating future planning needs and set parameters for development.

Chapter 3 Town of Bar Harbor Cruise Facilities

3.1 Section summary

This section provides an overview of the cruise line selection process for a port-of-call and link to Bar Harbor's cruise marine and upland operations. A discussion of the primary cruise port infrastructure, security review, and overall recommendations are presented. A summary is provided below:

- Cruise lines and their respective decision-making groups—marketing and sales, marine operations, logistics, and finance—expend significant effort in evaluating a destination, and congruently, an itinerary to ensure it meets the various criteria established to differentiate their product offering and sell desirable and profitable cruise products.

- For Bar Harbor the primary focus of cruise operations are shore excursion programs - the ability of passengers to be moved efficiently and effectively from the vessel to shore and a Ground Transportation Area that offers a safe and practical area for the movement of coaches and other forms of transportation is required. Secondary, is the movement and satisfaction of independent cruise visitors to the destination and their ability to spend a reasonable amount of time in the Town of Bar Harbor.

- Bar Harbor offers a unique anchorage and tendering opportunity for a marquee destination. The two main anchorage positions offer relatively short (less than 15-minute) tender moves to the main downtown area. A private tender facility, one of a handful in existence, provides the main reception area for Bar Harbor. An alternative private tender facility is being proposed for the Harborside development area. This would provide a good area for operations. However, an upland GTA must be a part of the package within the site, otherwise this concept will provide for severe impacts on the community.

- The Town of Bar Harbor is adequately monitoring the safety and security situation both from a landside and waterside perspective when cruise vessels are in port. This includes the monitoring of vessel tenders by the Harbormaster in terms of speed and wake creation that may disrupt small boats and rock docks within the marina. On the landside, local police are used to assist in securing safe passage for cruise passengers crossing from the tender landing to the GTA and uptown area. Overall, a Facility Security Plan is in place and the safety and security of the cruise vessel passenger is being adequately taken care of in Bar Harbor.

- There are currently no large ship berths, thus some vessels bypass Bar Harbor as they do not want to conduct tender operations. However, this also provides a limiting factor on cruise tourism passenger throughput for Bar Harbor. Thus, growth is constrained to Bar Harbor, while also regulating cruise call and passenger levels in order to preserve the local tourism infrastructure and balance cruise and land-based tourism needs with the requirements of the Town of Bar Harbor community.

- Based on operational and capacity issues we recommend imposing a daily cap on cruise tourism based on a range of total cruise passengers. This daily cap range should be assessed on an annual basis by the Town of Bar Harbor and adjusted accordingly to meet the needs of the industry based on vessel growth and seasonal expansion in the region.

- Conducting a tourism sustainability study (venue capacity analysis) for all tourism entities in Bar Harbor is not part of this planning process, but as a baseline, further work should be conducted in order to establish tourism venue use capacities and potential growth projections in order to establish overall strategic planning parameters for future tourism to the Town of Bar Harbor.

- We recommend establishing a bundled fee package inclusive of a port or dockage fee; tour coach fees per operation; and security fees per operation amongst others that may be implemented over time. This will allow the Town of Bar Harbor to be paid more monies sooner in the billing process, allow the cruise lines to better manage their budget and provide the tour operator with a fee simple billing process.

3.2 Cruise line requirements for selecting a port-of-call

In order to assess the cruise tourism infrastructure for the Town of Bar Harbor it is important and relevant to understand the cruise line criteria in making deployment decisions. Their selection of homeports and ports-of-call generally fall into three categories:

- Appeal as a travel and leisure destination;

- Type and quality of cruise tourism infrastructure needed to support vessel operations and movement of passengers; and,

- A market basis and strategic fit within a greater cruise vessel deployment scheme.

In the assessment of Bar Harbor the specific requirements related to the cruise tourism infrastructure are the primary focus of the examination. However, travel appeal and market basis are destination specific and also relevant to Bar Harbor. Lines are focused on development of products that deliver high levels of satisfaction and a vacation experience superior to land-based options. The cruise vessel and itinerary are the primary tools lines use to achieve this goal.

Cruise lines and their respective decision making groups—marketing and sales, marine operations, logistics, and finance—expend significant effort in evaluating a destination, and congruently, an itinerary to ensure it meets the various criteria established to differentiate their product offering and sell desirable and profitable cruise products.[2] A general list of cruise line decision-making groups and their primary focus in the selection process is provided in Table 1.

Marketing and sales followed by marine operations are the driving forces in cruise line decision making. The essential concern of the marine operations group is the actual functionality of a destination and itinerary in its ability to accommodate their cruise vessels. Can the vessel maneuver into the harbor, complete tender operations or dock at the selected pier? Are the upland facilities capable of accommodating the needs of the vessel, passengers and crew? Is the region and port safe? These and other questions are central in marine operations evaluation of a destination and itinerary.

Cruise lines have different needs for port-of-call and homeport operations, and accordingly, cruise line decision-making groups focus on different attributes for each type of facility and destination for which it is a part. Similarly, a cruise terminal is a much greater element of the homeport process; terminals are generally not needed at a port-of-call as the majority of cruise passengers want direct access to the shore excursion programs via Ground Transportation Areas, access to taxis and public transportation or access to entertainment and shopping areas. The marine/land operations group will spend time reviewing and evaluating a homeport destination as to the suitability of its cruise terminal to support vessel and passenger operations.

Table 1: Destination selection: What is important to the cruise lines?
Source: B&A, 2007

Marketing and Sales	Marine Operations
■ Consumer awareness and marketability of a cruise destination ■ Access to consumers ■ Fit with cruise brand philosophy ■ Fit with consumer vacation patterns	■ Marine navigation and access ■ Berth, apron and terminal features ■ GTA and parking ■ Provisioning and Security ■ History of operations from the port / destination
■ Landside access ■ Airlift ■ Lodging ■ Shore excursions and destination venues	■ Terminal charges ■ Labor, fuel and other operating costs ■ Regulatory issues ■ Maritime law
Logistics, Air-Sea and Shore Excursions	**Finance and Legal**

Cruise lines are also concerned with assembling destinations that are complementary to one another on an itinerary. Ideally, destinations visited need to be a balance of shopping, natural areas, cultural and historical attractions among other amenities. Destinations have a greater amount of influence on ensuring cruise tourism infrastructure meet cruise line requirements for vessel placement and the operational fit of a destination within an itinerary pattern. Through improving these attributes destinations can improve their chances of being included in an itinerary and having certain types of vessels operate from/to their port.

For the Town of Bar Harbor the primary focus of cruise operations are shore excursion programs - the ability of passengers to be moved efficiently and effectively from the vessel to shore and a Ground Transportation Area that offers a safe and practical area for the movement of coaches and other forms

[2] While we have presented the groups in general terms; in reality and depending upon the size of the cruise line, the groups can include several departments and decision-makers as part of the overall destination and itinerary selection process.

of transportation is required. Secondary, is the movement and satisfaction of independent cruise visitors to the destination and their ability to spend a reasonable amount of time in the port-of-call.

Bar Harbor offers a unique anchorage and tendering opportunity for a marquee destination. The two main anchorage positions offer relatively short (less than 15-minute) tender moves to the main downtown area. A private tender facility, one of a handful in existence, provides the main reception area for Bar Harbor. Immediately adjacent is the area used shore excursion operations. The town center is immediately accessible for cruise passengers. The main venue / attraction of Bar Harbor for the cruise tourist is Acadia National Park, which offers numerous attractions inclusive of Cadillac Mountain, Park Loop Road, Sand Beach, Thunder Hole, Otter Cliffs, Jordan Pond House and numerous other activities. Secondary attractions include water-based, nature-based alternative tours. Due to the primary location of the tender facilities the Town of Bar Harbor offers excellent access to a classic New England downtown area. While the compact size of the downtown area serves as a main attraction to land-based and cruise tourists alike, this same condition provides numerous challenges in the delivery of tourism related operations. In some instances there are direct and indirect conflicts between land and cruise tourism visitors sharing the same infrastructure. This is inclusive of sidewalks, roadways, retail areas, tourism venues and attractions and others.

3.3 Discussion of primary cruise port infrastructure and assessment

Channels and Turning Basins

Marine navigation requirements of modern cruise ships are significantly less than those constructed 20 or 30 years ago. Most cruise vessels in operation have vessel drafts of 32-feet or less and beams under 135-feet for Panamax vessels and between 135 and 180-feet for post-Panamax ships. Bow and stern thrusters provide excellent maneuverability for those cruise vessels constructed within the last fifteen years. These newer ships generally do not require tugboat assistance and can maneuver in turning basin with a diameter of between 1.2 to 1.5 times the ship's length overall. For the majority of cruise vessels in operation, air drafts (height) are below 170-feet; only the industry's largest cruise vessels as measured by GRT and passenger capacity have air drafts upwards of 210-feet.

In terms of onboard propulsion and environmental operations, the cruise industry continues to evolve. New vessel classes are incorporating azipod-thruster enhancements, new propulsion and drive-shaft designs, highly efficient low sulfur fuel burning gas-turbine engines and hull design to improve the marine characteristics of the vessels. A discussion of these components is provided below.

Azipod Thrusters. This feature has allowed for significantly increased vessel maneuverability in channel and turning basin navigation, docking and other situations such as anchorage operations, fjord movements and glacier sightseeing. Ships can now rely significantly less on tugboats to maneuver efficiently and safely. This ability has allowed vessels to decrease the turning radiuses and other variances (e.g., space between vessels at berth and in anchorage) by increasing the captain and pilot's ability to accurately propel and maneuver the ship.

It is believed that classes of vessels built after the next round of deliveries will continue to evolve on the marine technical side to produce greater onboard efficiencies, safety and speed. Thus, these maneuvering propulsion systems will likely continue to evolve, decreasing the use of assistance and increasing the ability of a ship to fit into a tight berth configuration. In several ports, it has been noted that azipods may impact the physical structure of pilings, seawalls or other berthing structures, due to the powerful outflow produced by the thrusters. At Bar Harbor, anchorage positions, thrusters, and anchor chains may impact areas on the seabed.

Propulsion systems. Developing efficient propulsion systems—drive shafts, jet and azipod propeller systems—that lower operating costs and increase the operational range of the vessel—effectively increasing itinerary possibilities during a fixed period of time—will be a continuing trend. RCCL's *Radiance*-class and Carnival's *Spirit*-class ships each have the ability to cruise at more than 24-knots which allows these lines to increase port time, the number of ports visited and/or the distance between port calls within an itinerary.[3]

Engines. Due to increased demand for fuel efficiency, environmental sensitivities and onboard operational requirements, the industry has begun developing their own engines, in conjunction with the major marine engine designers to produce hybrids capable of meeting the demands of the new generation of larger cruise vessels. Efficient diesel, gas turbine and other closely related engine categories have been used in the latest and next generation of cruise ships that allow for greater energy production and lower emissions. In conjunction with these newer engines, the cruise industry is also turning to low-sulfur fuels to further enhance environmental performance expectations. While the ships' power plant will continue to evolve over the next 20-years, the effects on port operations will be minimal.

[3] The average operational speed of cruise vessels in 1995 was approximately 18 knots.

Sail size. As cruise vessels continue to grow with lengths exceeding 1,000-feet the size of the ship's sail—overall total area of the side of the ship from bow to stern and waterline to mast—is increasing. This factor makes ships susceptible to wind movement during maneuvering at anchorages and through channels. Increased propulsion maneuvering systems do assist in counteracting and/or compensating for this factor. For Bar Harbor, any future marine side or berth design and placement must take into consideration prevailing winds.

To meet the channel and turning basin needs for design vessels presented in Chapter 9, minimum marine design parameters should generally include:[4]

- Water depth of access channels anchorages and vessel berths of 34-feet plus. An additional allowance for up to 10% under keel should be allowed. This level plus the under keel allowance is adequate to support operations by the *Queen Mary 2*.[5]
- A turning basin—either developed or existing—that can accommodate the safe maneuvering of a post-Panamax vessel. Additional maneuvering and vessel safety margins may need to be added given a specific site relative to existing lobster and fishing areas, mooring areas within the harbor and tender access ways.
- A maneuvering and safety distance of at least three to three-and-a-half vessel beams within access channel(s) associated with vessel movements is recommended. A similar distance should be designed for the area between the cruise anchorage/berth and active channel and/or turning basin. These distances allow for safe navigation, maneuvering, and while the vessel is at berth, room to allow for provisioning from barges.

Berthing areas

Berth configuration has important ramifications from a marine, landside access and upland development perspective. Cruise vessel berthing configurations observed worldwide are varied; specific application in ports and harbors generally reflects (from most important to least important):

- Cruise vessel protection and safety at berth;
- Proximity and access to channels and turning basins of adequate depth. This consideration takes on additionally weight given cost of construction and environmental permitting issues associated with creation of new marine navigation facilities;
- Water depth;
- Configuration of docks as it relates to marine navigation to/from the berthing position;
- Length of the vessel berth needed to support vessel operations;
- Utilization/rehabilitation of existing marine facilities for vessel operations;
- Size and configuration of available upland areas available to support operations;
- Proximity of facilities to upland transportation and access; and
- Relationship between the facility and other land uses, inclusive of mixed-use development, views, and other planning parameters.

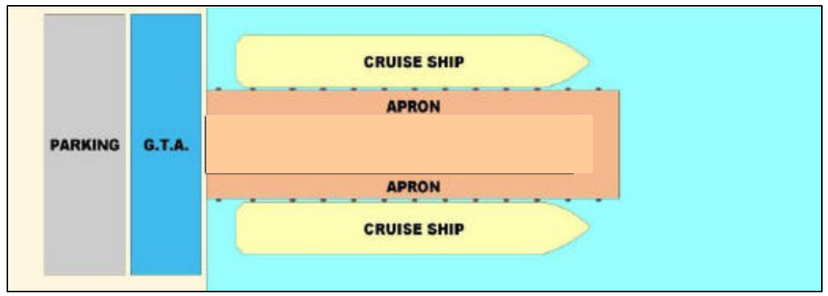
Three primary types of berth configurations are typically observed: Linear berths, piers and slips. Each of these types has distinctive advantages and limitations. However, for the current situation in Bar Harbor, the pier structure is most suitable – based on current layouts of the ferry terminal site. A further discussion on the Nova Scotia Terminal site is presented in Chapter 8.

In cruise applications, a pier typically supports two vessels, one on each side (see Figure 1). The compactness of the development can be very attractive in terms of marine access and upland facilities. The functional and aesthetic relationship of the pier to surrounding area also holds distinct advantages over a multiple linear berthing area. Downsides of piers include: Substantial initial development cost for new pier facilities and, if development is planned on the deck of the pier, high costs associated with structural loading; constrained GTA and transportation access facilities; and, difficulty in expansion beyond two berthing positions.

[4]Ultimate design of any cruise berth would likely vary given harbor, wind, swell conditions and vessel activity. Minimum design parameters presented herein are for preliminary planning purposes only. Any preliminary and final design of marine facilities to support cruise operations—as well as all features of cruise facilities development presented in this chapter—need to be thoroughly consulted with the State of Maine Dept. of Transportation including the Maine Port Authority and individual cruise lines. It is recommended that any marine, pier/dock configuration be simulated for a specific site under varying conditions & ship size to determine design suitability.

[5] This under keel clearance also meets Maine's under keel clearance of 3/2/1.

Figure 1: Pier Configuration
Source: B&A, 2007



In terms of the type of construction typically observed for development of cruise berths, sheet pile with a tied or cell wharf/piers, concrete caisson wharf/piers and open frame pile wharfs/piers are most commonly observed. These types of structures generally provide the right balance between longevity, rigidity and cost. In some instances, floating structures have been developed for certain cruise applications. Generally, these types of facilities are best in applications where only small and/or medium vessels are accommodated, or on a larger scale, facilities that are located in extremely deep water. The primary difficulty with floating facilities and large cruise ships is pontoon movement during vessel maneuvering and while the ship is at berth.

For Bar Harbor, only the pier berthing configuration approach is advantageous for implementation of possible new facilities within and along the current Nova Scotia ferry terminal property.

Ground Transportation Areas (GTA) and Parking

Port-of-call operations need to have moderate to large areas dedicated to GTA loading, off-loading and marshalling for tour coaches, taxis, and private car operations. Tour coaches, often the most demanding in terms of area required for operation should have at a minimum a drop-off / pick-up area capable of accommodating between 10 and 16 coaches simultaneously for a 2,000 to 3,500 passenger vessel within easy access of the area established for the off-loading of cruise passengers to Bar Harbor, whether this be the existing private pier tender facility, the new proposed facility adjacent to the Harborside Inn or in the long-term a possible berthing option at the ferry terminal facility.

Because the discharge of cruise passengers occurs within an abbreviated period, a coach marshalling area(s) supporting the primary GTA may provide an option for the Town of Bar Harbor to ease traffic within and adjacent to the current GTA. Control of taxi operations via radio dispatch from a marshalling area is also preferred for vessel operations. This works especially well in larger ports-of-call. For Bar Harbor this may provide limited relief from any downtown congestion. Use of the Ball Park as a queuing area would assist in congestion in the Agamont Park area with additional movements of tourism transportation maximized through management and traffic movement recommendations.

The GTA is used for both cruise and land-based tourism. Rules and regulations governing motor coach operations within Bar Harbor should not only be provided to cruise tour operators, but also to over-the-road coach operators arriving in Bar Harbor during various times throughout the tourism season. To a degree, these coaches provide for much of the impacts associated with cruise tourism coaches inclusive of parking, use of roadways, coach engine idling and use of designated drop-off areas. Some parking will also need to be provided for both anticipated taxi and service business for small ships calling in Bar Harbor and for other staff, CBP and others.

Security

The terrorism events of September 11 have brought into clear focus the potential horrific damage that can be wrought by a small number of individuals. Lines recognize that the terrorism threat against cruise vessels at sea or in port is very real and they are working hard to protect the safety of their passengers, crew and financial interests. One incident, no matter how small, could easily result in significant loss of life and financial ruin of the cruise line and industry overall. A location that experiences such an incident, especially if the event were to occur at a port or port of call, would also suffer from negative press and loss of cruise industry participation and revenues.

Any new and/or redeveloped cruise facility in Bar Harbor will need to meet the minimum standards of the ISPS Code and adhere to Maritime Transportation Safety Administration regulations. All facilities should also meet and/or exceed many of the standards considered best practices for maritime security planning. These include:

- Development of a security plan for the facility.
- Screening of all passengers and luggage (for homeport and port-of-call operations).
- Limit access to the apron or secured tender area to authorized, port/terminal ID holding individuals only.

- Inspection of provisions.
- Movement of private car drop-off areas and parking away from cruise vessels or cruise tenders. A minimum distance of 50-ft. should be established (both above ground and structured).
- For berths, apron fencing of 10 – 12-feet in height with a top bar and razor wire (or similar structure to discourage fence scaling).
- Lighting of the apron and access areas (between 3 and 5 foot-candles).
- CCTV surveillance of the secured tender area, terminal, apron, waterside and upland approaches.
- Provision of a small security operations center as part of the security plan.
- Consideration of waterside security surveillance and patrolling prior to and during vessels being in port or at anchor.

In Bar Harbor the currently used private tender facility is used for operations in part based on MTSA Regulations, Chapter 33, subchapter H, part 105-Facilities. This regulation dictates that a facility that receives tenders from foreign-flagged vessels must be regulated under 33 CFR Part 105 and must submit a facility security plan. Therefore, a facility that receives tenders from foreign-flagged cruise vessels cannot be designated as a public access facility as they are required to submit a facility security plan.

For Bar Harbor, this means that use of the Town Pier would restrict access to parking, create a barrier for the fishing fleet and restrict pedestrian movement during cruise ship tender operations. Additionally, there would be a high investment cost to modify the town pier and provide for the necessary maintenance and staff required for this type of operation. At this point we do not recommend that the Town of Bar Harbor be in the tender operations business. Whereas, the existing private tender facility allows for a secured area with limited public access for alternative activities such as the adjacent restaurant / retail areas and boarding of tour boats. For Bar Harbor this is the best solution currently. Permit applications have been submitted to create a new expanded private tendering facility adjacent to the Harborside Hotel & Marina. While further information is required to assess the impacts on the GTA, movement of passengers and other issues it appears this would certainly alleviate any coach parking difficulties at the current location as one would assume coaches would be parked within the Harborside area. However, this movement would impact West Street by increasing coach movements to/from the new site and there would be considerable impacts on the hotel itself as the pool facilities are immediately next to the proposed site. The Harborside site should be approved only if a GTA is adjacent to or within the property site. Use of the Agamont Park GTA in conjunction with the proposed tender facility would only work to further highlight cruise tourism impacts to the area.

The Town of Bar Harbor is adequately monitoring the safety and security situation both from a landside and waterside perspective when cruise vessels are in port. This includes the monitoring of vessel tenders by the Harbormaster in terms of speed and wake creation that may disrupt small boats and rock docks within the marina. On the landside, local police are used to assist in securing safe passage for cruise passengers crossing from the tender landing to the GTA and uptown area. The fee for this service is charged through the tour operator to the cruise line.

Overall, a Facility Security Plan is in place and the safety and security of the cruise vessel passenger is being adequately taken care of in Bar Harbor.

3.4 Attractiveness of the Town of Bar Harbor

Based upon the requirements for selecting a port-of-call found in section 8.2 and cruise line stakeholder interviews we have provided a matrix for consideration by Bar Harbor in terms of strengths within the core group of factors discussed.

Marine Conditions and Access

These are positive factors for Bar Harbor mainly due to the proactive role taken by the Harbormaster and others to establish an entrance channel into Bar Harbor that takes into consideration the lobster industry. This has been relayed to the cruise line industry and all vessels take this channel to access Bar Harbor in order to not disturb the large number of lobster pots in the area. Lobstermen are also aware of this channel and place their pots accordingly. Draft and width of the channel is not a challenge.

For Tender operations the following are recommendations to assist in lessening impacts to Bar Harbor. Tender drivers should act in a safe and responsible manner when utilizing the Town of Bar Harbor inner harbor and private float facilities to minimize wake production, noise emissions and operate in a way that exhibits common courtesy to all others. They include the following:

- The Town of Bar Harbor should work cooperatively with the cruise lines and private tender facility operators to provide advance information concerning tendering guidelines inclusive of tender route maps, no-wake zone enforcement, docking/undocking recommendations, oversight and monitoring.

- Through a joint effort with the cruise line and Tour Operator encourage maximum utilization of tenders to avoid inner harbor congestion, high concentration of emissions and increased wakes throughout Frenchman Bay.

- Encourage the use of low sulfur fuels in tenders to reduce emissions and request cruise lines to monitor all fluids that may potentially leak into Frenchman Bay. Comply with vessel visible emission standards and take all available steps to minimize emissions while in port.

- Encourage cruise lines to use an alternative docking method for loading and unloading passengers on tenders within the inner harbor. The goal is to not use the bow or stern line as a spring line to hold the boat and use the throttled engine to keep the boat against the dock. Tying up at the dock will assist in reducing noise, emissions and wake production within the inner harbor.

Cruise facilities

For large cruise vessels, Bar Harbor is an anchorage and tender operations port-of-call. Small US-flagged ships berth at the head of the Town Pier on their coastal cruises. Anchorages and tender lanes are adequate for operations. There are currently no large ship berths. Very few vessels bypass Bar Harbor as they do not want to conduct tender operations. This provides a small limiting factor on cruise tourism passenger numbers for Bar Harbor. Thus, overall growth is constrained to Bar Harbor, while also regulating cruise call and passenger levels in order to preserve the local tourism infrastructure and balance cruise and land-based tourism needs with the requirements of the Town of Bar Harbor community.

Cruise line decision-makers appear to be frustrated with the scheduling of cruise vessels into Bar Harbor. This is due in great part to the regulatory limits imposed by the city, limiting cruise calls to no more than two vessels per day. Thus, there must be more adjustments made during the peak months of September and October as anchorage reservation requests are submitted to the Town of Bar Harbor. It will continue to be difficult to schedule vessels with the regulations imposed presently. We recommend amending the current regulations as follows based on our market assessment and traffic analysis.

- Impose a daily cap on cruise tourism based on a range of total cruise passengers. This daily cap range should be assessed on an annual basis by the Town of Bar Harbor and adjusted accordingly to meet the needs of the industry based on vessel growth and seasonal expansion in the region.

- The cap should be tied to average vessel size and seasonality. As vessel sizes increase in the region this cap should be adjusted accordingly. We assume that the local tourism infrastructure would continue to expand to some degree in support of additional tourists in the surrounds. In addition, the cap should consider seasonality. Thus, the daily cruise tourism cap would be less in the peak land-based tourism summer months (June through August); and then increase as the

fall foliage peak season begins (September and October). This balance considers the needs of each tourism industry, tourism venue capacities in the area and local revenue generation.

- An equally important goal of a daily cap should be to meet the needs of the consumer, while also balancing the capacity of the tourism venues, character or attractiveness of the community and the living conditions of the local resident.

- The daily cap would affect only foreign-flagged large cruise vessels of more than 1,000-passengers. Ships with fewer passengers would not be calculated as part of the daily cap, but may be limited based on anchorage or pier berth availability.

- Our recommendation is a cap range in the summer months (May through August 15) of between 2,500 and 3,500 passengers per day. This allows for some flexibility on ships, while still practically limiting the daily cap to one large vessel. This may need to expand for the last two weeks of August in some cases. The Town of Bar Harbor should have the ability of working with the cruise lines on each single issue.

- Our recommendation for September and October (peak months) is to expand the daily cap to between 5,500- and 6,500-passengers total. Caps should be based on lower berth capacity of the vessel.[6] Crew members should not be included. These caps should be assessed on an annual basis. The Town of Bar Harbor should have the ability to be flexible in considering cruise line requests based on scheduling conflicts, weather, mechanical, medicals and other factors that may change or modify a call date. If a pier is built sometime in the future this daily cap must be further evaluated.

[6] Cruise vessel capacities are measured in terms of either (1) total passenger capacity (maximum capacity) or (2) lower berth capacity. Lower berth capacity is calculated by the number of cabins on board multiplied by 2 beds/berths per cabin.

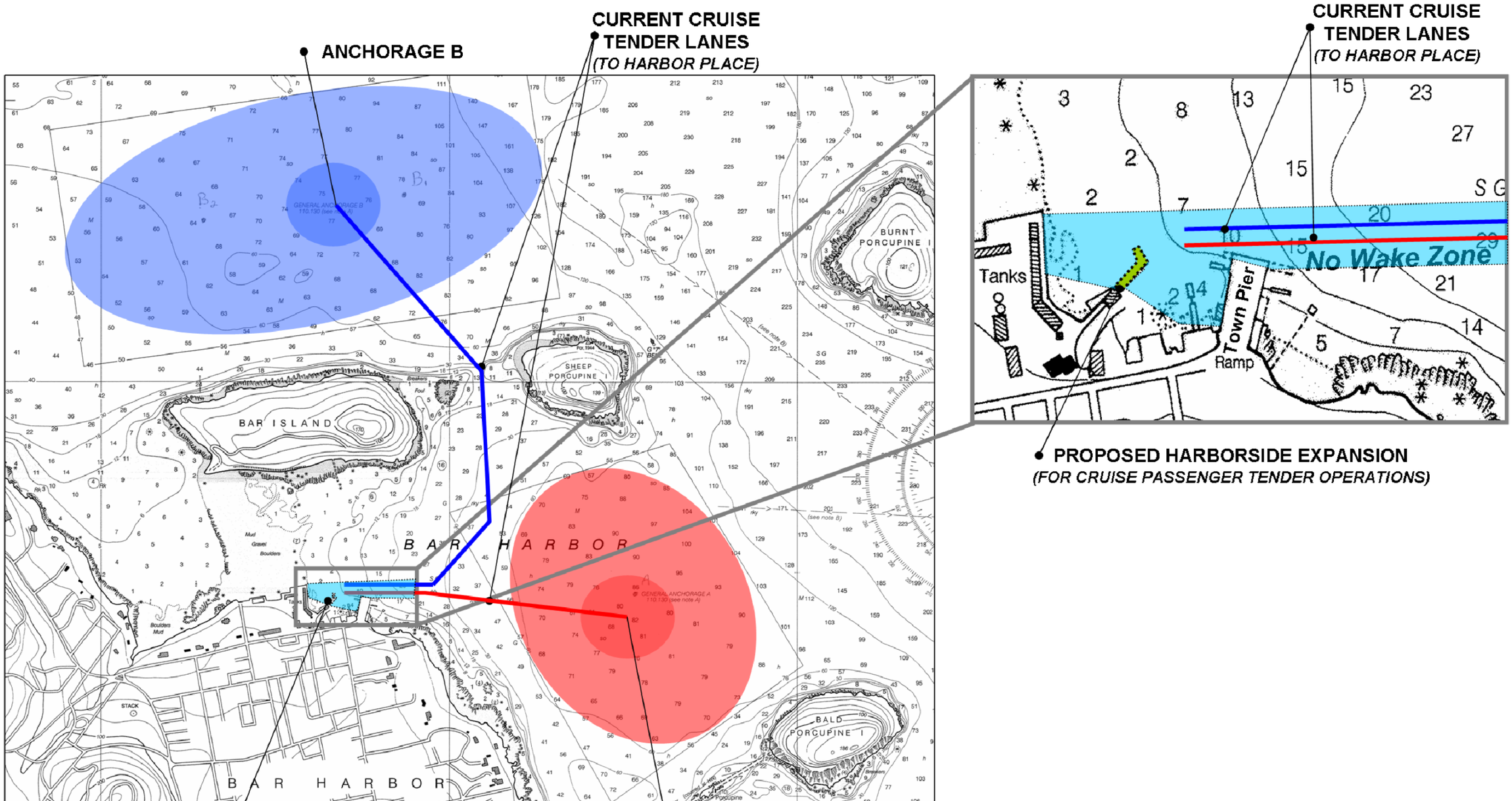


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FIGURE 2: MARINE OPERATIONS (ANCHORAGES + TENDER LANES)
BAR HARBOR, MAINE

- It is highly recommended that the Town of Bar Harbor partner with the cruise line industry in efforts to establish and implement future daily cap regulations. When feasible, cruise lines should be notified immediately in the event of schedule and/or arrival conflicts so cruise itineraries may be adjusted accordingly.

- The capacity of Acadia National Park should be a factor in the process of setting a Daily Capacity. Cruise vessel capacities should not be limited due to dramatic or regular increases in land-based tourism traffic. These tow areas should be balanced accordingly.

Table 2: Town of Bar Harbor Daily Capacity Recommendations
Source: B&A, 2007

YEAR(S)	SUMMER (MAY – AUG 15)	FALL (AUG. 15 – OCT)
2007 - 2010	2,500 – 3,500	5,500 – 6,500
2011 - 2015	3,000 – 4,000	6,000 – 7,000
2015 - 2018	3,500 – 4,500	7,000 – 8,000
2018 - 2020	4,000 +	7,500 +

The current GTA located adjacent to the tender facilities, encompassing Agamont Park works well when the tour operators, coach companies and cruise lines work together in the movement of cruise passengers. Based on our assessment, within reason most of the current operations run well and the tour operators in conjunction with local city officials, chamber and others have worked to modify the operation to meet the requirements of the city.

Supporting cruise infrastructure

Landside mobility is based upon the ability of cruise operations related traffic (both vehicular and pedestrian) to adequately maneuver to and from the cruise facility. There are issues related to the flow of coach traffic into and around Agamont Park, conflicts with service and private vehicles in the area, taxi stands, and the limited number of safe pedestrian crosswalks to the GTA and core of the downtown area. These are discussed in more detail in the overall operational assessment.

Conducting a Tourism Sustainability Study (venue capacity analysis) for all tourism entities in Bar Harbor is not part of the current study process. We recommend that a study of this nature should be conducted in order to establish tourism venue use, capacities and potential growth projections in order to establish overall strategic planning parameters for future tourism to the Town of Bar Harbor. The majority of cruise tourism traffic targets Acadia National Park and its specific attractions. For the park, the ability to determine the schedule in advance for cruise tourism related motor coaches should provide an essential element in their planning for daily operations. Based on our interviews with the Park it appears this is not always the case at present. There are very few enclosed venues such as museums used for cruise tourism, thus there are no significant limiting factors other than the Jordan Pond House area.

The downtown area as a whole may be limited due to a combination of street traffic, parking accommodations, sidewalk capacity and overall mix of retail, beverage and restaurant during peak days. These are primarily in late August. The Town of Bar Harbor should assess the need for pedestrian only areas in the downtown area on peak days to ease overall congestion in the area. Parking impacts and related traffic on adjacent streets must be part of the analysis.

The main shore excursion providers work well with the industry and local community on operational issues. Smaller independent providers should do more to coordinate daily operations with the cruise line and community. Certainly, land-side motor coach tours entering Bar Harbor should also conduct themselves in the similar manner as that expected of the cruise tourism providers and coach companies. This is inclusive of street use, parking, loading zones, engine idling and others.

While cruise port and other operational charges affiliated with cruise operations are lower than other similar ports in the region as compared in the recent tariff analysis prepared by the Town of Bar Harbor it must be noted that most of these ports are offering a pier/berth facility. In addition, the Town of Bar Harbor does not collect any monies on a per passenger basis as this fee is collected directly by the private operator of the tender facility. There are also several unique fees that are paid by the shore excursion operator and then passed on to the cruise line inclusive of a tour coach fee $150.00 per coach) and security fee (variable based on the number of police, hours worked and vessels in port). The Town of Bar Harbor only charges each vessel a flat fee of $1,500.00 per anchorage or $900.00 for small ships berthing at the Town Pier. The port fee is paid by the ship's agent and charged back to the cruise line.

Cost savings are clearly an important objective for cruise lines. Two areas, which garner attention by cruise line finance departments, include port charges and operational deployment costs of the vessel operating in a specific region. Cruise lines are very sensitive to port charges, including those levied on passengers, dockage, wharfage, harbor dues and others. Beyond competitiveness in cruise port charges, cruise lines look to other ways that operational costs can be reduced as part of a cruise port-of-call deployment. Based on our assessment we recommend the following to the Town of Bar Harbor:

- Establish a bundled fee package inclusive of a port or dockage fee; tour coach fee per operation; and security fee per operation. This will allow the Town to be paid more monies sooner in the billing process, allow the cruise lines to better manage their budget and provide the tour operator with a fee simple billing process.

- Implement a passenger fee structure either on a per call basis or lump sum with cruise LINE industry partners to target specific cruise related infrastructure needs or improvements. As an example, a fee of $1.00 per passenger for 100,000-passengers would provide an additional $100,000 to use toward the Town of Bar Harbor's cruise infrastructure needs. This fee or lump sum contribution would off-set some of the local commentary tied to the cruise passenger's use of infrastructure, while also targeting the needs of the cruise industry and the satisfaction of cruise visitors. This fee should not be used to address issues that directly apply to land-based tourism only.

Environmental issues are addressed in detail below. However, based on our assessment the cruise line industry is continually trying to work with federal, state and local government on this issue. Bar Harbor is in a unique position to have an independently established environmental monitoring program of the cruise industry. Monitoring is an important part of the overall system of checks & balances and one which the cruise industry has encouraged.

Marketing of the cruise industry by the Town of Bar Harbor has been limited through participation of the Chamber of Commerce and the Maine Port Authority's establishing of *CruiseMaine*. While we encourage communities (tourism destinations) to work through their travel agent and tourism distribution chain to encourage visitors to come via cruise ship, this may be in some regards counterproductive to the desire of some members of the Town of Bar Harbor community in that it could influence a greater growth scenario long-term.

- We do recommend the establishment a public entity as part of the Town of Bar Harbor tasked to focus on tourism in general, with specific tasks inclusive of scheduling, operations, public relations and marketing. This would allow for a direct point of contact and an easier decision-making process than is currently observed. Thus, more direct work could be done with the cruise and land-based tourism line industries to influence their itinerary planning and conduct of operations. This Tourism Department would work in conjunction with the Chamber of Commerce, which already has a cruise tourism committee of local stakeholders working with the Town of Bar Harbor, cruise industry and other stakeholders to address needs and concerns of the local businesses and residential community of Bar Harbor.

- As a part of this process we recommend the establishment of a survey process inclusive of local residents providing feedback on the tourism industry overall, with specific seasonal studies on cruise and land-based tourism. This would allow an outlet for the community to provide commentary on the direction of the Town of Bar Harbor.

- In addition, a locally organized economic impact study could be conducted to monitor and establish the validity of the cruise and land-based cruise industry. Passenger and crew sampling, business surveys and other methods could be used to gather data over a set period with an assessment conducted and released to the public thereafter.

- A Visitor Survey instrument would also assist in the development of future infrastructure needs and target those elements of the Bar Harbor and Acadia National Park experience that must be addressed to provide for an enhanced experience.

Table 3: Bar Harbor Attractiveness vs. Selection Criteria
Source: B&A 2007

Criteria	Placement
Marine Conditions and Access	
Marine conditions	■
Channel access	↑
Channel depths	■
Tidal conditions	■
Cruise Facilities	
Large vessel berths	↓
Anchorages	■ / ↑
Scheduling and operations	■ / ↑
Ground transportation area	■ / ↓
Security	■ / ↑
Tender operations	■ / ↑
Supporting Cruise Infrastructure	
Landside mobility	■ / ↓
Attractions and venues	↑
Shore excursion providers	■ / ↑
Cruise port charges	■ / ↓
Other operational charges	↓
Regulatory issues	■
Environmental issues	■
Regional and local marketing	■ / ↓
Intangibles	↑
Key: Strong (↑), Fair (■), Weak (↓)	

Table 3 provides a glimpse into the attractiveness of Bar Harbor as per the selection criteria most commonly used by cruise operator itinerary planners. The rankings area based on interviews conducted with key cruise line decision makers and a blend of our own understanding of the process overall. Bar Harbor is a strong destination for attractions and venues with Acadia National Park reflecting a highlight of the overall tourism platter. Although the Town is not able to accept large vessels at berth, this has had a limited effect on overall deployment to the region and in particular Bar Harbor.

Chapter 4 Cruise Tourism Operations

4.1 Section summary

After review of Ground Transportation Area (GTA) operations, we have provided the following observations that may assist to regulate the movement of pedestrian and vehicular activity in and around the Town Pier and downtown area, including discussion(s) on the transportation conditions and recommendations as they relate to Town Pier vehicular traffic, and movement of cruise passengers around Town Pier and Harbor Place. Following a look at the existing conditions and typical passenger experience in the realm of vehicular and pedestrian activity, challenges and recommendations are assessed, followed by future development considerations.

4.2 Existing Conditions and Passenger Movement

There are many facets of GTA operations that work well. The movement of coaches and passengers is for the most part well coordinated between the tour operators and the drivers, and the downtown retail and restaurants are able to accommodate the influx of both land-based visitors and cruise passengers. There are, however, some recommendations that address community and stakeholder concerns that should be taken into account in preparation for busier cruise seasons and downtown development. Understanding typical passenger experience will help in accommodating movement of pedestrian and vehicular traffic.

The Bar Harbor Conservation Commission issued a Cruise Ship Policy Statement regulating the cruise activity in order to preserve water quality, air quality, noise pollution, visual landscape, overcrowding, and the working waterfront. Presently, the Town of Bar Harbor has limited itself to a daily capacity of two cruise ships. This equates to an estimated one-ship capacity day of 2,600- to 3,200-passengers, or a two-ship capacity day of roughly 5,200- to 6,400-passengers. It is noted earlier that the Town of Bar Harbor should impose a daily cap not on the number of ships that visit, but rather by total passenger capacity. The movement of pedestrians, vehicular traffic, and tour coach operations varies according to the volume of cruise ship passengers that are visiting Bar Harbor's Town Pier & Harbor Place, Downtown, and landside attractions.

The following discussion evaluates a typical cruise-passenger experience in Bar Harbor.

Passenger Arrival

Figure 3 illustrates the general flow of cruise passengers that comprises the typical passenger experience while in Bar Harbor. The onboard security process includes the required customs and immigration clearance in order for passengers to be tendered ashore (via tender boats). The tender boats are regulated and coordinated by multi-party communication, inclusive of the tender boat captain, the cruise vessel, and the Harbor Master. The onboard security measures and operations help to regulate the flow of passengers from ship to shore. The constant, yet staggered arrival allows landside ground operations to operate more efficiently.

Passengers predominantly disembark at the privately-owned tender landing area at Harbor Place. This is the visitor's first impression of the Town of Bar Harbor, and the crucial decision point that often determines their day's activities. Figure 3 shows that passengers have direct access to Harbor Place, and then choose to take an independent tour, walk into the downtown area along Main Street, take a taxi or shuttle to another destination, or participate in a tour coach via a pre-existing reservation.

It would be of great benefit to the visitor to have the opportunity to purchase tour coach tickets, or independent tours, at a well-advertised visitor's welcoming center in or around Harbor Place or other optional tender facility or GTA. It may behoove the Town of Bar Harbor to distribute a brochure to cruise passengers before their arrival that indicates their location upon arrival and available activities and retail/restaurant areas (it is important to note that the distributed package should not include local advertisements that interfere with already established, on-board advertising procedures).

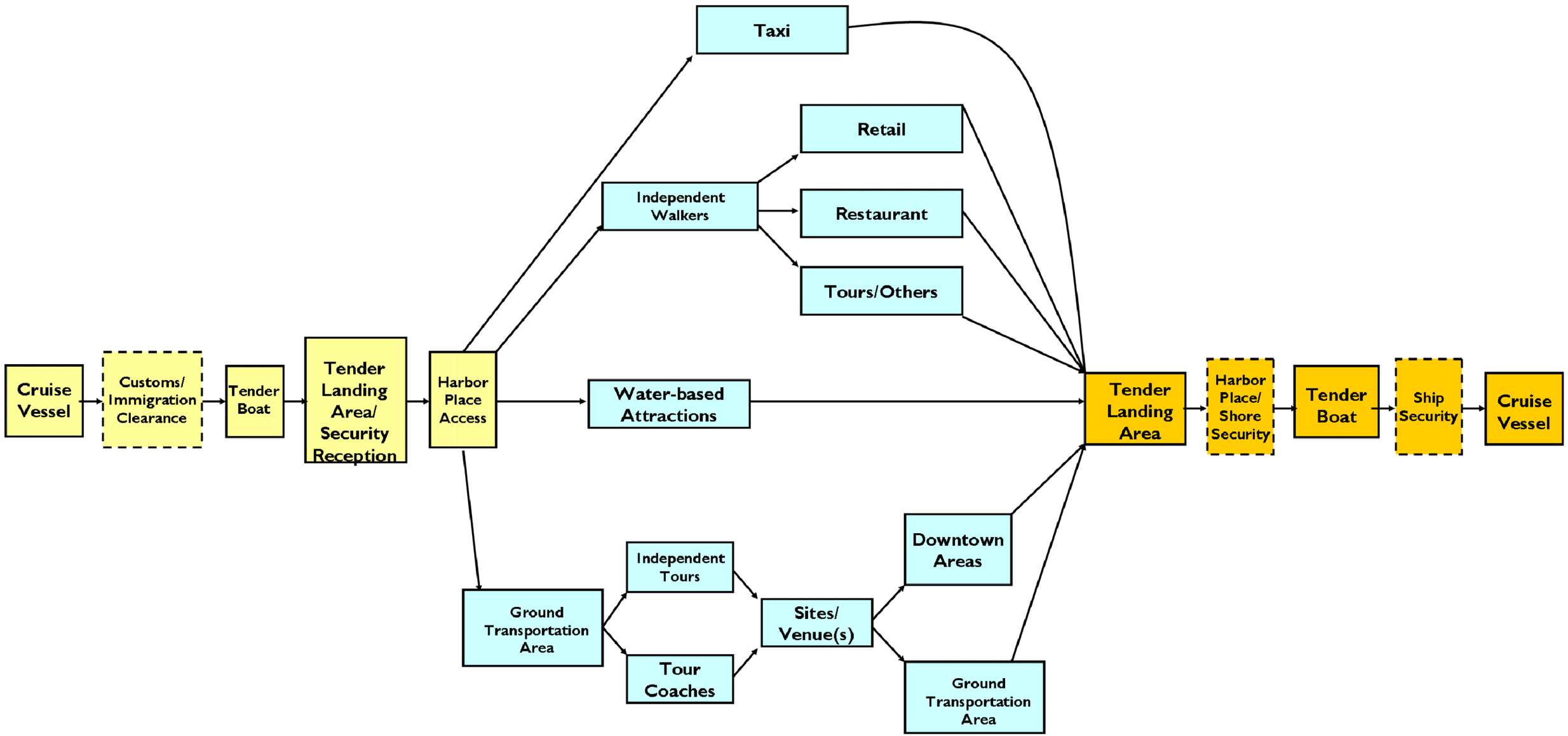

FIGURE 3: TYPICAL PASSENGER FLOW
BAR HARBOR, MAINE

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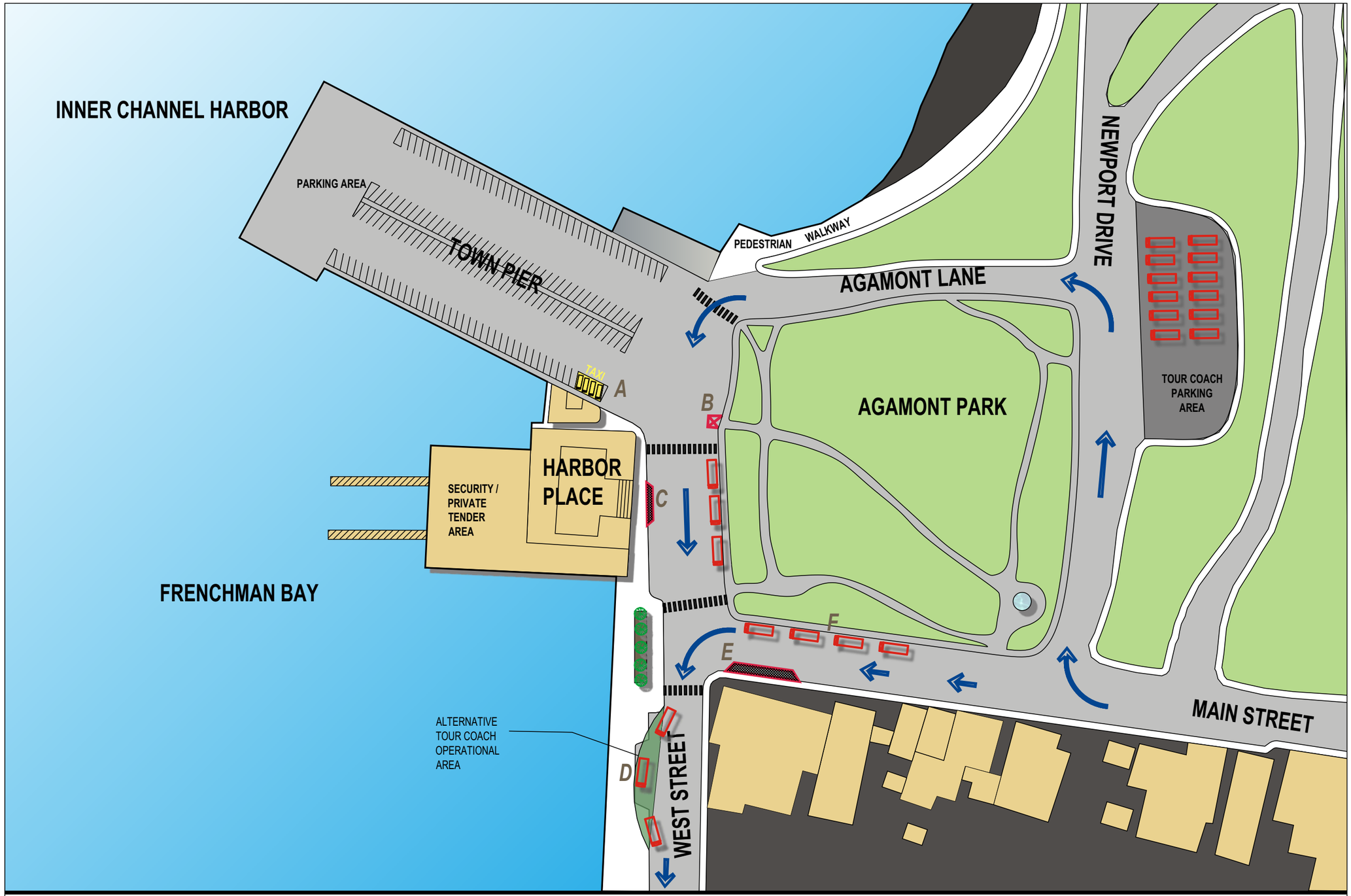

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FIGURE 4: AGAMONT PARK GTA (WITH RECOMMENDATIONS)

BAR HARBOR, MAINE

GRAPHIC SCALE

0 50 100 150 200 250 FT.

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Tour Operations

The majority of passengers that arrive at Harbor Place make their way around, or through, the commercial space, to the Ground Transportation Area (GTA).

- **Existing GTA.** The existing areas of the Town Pier, Harbor Place, and Agamont Park areas of Bar Harbor combined make up the GTA. Passengers that are tendered from visiting cruise ships have the opportunity to walk along Main Street further into Bar Harbor's downtown towards the Village Green, and/or load a tour coach to partake in one of many shore excursions that Bar Harbor offers. Generally speaking, tendered cruise passengers arrive in Bar Harbor early morning, and return to ship in the late afternoon.

- **Passenger Flow: Two-Ship Capacity.** Figure 4 illustrates the typical arrangement of tour coaches and passenger/pedestrian routes and loading areas on a two-ship day as per our recommendations. Passengers that are tendered through Harbor Place assemble in the area directly in front of and adjacent to the visitor center. Waiting coaches are positioned southeast of Agamont Park, while loading coaches are situated along West Street, Main Street and Newport Drive. Loaded coaches exit West via West Street and South via Main Street (currently). Independent cruise passengers pass through Agamont Park, the Town Pier vicinity, and to Main Street and the downtown areas. Typical pedestrian routes and vehicular flow(s) remain constant to that of one capacity days. Similarly, the increased activity during high capacity days alters traffic patterns very little in comparison with those of one ship days.

On peak cruise activity days, there are roughly 51 tour coach departures, which equate to 102 coach movements (i.e. departures and returns). Staggered arrival of coaches to the loading areas is crucial to maintain a smooth flow of passengers – this is carried out well by the tour operators. There is room for improvement, however, in the coordination between the ship staff, cruise tour operators, and independent tour operations. As mentioned previously, it would be beneficial for onshore ticket sales to have a greater presence.

The overall capacity of the GTA can be burdened by the relationship of land-based visitors to cruise passengers due to the vehicular activity and draw to Town Pier. There are several parking spaces in front of Harbor Place that are reserved for taxis and shuttles. The proximity of these operations to the passenger waiting area can cause complications due to the density of foot traffic that the area experiences during peak times. The vehicular thoroughfare activity that occurs in front of Harbor Place further complicates the smooth flow of traffic. Issues that should be addressed include facilitating easier access for those visiting Town Pier (inclusive of commercial fisherman), and better delineating pedestrian areas and crosswalks via enhanced curb-cuts and roadway markings. There are methods of resolving these issues, which are discussed further in the next section.

Passenger Departure

Passengers return to the tender landing area, and are screened by shoreside security before boarding a tender boat. Immigration procedures occur before boarding the cruise vessel.

There are a number of challenges and opportunities that relate to operational improvements, infrastructure enhancements, capital improvements, and traffic regulations that can assist in better controlling pedestrian and vehicular movement. The following discussion addresses these issues, inclusive of community and stakeholder concerns.

4.3 Challenges & Recommendations/Options

The GTA accommodates the movement of cruise-related and independent tour coaches, cruise visitors and land-based visitors, as well as resident traffic, as it is described above. There are specific areas that become congested or will eventually require infrastructure improvements with increased volume of visitors. The following discussion highlights areas of concern that should be addressed in order to accommodate best management practices for pedestrian and vehicular traffic. These considerations are not only for the safety of cruise visitors and residents of Bar Harbor, but also contribute towards the overall appeal of Bar Harbor as an attractive cruise destination.

- **Intersection of Main Street & West Street.** There are a number of vehicular issues that affect the efficiency of traffic movement at the intersection of West Street and Main Street. Stop signs are not clearly visible to drivers. Further, the loading of coaches along West Street (east of Main Street) adds to the congestion and awkward flow of cars and coaches through the high-intensity traffic corner. The recommendations that concern this critical intersection will help to relieve this corner of its congestion and subsequent inefficient flow of pedestrians and vehicles.

- **Passenger Waiting and Tour Coach Loading Area.** Bar Harbor should consider designating the road segment directly in front of Harbor Place, between Main Street and Town Pier, as a time-sensitive, pedestrian-only zone during peak hours times (800-10:00AM) of coach loading. Those who contribute to the vehicular congestion in and through this area include those independent persons parking at Town Pier, coaches, taxis, and shuttles. All vehicular traffic can be re-routed around Agamont Park, so that access to Town Pier is through Agamont Lane. The coach loading area can be coned off to allow for tour coaches to enter the pedestrian zone, while taxis may either be re-routed around Agamont Park, or allowed to occupy a set number of parking spaces outside of the commercial building.

    - It is recommended that pedestrian crossings are better delineated by means of curb cuts at crosswalks, street markings, and street signage as it relates to time-sensitive traffic control measures.

    - The presence of a local police officer and their traffic management responsibilities is crucial on one-ship capacity days, while the assistance of *two* officers on high capacity days should certainly be maintained.

- **Agamont Lane Tour Coach Loading Area.** Any form of coach loading, vehicular parking, and prolonged vehicular presence should remain restricted along Agamont Lane in order to:

    - Not disrupt pedestrian activity and enjoyment of the waterfront and shoreline;

    - Avoid blocking connectivity and accessibility of the coastal promenade;

    - Preserve scenic views of channel's boating activity and associated view corridors; and,

    - Maintain easier, dual-way vehicular access to and from Town Pier.

- **Main Street Restaurant/Retail.** The strip of retail shops and restaurants along Main Street feeds into Bar Harbor's central downtown and is a primary arterial connector, for both pedestrians and vehicles, between downtown and the waterfront.

Due to the positioning of two to four motor coaches along the northwestern edge of Agamont Park, the fluidity of pedestrians and vehicles at the intersection of Main Street and West Street is jeopardized. In order to avoid complications here, parallel parking positions directly opposite the loading area to the west (along Main Street) should be restricted during peak loading times. Enforcing this regulation would account for the temporarily restricted access of four to six parking spaces. In tandem with restricted vehicular flow through the pedestrian-only zone on two-ship capacity days, this would help to ease traffic congestion as it applies to the intersection, alleviate view blockage, and facilitate safe pedestrian movement.

The level of grading along Main Street, between West Street and Newport Drive, is at roughly 20%. This steep upward incline, in addition to generally crowded sidewalks at peak times, results in a pedestrian corridor that is difficult to negotiate, especially for older cruise passengers. Street and sidewalk enhancements (such as wider sidewalks, restricted parallel parking, and/or greater connectivity between east and west Main Street) can alleviate this burden. It should be noted that particular sections along Main Street leading up to the Village Green also suffer from similar congestion, and should be addressed.

Cruise Tourism Ground Transportation Area (GTA) Operational Plan

Figure 4 illustrates a proposed operational plan that, if applied in conjunction with transportation recommendations, will accommodate peak cruise passenger traffic flow. Elements of the layout include:

- **Movement of Taxi Parking Area (A).** Moving the Taxi and small vehicle loading area from the front of Harbor Place will allow for better visitor flow options in the area and still allow for adequate parking. This option may only be used for peak operating times (8:00 – 10:00AM).

- **Motor Coach Loading Zone in front of Harbor Place (B).** The coach loading zone in front of Harbor Place would allow for better flow of tour motor coach traffic if the curb cut was expanded to allow for easier movement and an additional coach in the area for loading and unloading of cruise passengers.

- **Pedestrian Friendly Zone (C).** We encourage a more pedestrian friendly zone in this area through the movement of the two parking slots immediately in front of the Harbor Place

exit/entrance to assist in alleviating long-term safety issues. The parking spaces directly in front of Harbor Place that have been allocated to taxis and shuttles for cruise passengers can be relocated to Town Pier so as to divert the taxi and shuttle traffic away from pedestrian-congested areas; or, the vehicular use of the spaces may be more carefully regulated by the present police officer.

  - The benefit of implementing a pedestrian-only zone includes improving upon the passenger's first impression of Bar Harbor, safer traffic patterns as it relates to all vehicles, and more efficient communication and operations on the part of the police, coaches, cruise line staff, and tour operators.

- **Proposed embarkation area adjacent to the passenger waiting zone (D).** If implemented, it is important to ensure that the times of operation do not interfere with adjacent properties' activities and waterfront views, as well as the feasibility of the physical alteration of the proposed coach staging area. The area can presently accommodate one coach; for two to three coaches to operate efficiently, the space must be lengthened. The primary issues that must be addressed if this were pursued include:

  - Consider relocating the underground fuel tank that is situated under the current passenger waiting area;

  - Assess the financial feasibility of the expansion as to whether or not it is cost prohibitive to lengthen the loading zone; and,

  - Take into account the 4 to 6 car spots that will be unavailable during cruise season as a result, and consider this in the recommended traffic study.

- **Restricted parallel parking along Main Street across from tour coach loading area (E).** Presently, two coaches are currently allowed to load passengers on the intersection of Main Street and West Street, abutting Agamont Park. We would propose allowing up to four coaches in the AM at this location and eliminating coaches parked along Newport Drive. From a cruise passenger loading perspective, this system works well. However, when cars are parallel parked directly across from the loading coaches, the flow of traffic in and around Main Street/West Street intersection is disrupted. Disallowing parallel parking in this area (2 to 4 parking spaces) during peak times will enhance vehicular and pedestrian movement.

- **Main Street Coach Loading Area (F).** Providing for up to two additional motor coach loading spaces along Main Street adjacent to Agamont Park will assist in expediting tour loads and provide for less traffic along Agamont Lane and Newport Drive. These spaces are key for early AM tour loads and can be released for on-street parking in the PM.

4.4 Transportation and Development Considerations

Town of Bar Harbor Comprehensive Plan

It is important to establish a Comprehensive Plan that reflects the priorities and values of Bar Harbor residents and small business owners. Doing so helps to create a framework by which development may be guided by transportation and economic elements, as well as enables the Town of Bar Harbor to create Special Area Plans (SAP), Enterprise Zones, Special Business Districts (SBD), and specially designated transportation corridors. In addition to the recommendations presented in section 4.4, which focus primarily on pedestrian and vehicular movement, there are several opportunities that Bar Harbor should take into account in some form in their ongoing Comprehensive Plan efforts, and any downtown (re)development schemes that are pursued. These include, but are not limited to:

- Street signage in the waterfront area, parking facilities, and arterial roads leading into the downtown are in need of improvement. Signs must be larger and more visible.

- Focus effort on improving walkability along West Street to encourage pedestrian activity throughout the historic residential corridor that extends beyond Harborside Hotel.

Similar factors that will help the Town of Bar Harbor to prepare for any potential increase in overall volume of visitors include administering a traffic study of the waterfront vicinity, West Street, and Main Street; consider the development of the Harborside Resort pier facility; encouraging coaches to offer passengers the opportunity to debark at the Village Green; and, utilizing the proposed Acadia Gateway Center to help regulate coach traffic.

Traffic Study

A traffic study must consider the development opportunities along Main Street, West Street, general waterfront vicinity, and in particular, the proposed development of Harborside as a cruise passenger tender facility. A traffic study will also help to determine traffic capacity of the said areas, allowing for smarter development along the key pedestrian and vehicular corridors with regard to density and volume of growth. Regulation of pedestrian flows, traffic patterns, peak days, and peak hours during tourism season will better serve the town in preparation for any future downtown- and waterfront redevelopment effort.

It should be noted that elements of a re-designed traffic flow require capital improvements that vary depending on the intensity of the project. It is thus recommended that a traffic study be conducted by transportation consultants. This is done to determine peak hours, traffic counts, costs of road improvements, synchronized traffic signals, and other traffic-calming mechanisms. This is important to consider with respect to any future development that will affect the volume of passenger throughput, and general movement of people throughout Bar Harbor's downtown area; it is further addressed in the discussion of Nova Scotia Pier expansion.

Pier (Tender Facilities) Development: Harborside Resort

Development along West Street will have an impact on both vehicular and pedestrian movement, traffic management, and overall throughput capacity. Any structural changes in the Town Pier, Harbor Place, and immediate downtown area that affect the transportation infrastructure will require re-addressing aspects such as tour coach operations, vehicular traffic flow, and passenger waiting areas. An increase in volume and capacity of daily visitors to the downtown waterfront vicinity may require a restructuring of traffic flow due to relocation of coach loading and passenger waiting areas. Possible development of this kind includes, but is not limited to, a passenger screening area or further dock development in and around Harborside Resort, development of property abutting the Quarterdeck restaurant off of West Street, and expansion of pier facilities at Harbor Place that aims to accommodate increased cruise-passenger throughput.

A GTA must be part of the overall package at the Harborside site. Additionally, with any GTA revised traffic circulation for motor coaches through Bar Harbor and the use of an off-site parking/queuing area such as the Ball Park is recommended. Figure 5 illustrates the requirements for a motor coach to turn in the Harborside Resort area for a GTA. Additional modifications to the ingress/egress to West Street would also likely be required to accommodate increased motor coach and pedestrian flows in the area.

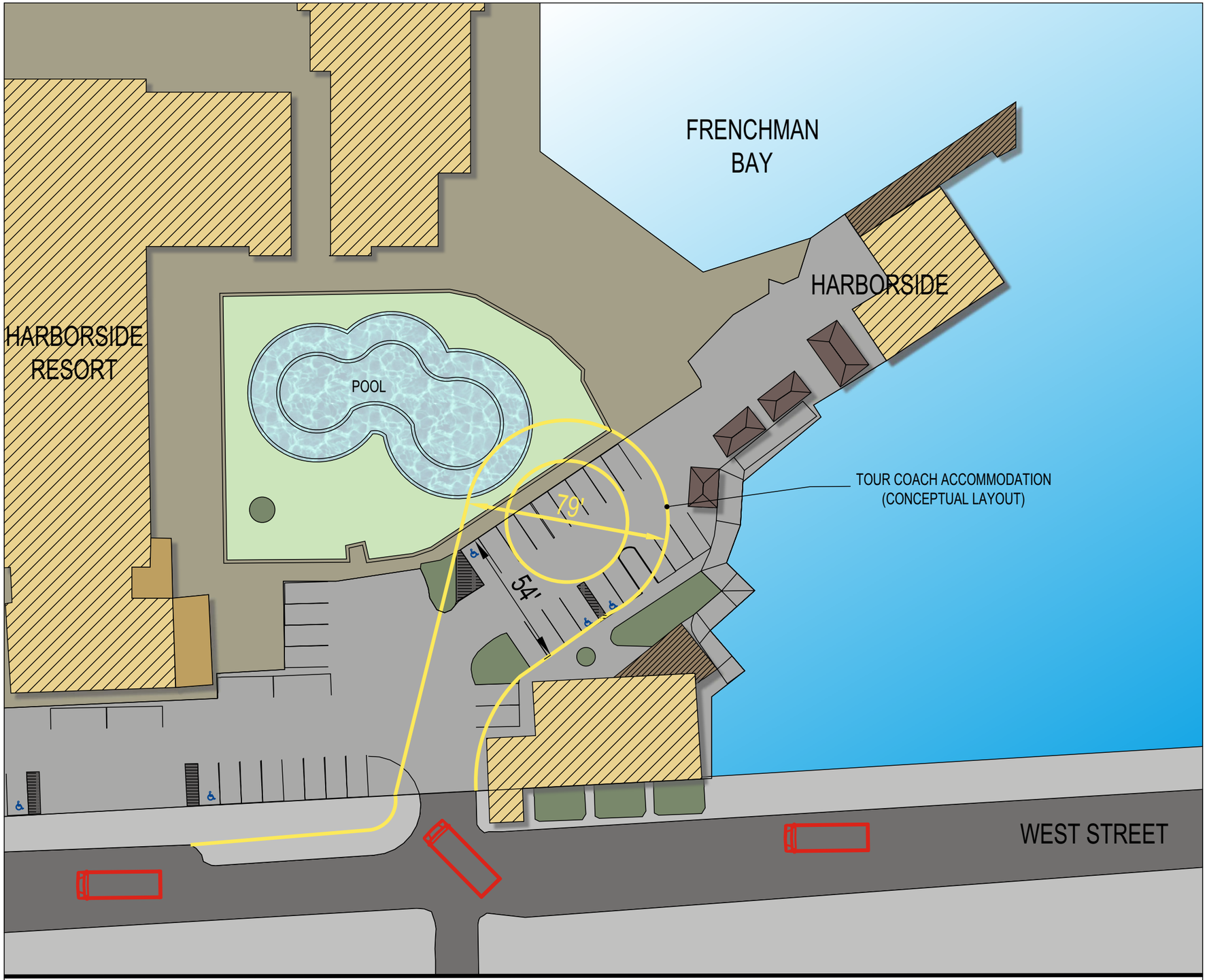

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FIGURE 5: HARBORSIDE GTA
BAR HARBOR, MAINE

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The Village Green & Main Street Corridor

Bar Harbor should consider increased usage of the Village Green as an optional debarkation point for passengers returning from shore excursions. Debarkation at the Village Green allows for the passenger to walk (north) along Main Street back to the Town Pier. (This pedestrian route increases exposure of the downtown retail and food & beverage offerings, as well as Bar Harbor's unique architectural façade.) It also relieves the Town Pier area of tour coach traffic by decreasing drop-off times and the overall volume of tour coaches returning directly to the GTA.

Figure 6 provides an illustration of cruise pedestrian traffic flow from the current GTA and expansion throughout the downtown Bar Harbor area. As shown the high pedestrian traffic is likely confined within a small area with the intersection of Cottage & Main a high traffic area. From there, foot traffic is reduced as passengers venture further into the retail and then residential area of the Town of Bar Harbor. Offering an additional drop off at the Village Green would encourage visitors to expand their horizons and venture further from the vessel and flow back to through the downtown area. This would encourage additional economic impacts to the community and alleviate traffic (vehicle and pedestrian at the Harbor Place and GTA).

Presently, there are Island Explorer coach operations off of Kennebec Place (western border of the Village Green). Sidewalk/Curb enhancements can be pursued in order to accommodate tour coach (debarkation) activity either along Mt. Desert Street in front of Window Panes or along Main Street in the same area. Passengers are able to explore the Main Street/Downtown area at their leisure and return to the Town Pier area afterward. Increased connectivity to and from Agamont Park will encourage increased pedestrian activity along the East and West sides of Main Street, and increased pedestrian activity will help to patronize the Main Street shops and eateries. Sidewalk expansion and/or general sidewalk improvements will allow for a more pleasant visitor experience.

Island Explorer Circular Route

As part of the development of the Town of Bar Harbor, the addition of a small bus route throughout the Town would assist in the distribution of pedestrian traffic flow throughout the community, provide for movement of visitors with disabilities and offer local persons with an option for moving throughout the community.

Additional recommendations related to the operation of motor coaches throughout the Town of Bar Harbor are included in Chapter 2 of the report based on our observations, stakeholder interviews and workshop process. While each is not explored in detail within the report, for the most part wee believe these to be common sense recommendations with little need for additional discussion.

Tour Motor Coach Licensing

Based on our field observations, we recommend requiring all tour coaches, both cruise-related and independent, to obtain a license before operating in the Town of Bar Harbor. Cruise tour coaches are presently required to have a license; independent coaches should adhere to similar regulations. Revenues could be used to support infrastructure development, while the licensing may assist in regulating downtown traffic. While the Chamber of Commerce Visitor's office is a possible option to house and manage the licensing process, Bar Harbor might also consider direct communication with transportation providers through the National Transportation Association, Acadia National Park or other avenues. The Acadia Gateway facility may serve as an entry/exit point for all tour coaches operating in Mount Desert Island. Preliminary plans include facilitating Island Explorer excursions/tour operations on planned routes, a National Park Service welcome center, parking for commuters and visitors, a coach transportation facility, and visitor comfort and commercial services.

Tour Motor Coach Movement and Parking

Figure 7 provides an illustration of our recommendations associated with the movement and parking of tour motor coaches and other tourism related traffic within the Town of Bar Harbor. We recommend the following:

- Establish specific parking and queuing zones for motor coaches within the Town of Bar Harbor for cruise and land-based coaches such as those adjacent to the Agamont Park GTA on Newport Drive. Sites include Newport Drive, West Street, Main Street (all adjacent to the current GTA) and within Harborside as stipulated for a new tender facility. A coach queuing area should be established at the Ball Park.

- One way motor coach movement within the Town of Bar Harbor is encouraged. Specifically, inbound from Hwy #3 to Eden Street and inbound via Mt. Desert Street, turning North along

Main Street to the GTA and then outbound via West Street only. Inbound from Acadia National Park motor coaches can move along Cromwell Drive to Main Street and out West Street.

- Encouraging one-way loop traffic for all tourism transportation vehicles, delivery vehicles and non-local vehicular traffic around Agamont Park from Main Street to Newport Drive to Agamont Lane and along West Street would assist in preventing safety issues and provide for an easier flow of traffic in the immediate area.

- Motor coaches should not slow or stop for sightseeing opportunities within the Town of Bar Harbor or impeded or slow vehicular traffic within the town. Common courtesy should be used at all times. No stopping or parking on West Street, unless to turn into Harborside or other property. No tourism transportation traffic should use Ledgelawn Avenue as an alternative route or parking area. There should be limited use of residential streets within the Town of Bar Harbor for tourism transportation.

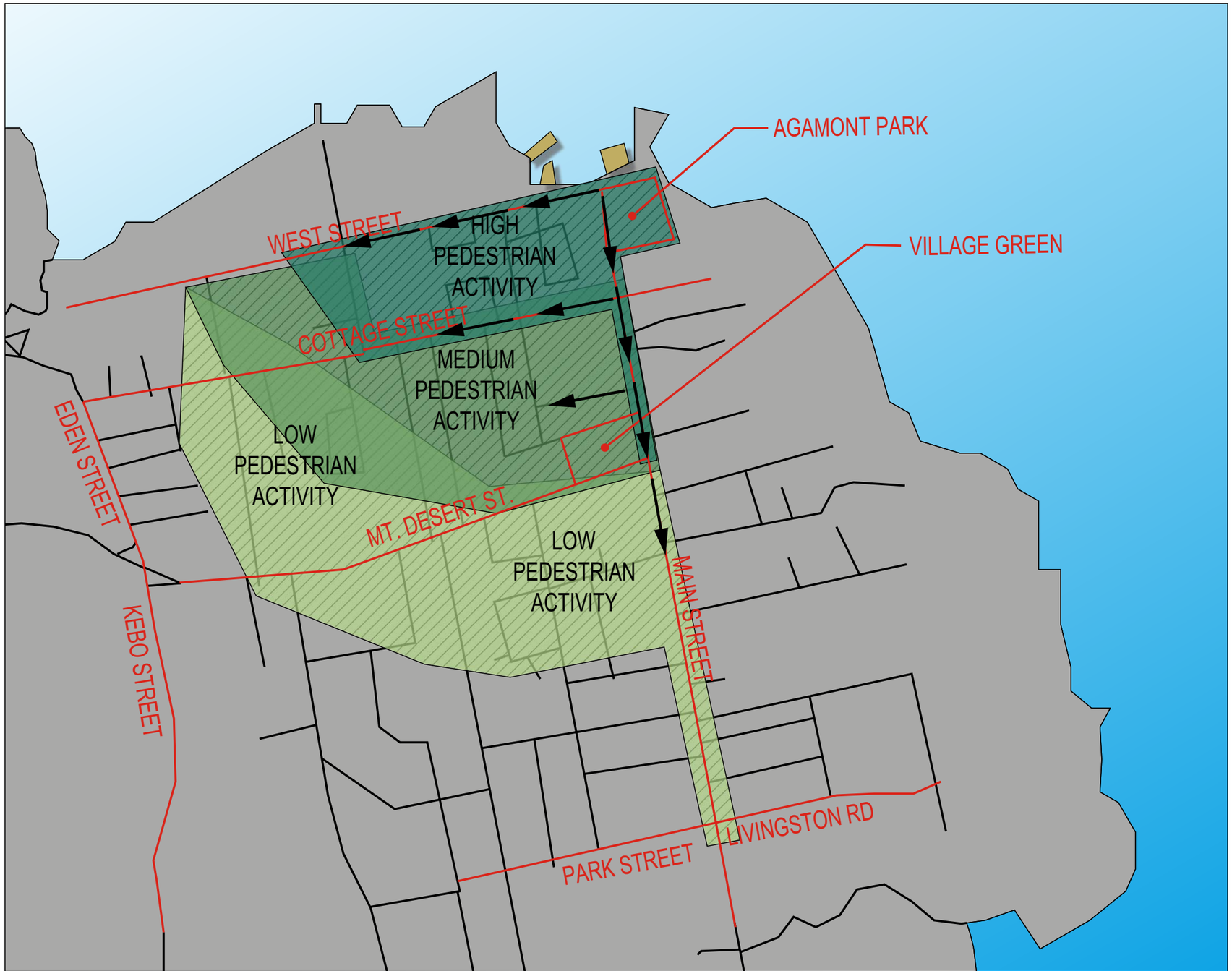

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FIGURE 6: CRUISE VISITOR PEDESTRIAN MOVEMENT
BAR HARBOR, MAINE

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FIGURE 7: TOUR MOTOR COACH MOVEMENT & PARKING

BAR HARBOR, MAINE

TOUR COACH IN-FLOW

TOUR COACH OUT-FLOW

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Chapter 5 Environmental Review

5.1 Section summary

The purpose of the environmental review was to identify applicable rules/regulations and outline best management practices that fulfill the environmental regulatory obligations specifically related to the cruise industry as they relate to Bar Harbor.

The following, which address the applicable regulatory requirements and best management practices for air and water, should be considered an overview of general issues/impacts and should not be considered a surrogate for an Environmental Impact Assessment (EIA).

- Monitoring wastewater discharge from docking vessels and overall water quality will help to sustain acceptable standards dictated by the appropriate rules, regulations, and publications applicable to Bar Harbor operations.
- Increases on local solid waste and recycling vendors (due to docking vessels), and additional visitors onshore will likely produce an increase in solid waste and solid waste management services.
- A demand for ash trays, litter bins and recycle bins would be anticipated throughout Bar Harbor to ensure efficient and sanitary means for solid waste disposal.
- Similarly, incorporating the inherently recommended air emission reducing elements for land-based operations into Bar Harbor's future development as a tourism destination will assist in maintaining Bar Harbor's environmental health.

5.2 Environmental Review

As part of this Environmental Review for Bar Harbor, the following rules, regulations and publications applicable to the operational impacts of increased cruise liner traffic were reviewed:

- Code of Maine Rules (CMR) Chapter 520 - Definitions for the Waste Discharge Permitting Program;
- CMR Chapter 522 - Application Processing Procedures for Waste Discharge Licenses;
- CMR Chapter 529 - General Permits for Certain Wastewater Discharges;
- CMR Chapter 532 - Large Commercial Passenger Vessels;
- CMR Chapter 600 - Marine Oil Terminal Rules;
- Code of Federal Regulations (CFR) Title 40 Part 122 – EPA Administered Permit Programs: The National Pollutant Discharge Elimination System;
- CFR Title 33 Part 151 – Coast Guard, Department of Homeland Security: Vessels Carrying Oil, Noxious Liquid Substances, Garbage, Municipal or Commercial Waste, and Ballast Water;
- CFR Title 40 Part 51 – USEPA Approval and Promulgation of Implementation Plans;
- CFR Title 40 Part 94 – USEPA Control of Emissions from Marine Compression Ignition Engines;
- International Council of Cruise Lines (ICCL) Standard E-1-01 (Revision 3);
- ICCL website (www.iccl.org);
- Ocean Conservation and Tourism Alliance (OCTA), *Science Panel Recommendations to the International Council of Cruise Lines (ICCL)*;
- USEPA website relating to Cruise Ship Industry (www.epa.gov/owow/oceans/cruise_ships); and
- USEPA website relating to new 8-Hour Ozone Attainment Areas in New England (www.epa.gov/NE/airquality/nttainm.html).

Wastewater Discharges from Docking Vessels

Some of the waste streams generated by cruise ships include (but are not limited to) the following:

- Sewage, which is also referred to as blackwater;
- Graywater, which is wastewater primarily generated from cleaning processes such as laundry and kitchen services and also showering/bathing;
- Bilge water, which is collected water in the ship's hull that may contain oil, grease or other contaminants from engines or other ancillary machinery; and
- Ballast water, which can be seawater taken onboard, or graywater held on board, to maintain a vessel's stability.

Although the Federal Rules derived from the Clean Water Act (40 CFR 122.3) specifically exempt sewage discharges from vessels, as of January 1, 2006 the Maine Department of Environmental Protection (DEP) requires large commercial passenger vessels[7] (LCPVs) to:

[7] "Large Commercial Passenger Vessels" are defined in Maine statute (38 M.R.S.A. §423-D) as commercial passenger vessels that provide overnight accommodations for 250 or more passengers for hire, determined with reference to the number of lower berths.

- Obtain a General Permit for the Discharge of Graywater or a Mixture of Graywater and Blackwater from LCPVs to Coastal Waters (DEP Permit #W008222-5Y-A-N) in accordance with CMR Chapter 522; and,
- Adhere to strict discharge standards outlined in CMR Chapter 532 that establish the minimum level of effluent quality to be attained by secondary treatment prior to discharge within a harbor.

In order to meet the requirements of Chapter 532 and the General Permit, results from analytical testing for effluent parameters (e.g., biological oxygen demand [BOD], suspended solids [SS], pH, fecal coli form and chlorine) are evaluated and recorded in a sewage and graywater discharge record book to ensure effluent quality is achieved prior to discharge. Each vessel that discharges to coastal waters of Maine must also provide certification of participation under a Quality Assurance/Quality Control Plan (QA/QCP) and develop a Vessel Specific Sampling Plan (VSSP) that must be accepted by the Maine DEP for each current operating season. Additionally, each vessel must also submit test results to the Maine DEP and retain records onboard for a period of 3 years.

According to a January 2006 Report to the Natural Resources Committee on Small Commercial Passenger Vessel Wastewater Management prepared by the DEP (DEP Document #DEPLW0737), small commercial passenger vessels[8] (SCPVs) are exempt from the strict discharge standards imposed through the general permit process, but have established three recommendations to ensure that discharges generated by SCPVs remain small in volume and are voluntarily discharged outside the No Discharge Areas (NDAs):

1. Gather vessel-specific waste management information through joint sewage system inspection with the USCG on a subset of SCPVs;

2. Ensure there is adequate pump-out station infrastructure; and,

3. Implement voluntary restrictions on graywater discharges in designated NDAs.

In addition to the Maine DEP standards summarized above, the following management practices have been established by ICCL, USEPA and USCG pertaining to each of the following types of wastewater discharged from docking vessels:

Blackwater (e.g., sewage)

As recommended by the OCTA Science Panel, "all blackwater [generated onboard vessels] should be treated" prior to discharge. This eliminates the discharge of raw sewage from ICCL member vessels. The panel goes on to state that even "discharge of treated blackwater should be avoided" near ports, shellfish beds or other environmentally sensitive areas. According to ICCL Standard E1-01-1, discharges will be limited to treated blackwater that meets established effluent guidelines. Furthermore, discharges will be limited to when the vessel is proceeding at a speed not less than 6 nm where the ship is more than 4 nm from shore. Therefore, it is not likely that treated or untreated blackwater discharges will occur while vessels are in port in the Bar Harbor area. However, in the event that a docking vessel does not have onboard wastewater treatment technology (i.e., SCPV), two possible options for safe and sanitary removal of the onboard blackwater could be to:

1. Develop a list of approved service vendors in the Bar Harbor area and appropriate protocol for offloading the blackwater to ensure safe and sanitary treatment and removal of sewage; and,

2. Identify how much (if any) of the blackwater could be discharged to the local onshore POTW and develop protocol (e.g., methods and notification procedures) for such connections and subsequent discharges.

With respect to the onboard wastewater treatment technology, periodically servicing and monitoring may need to be performed on the system. Specifically, excess sludge from the wastewater treatment process may need to be removed from the system in order to adequately and efficiently operate. The OCTA Science Panel recommends an "improved practice of offloading sewage sludge to an approved land-based handling facility" while in port instead of discharging sludge at sea. A list of approved service vendors in the Bar Harbor area and appropriate protocol for offloading the sludge should be developed to ensure that provisions are in place for such an occasion.

Graywater[9]

As recommended by the OCTA Science Panel, a good practice adopted by ICCL members is to voluntarily prohibit the discharge of untreated graywater[10] while in port. A preferable practice would be

[8] Although the Report considers small commercial passenger vessels to be vessels that carry less than 500 overnight passengers, "Small Commercial Passenger Vessels" are defined in Maine statute (38 M.R.S.A. §423-D) as commercial passenger vessels that provide overnight accommodations for fewer than 250 passengers for hire, determined with reference to the number of lower berths.

[9] By definition, "graywater" will never include blackwater or bilge water.

to treat all graywater through the onboard treatment system established for blackwater discharges. According to ICCL Standard E1-01-1, graywater discharges shall be limited to while the ship is underway and proceeding at a speed not less than 6 knots and will not be discharged within 4 nm from shore or where geographically limited.

Bilge Water

Maintaining an Oil Record Book is required under MARPOL and USCG regulations (33 CFR 151.25). In addition to the requirements of the Oil Record Book, requirements such as analytical and mechanical testing, maintenance, and oil spill prevention during fueling operations and bilge care is also subject to USCG inspection and enforcement procedures while at port. As part of the ICCL Standard E-1-01, "[all] ships are required to have equipment installed onboard that limits the discharge of oil into the oceans" in order to meet the international (MARPOL) and US regulations. These regulations establish an effluent discharge limit for oil content of 15 parts per million (ppm) or less. Discharges are also limited to when a ship is en route[11], unless a ship is in a special area where all discharge of oil is prohibited. Therefore, it is not likely that bilge water will be discharged while at port in the Bar Harbor area. However, in the event of an inadvertent discharge resulting in a visible sheen on the water, the USEPA's National Response Center should be notified immediately. In addition to the USCG, the Maine DEP should also be notified in the event that oil is discharged from a docking vessel. The Maine DEP has established oil discharge reporting procedures under CMR Chapter 600 Section 4, which require an initial telephone report to the DEP within two hours of discharge and a written report prepared and submitted to DEP within 10 days.

Ballast Water

In the event that ballast tanks are used as holding tanks for graywater or blackwater, arrangements should be made as described above (see ***Blackwater*** and ***Graywater***) to empty the tanks and ensure appropriate disposal.

Otherwise, ballast water management practices are outlined in USCG regulations (33 CFR 151.2040-151.2050). Furthermore, according to ICCL, cruise ships are voluntarily adopting the following best management practices relating to ballast water management in an effort to limit the potential for taking on and depositing non-native species:

- Ballast water is collected in open ocean environments;
- New technologies for limiting non-native species from ballast discharges, (including the use of ozone, ultraviolet rays, filtration, heat and other processes) are being tested; and
- The USEPA is also developing a number of approaches as potential solutions.

Wastewater Discharges Onshore

An increase in sanitary sewage production will also be experienced onshore from increased tourists and visitors to the area. While exploring offloading options for vessels without onboard wastewater treatment technology described above, the increased demand to the local POTW resulting from the increase in onshore activity should also be considered throughout Bar Harbor's development.

Water Quality Sampling

According to the "Recommendations of the Bar Harbor Conservation Commission Regarding Cruise Ship Management Issues," a water quality monitoring program will be funded by increased fees[12]. Although the proposed water quality program should include many of the parameters discussed in the sections above (e.g., blackwater and bilge water), a formal evaluation should be conducted in consideration and development of the water quality sampling plan by a qualified and knowledgeable individual or consultant. Input from regulatory agencies, including (but not limited to) the Maine DEP, USEPA, USCG, Maine Department of Inland Fisheries and Wildlife, and National Oceanic and Atmospheric Administration, should be solicited and considered in the development of any sampling plan. The sampling plan should address such items as sampling frequencies, protocols and methodologies for both sampling and analytical testing.

Air Emissions

According to the "Report to the Joint Standing Committee on Natural Resources pertaining to Air Emissions from Marine Vessels" prepared by the Maine DEP in January 2005, diesel and residual fuel

[10] The OCTA Panel recommended that untreated graywater only be discharged at least 4 nautical miles (nm), preferably 12 nm, from the nearest 20-meter contour (about 65 feet or slightly greater than 10 fathom contour) or sensitive habitat while traveling at a speed of no less than 6 knots.

[11] "En route" is defined in MARPOL (73/78) Regulations 9(b) as while the vessel is underway. According to ICCL Standard E1-01-1, the USCG agrees with this definition.

[12] While we agree that water quality sampling should be part of an overall cruise ship monitoring program, we believe further evaluation is required as to the funding process for this program.

engines powering the majority of marine vessels produce nitrogen oxides (NO_X), sulfur dioxides (SO_X), carbon dioxide and carbon monoxide thus contributing to several of Maine's air pollution concerns. This report specifically identifies the following concerns specific to Maine:

- Ozone, which is formed when NO_X combine with volatile organic compounds (VOCs) in the presence of sunlight;
- Acid deposition (e.g., acid rain), which is primarily a result of NO_X and SO_X;
- Particle pollution, which consists of fine solid particles and tiny liquid droplets and is also a byproduct of diesel consumption by marine vessels;
- Regional haze (e.g., reduced visibility), which is a direct result of particle pollution; and
- Climate change, which many scientists attribute to increased concentrations of carbon dioxide from fossil fuel combustion, such as diesel and residual fuels.

Although this report concluded that the contribution specific to marine vessels was minimal compared to the total inventory from all source categories (including mobile sources), the DEP does believe that impacts on the local level of air quality and the increase in harbor traffic "do give reason to study the issue further and support voluntary initiatives." Due to the current legal framework of the Clean Air Act, DEP does not and cannot regulate/control air emissions from commercial marine vessels. However, voluntary initiatives within Maine to counteract air emissions from marine vessels include (1) supporting the use of low-sulfur diesel; (2) encouraging engine retrofits to newer technology with lower emissions rates; and (3) joining the interstate association of air quality control divisions in the Northeast States to create a SO_X emission control area under MARPOL Annex VI.

MARPOL Annex VI, which is a combination of treaties adopted over the years by the International Maritime Organization International Convention for the Prevention of Pollution from Ships, addresses a number of air pollutants in various ways. The following restrictions are established by MARPOL Annex VI:

- Deliberate emissions of, and new installations containing, ozone-depleting substances are prohibited;
- Emissions of NO_X from newer, higher-powered diesel engines is limited;
- Sulfur content of diesel fuel used onboard vessels is limited to 4.5% everywhere (except within a SO_X emission control area where sulfur content is limited to 1.5%); and
- Shipboard incineration[13] is limited to certain conditions and wastes while incinerators installed after January 1, 2000 must meet emissions requirements established in 1997.

In addition to the MARPOL requirements which are either largely equivalent to USEPA regulations for controlling emissions from marine engines (40 CFR 94) or are incorporated by reference into USCG standards, ICCL member ships are required to have meters to monitor haze (e.g., air opacity).

While vessels are in port at Bar Harbor, restrictions on emissions producing-operations should be encouraged to reduce visibility blockage from stack emissions. Some options to consider that have been successfully implemented by voluntary initiatives in other destination ports throughout the US include:

- Prohibition of onboard incineration on cruise ships while in port (Hawaii) or within three miles from shore (California);
- Development of visible emissions standards from ships operating within three miles from shore (Alaska);
- Establishment of a stack monitoring program (Hawaii);
- Establishment of a working group that is (1) dedicated to engine and machinery retrofits to newer, lower emissions technology and/or alternative fuel sources for marine power; and (2) connected to a grant program to support and drive the retrofit program;
- Consideration of alternate fuel machinery (e.g., biodiesel) and electrified equipment as part of any capital expenditures for port equipment and supporting services (i.e., cranes, tender services, coaches, etc.); and
- Establishment of a fuel conservation plan for the port, which may include fuel conservation methods (i.e., retrofit to energy efficient machinery, speed reduction, limit idling of ships and coaches alike, etc.) and implementing low sulfur diesel conversion and usage in accordance with EPA's downstream compliance date of 2010.

As mentioned previously, the legal framework established under the Clean Air Act may be problematic for promulgating any new air emissions controls at the State level. However, there are two federal initiatives that could help drive or support one or more of the air emissions reduction options provided above:

[13] Appendix B of MARPOL Annex V specifies the required information that is tracked using a Garbage Record Book that is subject to inspection and enforcement by territories ratifying the MARPOL treaties. The USCG includes by reference a number of the MARPOL requirements.

1. Bar Harbor is one of 108 communities along Maine's coast that is classified by USEPA as a non-attainment zone for the 8-hour ozone standard, which means that an 8-hour average ozone concentrations must be limited to 0.08 ppm by June 2009; and,

2. Acadia is classified as a Class I area under federal haze regulations (40 CFR 51), which means that a plan to reduce haze forming pollutants must be developed by 2008.

In addition to increases in air emissions from docking vessels offshore, onshore support services may also contribute to an increase in overall air emissions thus limiting visibility. As recommended by the Bar Harbor Conservation Commission, coach emissions can be minimized by:

- Limiting the number of coaches at the pier and Agamont Park;
- Providing incentives for low emissions or alternate fuel (e.g., electric) coaches; and
- Enforcing idling law for coaches by removing the coach from service until repairs can be made.

Incorporating these air emission reducing elements for land-based operations into Bar Harbor's future development as a tourism destination will assist in maintaining Bar Harbor's environmental health. (Methods for doing so have been discussed in the previous chapter).

5.3 Other considerations

In accordance with ICCL Standard E1-01-1, hazardous and solid waste will not be disposed of overboard. Instead, the ICCL Standard has developed a number of handling and management standards for wastes generated onboard.

Hazardous Waste

Photo processing and x-ray fluids, dry cleaning waste fluids and contaminated materials, print shop waste and old pharmaceuticals, fluorescent and mercury vapor bulbs, other mercury containing devices and batteries are all examples of typical hazardous or universal waste items that may be generated and managed onboard a docking vessel. ICCL Standard E1-01-1 addresses adequate handling and management procedures for these hazardous and universal waste items to ensure compliance with applicable rules and regulations. In general, these waste streams will likely be offloaded at the ships homeport. However, in the event that a vessel may need to offload such items while in Bar Harbor, a prudent measure would be to identify DEP-licensed hazardous waste transporters that service the area and transport regulated wastes to appropriately licensed treatment, storage and disposal facilities (TSDFs). Most of these licensed transporters are also qualified to, and may also be contracted on a contingency basis to, respond to hazardous waste spills, releases or cleanup.

Solid Waste

According to ICCL Standard E1-01-1, recycling and waste minimization are key elements associated with the cruise line industry's waste reduction management strategy and overall solid waste management onboard docking vessels. Some docking vessels may incinerate solid waste[14] while others may recycle as much as possible and store the balance for offloading at port and disposal at a land facility. As with hazardous waste, the majority of the offloading will likely take place at the vessel's homeport; however, local provisions with recycling and solid waste vendors that service the Bar Harbor area may be a prudent measure to be prepared for any potential influx in solid waste from docking vessels.

In addition to increases on local solid waste and recycling vendors due to docking vessels, the additional visitors onshore will likely also produce an increase in solid waste and solid waste management services. Additionally, a demand for ash trays, litter bins and recycle bins would be anticipated throughout Bar Harbor to ensure efficient and sanitary means for solid waste disposal.

[14] ICCL Standard E1-01-1 establishes quarterly analytical testing protocol for incinerator ash during the first year of incinerator operation to establish a baseline for comparison to future annual testing results.

Chapter 6 Town of Bar Harbor Cruise Market

6.1 Section summary

This section analyzes the current situation for Bar Harbor in terms of cruise tourism operations and looks at the cruise sub-regions and itinerary patterns directly relevant and impacting Bar Harbor cruise operations. In the section that follows, each is discussed in terms of the characteristics of vessel deployment, passenger demographics and volumes, leading regional operators and itinerary composition, as well as presents the relevance to each for present and future operations to Bar Harbor.

- Selection of a model design vessel(s) dictates a programmatic response for Bar Harbor, one that will allow the destination to meet industry needs, maintain competitiveness in the region, and plan port-of-call operations as deemed viable and within best practices policies established by the Town of Bar Harbor in order to be a marquee cruise tourism destination;

- In 2006 the Town of Bar Harbor hosted approximately 108,000-cruise passengers on 82 sailings, a 7.3% increase over the previous year. In 2007 the Town of Bar Harbor will see an 18% increase in cruise passenger traffic to more than 128,000 on 90 cruise calls;

- Bar Harbor's strength in terms of strategic fit is to serve primarily as a port-of-call for the regional Canada & New England deployment patterns. As a port-of-call, Canada & New England (all durations) and Atlantic Coast small ship sailings have a strong appeal given present cruise line deployment strategies;

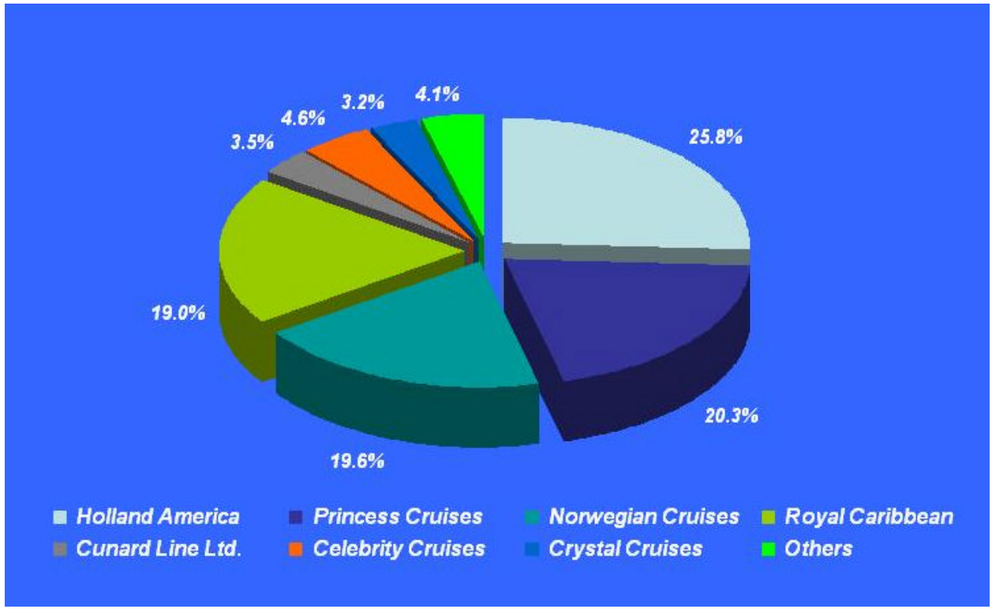
- In general, Bar Harbor fits into most of the cruise sectors given its geographic location and visitor-appeal. Bar Harbor competes directly with Portland, Maine and Saint John, New Brunswick for cruise traffic on the Canada & New England itinerary patterns. However, due to the value of Bar Harbor - in conjunction with the length of cruise and geographic placement - most ports in the region can be viewed as complementary ports with each benefiting due to their influence on the overall marketing value of the itinerary pattern.

6.2 Current Situation

In 2006 the Town of Bar Harbor hosted approximately 108,000-cruise passengers on 82 sailings, a 7.3% increase over the previous year. In 2007 the Town of Bar Harbor will see an 18% increase in cruise passenger traffic to more than 128,000 on 90 cruise calls. Over the past five years overall growth has been limited in Bar Harbor due to a combination of leveling in the region and an artificial cap on cruise calls established by the Town of Bar Harbor during the period. HAL continues to be the predominant cruise line for Bar Harbor in 2006 and 2007 with 21 calls and more than 32,000-passengers respectively. HAL offers a Canada & New England summer cruise pattern not seen on other lines offerings.

Figure 8: Bar Harbor Cruise Line Activity, 2007

Source: B&A, 2007

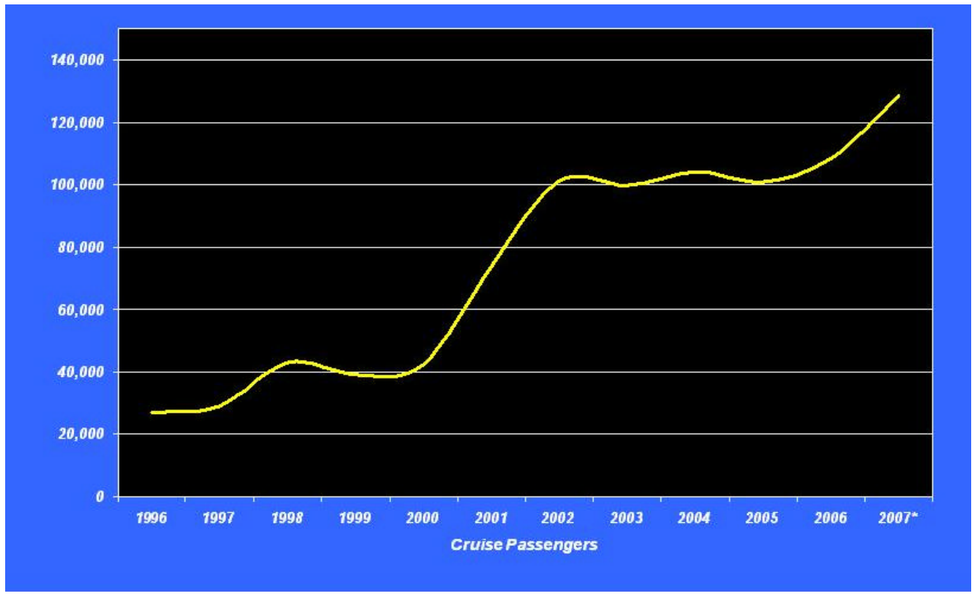


Currently, the Town of Bar Harbor limits conventional cruise calls to two ships per day in consideration of the overall tourism elements of Bar Harbor and surrounds. Based on our cruise line interviews this limitation has forced lines to either adjust itineraries to call in Bar Harbor on alternative days or it has prompted cruise lines to bypass Bar Harbor in favor of alternative ports in the region. This capacity limit is evident in the flattening of growth as illustrated in the cruise passenger throughput, cruise calls and

passengers per ship. This limit may discourage larger vessels in the region from placing Bar Harbor on its itinerary patterns. In addition, the lack of berthing facilities also provides a limiting factor for larger ships as it is difficult to conduct tender operations for some of these ships.

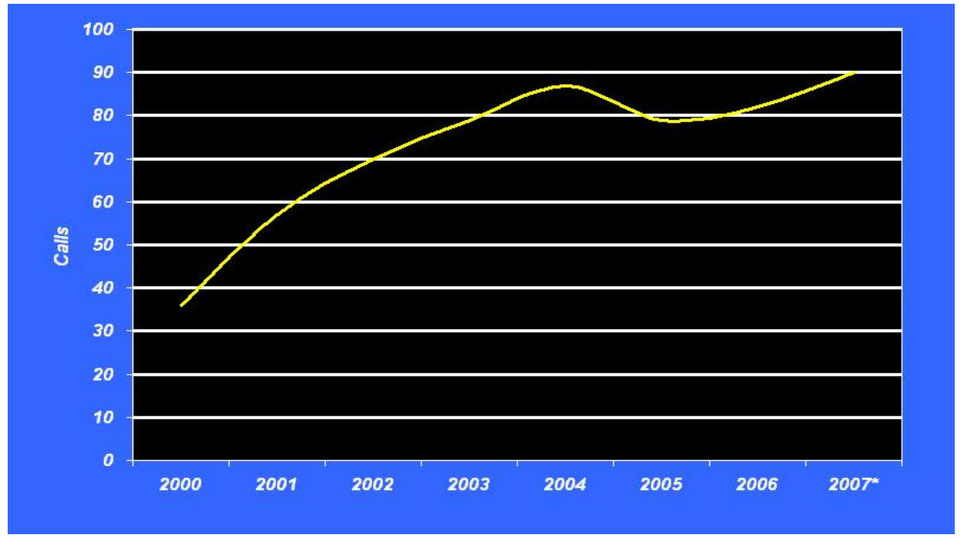
Tender operations in Bar Harbor are conducted at a private port facility (not part of the Town of Bar Harbor) due to security concerns and the need to keep the Town Pier available for the local fishing fleet, parking and other activities associated with tourism in the community.

Figure 9: Cruise Passenger Throughput, 1996 - 2007
Source: B&A, 2007



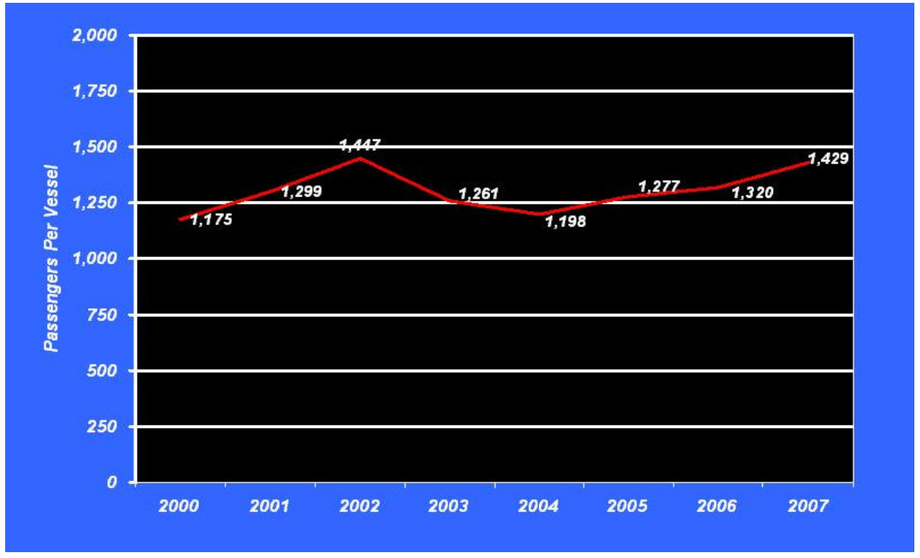
Over a ten year period Bar Harbor has seen a tremendous growth in cruise tourism as illustrated by Figure 9. The largest jump in activities occurred following the redeployment of the North American cruise fleet to homeland cruise patterns following the September 11 terror incident. Since that time Bar Harbor has seen minimal growth in passenger throughput. Cruise calls to Bar Harbor have actually decreased the past two years since a high in 2004 of 87 calls. In 2006 Bar Harbor saw 82 cruise calls with the vast majority of these seen during the months of September and October.

Figure 10: Cruise Calls, 2000 - 2007
Source: B&A, 2007



Bar Harbor receives most of the larger vessels that sail in the region. The overall capacity of cruise ships calling in Bar Harbor has remained relatively flat and lower than the overall regional ship capacity average which was slightly more than 1,600-passenger per ship. In 2007 the average capacity per vessel will move to approximately 1,429-passengers with the *Explorer of the Seas* calling with 3,114-passengers. In addition, Bar Harbor captures numerous smaller coastal cruise vessels with capacities of less than 102-passengers. Thus, there has been less than .07% growth over the study period as illustrated in Figure 10.

Figure 11: Cruise Passengers Per Vessel, 2000 - 2007
Source: B&A, 2007



6.3 Cruise sectors and Itinerary Patterns Impacting the Town of Bar Harbor

To provide an understanding of the vessel movements, sub-regions, and itineraries offered in the Canada & New England region, specifically those with relevance to port-of-call operations to Bar Harbor, we have identified and reviewed several cruise market deployment patterns in detail. Cruise sub-regions and itinerary patterns reviewed include the following:

- Canada & New England;
- Atlantic Coast (Small Ship Deployments);
- Transatlantic; and
- Round-the-World.

Canada & New England

Overview

The region generally consists of cruise operations originating from northern U.S. Atlantic Seaboard homeports (primarily Boston, Cape Liberty and New York) to ports-of-call in the New England States and Canadian Maritime Provinces. To a lesser extent the ports of Montreal and Quebec City are also used for homeport operations. Cruises range from 3- to 12-days in length and run from May through late October, with the majority of offerings occurring during the months of September and October.

In the mid-1990's this sector started its ascent as a mainstream itinerary pattern due to the number of ships making Transatlantic sailings from the shipyards in Europe, and repositioning from the increasingly lucrative European summer cruise markets of the Mediterranean and Northern Europe. Today, the itinerary is primarily concentrated during the months of September and October to capture the fall colors with cruise lines typically making a limited number of 7-, 10- or 12-day sailings through the region before departing for winter cruise sectors in the Caribbean. In concentrating the sailings into small groups the cruise lines have been able to keep per diems[15] at a mid to high level.

All of the major cruise consortiums are present in this market sector, with HAL as the primary operator due to its summer deployment of the *Maasdam* on 17 calls from May through October. Princess, RCI, NCL and Celebrity each offer a variety of cruise patterns in this sector in the fall foliage months. The European cruise brands of Hapag-Lloyd, Classic International, Saga and P&O Cruises each make their way through the region in this sailing sector or as part of a Transatlantic or World Cruise pattern.

Besides Bar Harbor, traditional ports-of-call include Halifax, Saint John and Quebec City. For sailings of more than 8-days, Sydney, Saguenay, Charlottetown, Newport and Portland all compete for cruise traffic. Most of the ports-of-call listed have invested into the development of marine and upland infrastructure to support the growth of the cruise industry in the region, while also supporting local business and regional tourism development.

Impact / Relevance to Bar Harbor

Bar Harbor is in a very strong position to accommodate regular port-of-call activities associated with the Canada and New England market sector given its distance from the region's principal homeports and ports-of-call in the region. The cruise industry also continues to move toward the shorter cruise

[15] *Per diems* in the cruise industry represent fares per day, per passenger. It is commonly used to compare the fares of different cruise lines.

itineraries in the region (less than 8-days) from the larger markets of New York and Boston. The mainstream ports (particularly Bar Harbor and Halifax) provide a high level of name recognition to potential cruise passengers familiar with the region. In addition, Bar Harbor is in an excellent geographic position to provide for product offerings due to speed & distance marine patterns from which 4-, 5-, 7- and 10-day cruise itinerary patterns on both open- and closed-jaw itineraries[16] can be derived. The primary ports of Bar Harbor (USA), Halifax (Nova Scotia) and Quebec City (Quebec) provide the initial basis for building an itinerary. Following the placement of these key "marquee" ports in the itinerary the cruise lines then choose between the secondary ports of Portland (USA), Newport (USA), Saint John (New Brunswick), Charlottetown (Prince Edward Island) and Sydney (Nova Scotia).

Presently, New York and Boston are the drivers of growth for the Canada & New England cruise market. They provide the essential berth capacity, airlift, hotel and access to the critical passenger source marketplace, besides being geographically well positioned to offer several itinerary patterns and cruise durations. Both homeports are serviced by large hub airports with significant scheduled airlift at reasonable price levels, are very attractive in terms of pre- and post-cruise stay-over packaging, and have an expanding port infrastructure base that can serve the largest cruise vessels. These strengths will likely keep the vast majority of U.S. cruise embarkation traffic at these two facilities as the Canada & New England market continues to mature. Cruise lines may need to re-think deployment patterns based on berth availability in New York in the summer months, should the sector expand into the mid- to long-term, due to increasing use of berths on key weekend days for Bermuda and Caribbean sailings.

Atlantic Coast (Small Ship Deployments)

Overview

The Atlantic Coast cruise sector is seeing increasing growth opportunities associated with operations by small, niche regional cruise operators. The sum contribution in terms of annual passenger throughput, however, is small resulting from the use of vessels with capacity levels generally below 200-passengers. Additionally, larger mass-market vessels are using a routing inclusive of some Atlantic Canada ports and U.S. East Coast destinations en route to the Caribbean from a Canada & New England cruise season. Mainly these larger ships depart from Montreal, while the smaller vessels, such as American Cruise Lines, American Canadian Caribbean Line and Clipper Cruise Line may use Bucksport, Bangor, Portland, Boston, New York and others for homeport options.

[16] A cruise with an open-jaw itinerary starts in one country and ends in another. A closed-jaw itinerary is one that returns to the same port from where it started its voyage.

The Atlantic Coast sector is seen as mainly a seasonal early summer and fall pattern due to the cold Atlantic winter months; transitional cruises to Canada and New England; the high return summer markets of Alaska and Europe; and the hurricane season. The smaller lines are stretching this season into the summer months to capture increased market share. Additionally, large lines such as Princess and Holland America have added a significant number of U.S. cruise ports to their coastal offerings such as Gloucester, Gaspe, Lunenburg, Newport, Rockland, Castine, Camden, Belfast and Portland. This cruise sector provides a small in-road in terms of extended sailings within and through the region from which Bar Harbor is a part.

Overall, this is a relatively small market with 24 sailings on three ships with approximately 1,700-passengers being identified within 2006 that move along the Eastern Seaboard. This is a strong niche market for small cruise ships sailing within the region on a seasonal basis.

Impact / Relevance to Bar Harbor

Bar Harbor receives a fairly high number of cruise calls from this cruise segment at present, on 8-day sailings. Bar Harbor is in an excellent position to capture port-of-call and small ship homeport calls associated with this cruise sector. It is clear that the philosophy of these cruises is the exploration of the smaller ports along the Eastern Seaboard and to not compete with the larger vessels in the region. Larger North American lines move southbound from their existing homeports in New York and Boston on similar routings as part of repositioning sailings to the Caribbean region. These one-off itineraries take in a variety of cruise ports-of-call (i.e. ports that are visited on a cruise voyage) and are generally low cost from a speed and distance perspective.

Transatlantic

Overview

Transatlantic itineraries typically involve the repositioning of North American and European cruise fleets from the European summer market, transitioning to the Canada and New England "fall foliage" cruises, and then down to the winter market in the Caribbean. Additionally, this route is used by newly-built ships moving from European shipyards to the U.S., with introductions in New York and along the lucrative U.S. East Coast marketplace. Some cruise lines also offer round-trip transatlantic sailings that touch key U.S., European and Canadian East Coast cities popular with their passenger base. These cruises are typical for the German and English cruise markets in particular with Hapag-Lloyd, Fred Olsen and P&O operating cruises from their significant homeports in Germany and England respectively.

The transatlantic itineraries consist of 7-, 10- to 14-day sailings that include several port-of-call visits in England, Ireland, Norway, Iceland, Greenland, Bermuda, Newfoundland and Labrador, The Azores and Canadian Maritimes before ending the voyage in New York, Boston or other East Coast port. Over the past several years, some cruise lines have chosen to forego the northern sailings, in favor of a more southerly route that deliver the ship directly into the Caribbean or further along the lower east coast of the U.S. Cruise lines will continue to use the Transatlantic crossing to move their fleets into seasonal regions that generate the highest revenues, while also offering a unique repositioning voyage for repeat passengers to the line. These cruises do not typically generate good per diems for the cruise line, and often these sailings are not full.

The general prospect for continued growth of the traditional transatlantic region is fair based on our assessment. The further expansion of cruise line repositioning cruises is anticipated to be fair to good as the European markets continue to be favored for increased cruise vessel capacity placement. In 2006, Bar Harbor captured Transatlantic sailings from Cunard Line, Crystal Cruises and P&O Cruises.

Impact / Relevance to Bar Harbor

Bar Harbor is in a fair to good position to support port-of-call operations for traditional Transatlantic voyage movements for medium and large vessels given its location in the region and proximity to the U.S. east coast homeports of New York and Boston. Bar Harbor's opportunities for operations associated with Transatlantic sailings are good for the following vessel routings: northbound cruises originating from a European homeport and destined for New York or Boston; and vessels coming out of New York or Boston and transiting to a European destination via direct routings. There is limited opportunity for cruise call capture on the latter traffic pattern.

Round-the-World Cruises

Overview

The round-the-world cruise sector is very limited and mainly caters to higher-income passengers able to take extended time away from home on luxury cruise vessels. These sailings are typically 80- to 120-days in duration, divided into more modest 15- to 55-day cruise segments. These cruises pass through several regions of the world as they navigate the globe, thus all calls on the itineraries are usually one-off calls (i.e., they do not repeat ports). These sailings are also seen as exotic, and as such, cruise operators do not spend a significant amount of time in the larger, mass-market cruise regions. With the marquee value of Bar Harbor this sector may provide a few port-of-call visits each year within the region. New York and Boston will see segmentation homeport visits from the world cruise ships. Cunard's *QE2* and Hapag Lloyd's *Hanseatic* call in Bar Harbor on World Cruises in 2006.

Impact / Relevance to Bar Harbor

Bar Harbor will continue to be in good position to be a port-of-call for World Cruises. The growth of this sector is limited and as such Bar Harbor may be well served to meet the needs and expectations of its current clients while concentrating on its other core market sector products (Canada & New England and Atlantic Coast Small Ship) that offer a greater degree of potential calls. New York will most likely continue to play a leading role on the Atlantic Coast for homeport operations in this cruise sector due to its overall cruise homeport logistics and marquee value.

Fit of Bar Harbor within Identified Target Sectors

Each of the target sectors identified above affords Bar Harbor varying degrees of potential cruise line port-of-call operations. In Table 4, we summarize Bar Harbor's general potential for participation in each of the target market sectors reviewed. Bar Harbor's strategic position in each sector was assessed either as being strong (↑), fair (■), or weak (↓).

Table 4: Fit of Bar Harbor within Identified Target Sectors (Summary)
Source: B&A, 2007

Target Market	Bar Harbor as a Port-of-Call
Canada & New England	↑
Atlantic Coast (small ship deployments)	↑
Transatlantic	■
World Cruises	■ / ↑

Key: Strong (↑), Fair (■), Weak (↓)

As presented above, Bar Harbor's strength in terms of strategic fit is to serve primarily as a port-of-call for the regional Canada & New England deployment patterns. As a port-of-call, Canada & New England (all durations) and Atlantic Coast small ship sailings have a strong appeal given present cruise line deployment strategies. In general, Bar Harbor fits into most of the cruise sectors given its geographic

location and visitor-appeal. In the mid- to long-term, changes to push other sectors may occur through strategic marketing efforts and other cruise tourism travel factors that may then provide new cruise port-of-call opportunities for Bar Harbor.

6.4 Cruise Port Competitors Impacting the Town of Bar Harbor

Several regional competitors were reviewed as to their potential short and long-range impact to cruise activities in the region overall and specifically port-of-call operations to Bar Harbor. A summary of their general attributes is presented in Table 5. Generally, Bar Harbor competes directly with Portland, Maine and Saint John, New Brunswick for cruise traffic on the Canada & New England itinerary patterns. However, due to the value of Bar Harbor in conjunction with the length of cruise and geographic placement, most ports in the region can be viewed as complementary ports with each benefiting due to the influences of each on the overall marketing value of the itinerary pattern. Simply, each itinerary should include ports that offer different types of experiences and offerings to make it successful for the cruise consumer.

From the review of primary attributes, strengths, and weaknesses of each of these facilities, an evaluation of the general competitive threat potential for each was prepared (see Table 6). The Ports of Boston and New York (inclusive of Cape Liberty and Brooklyn) is Bar Harbor's primary contributor of cruise traffic into the region, followed by Quebec City and Bangor, Maine. Their future development directly impacts the overall cruise passenger throughput potential of the Canada & New England cruise sectors. Saint John, NB and Portland, Maine appear to be the closest competition for port-of-call traffic in the mid-term based on our review. Both ports are geographically competitive and are capable of developing new infrastructure and products to capture additional business in the region. Portland, Maine will have a dedicated cruise terminal facility once the Ocean Terminal project is completed.

Table 5: Competitor Ports in the Region (Summary)
Source: B&A, 2007

Port	Cruise Facilities		Future Plans / Notes	(S) Strengths / (W) Weaknesses
	Cruise Berth(s)	Cruise Terminal(s)		
Port of Saint John, New Brunswick	3 Berths: Pugsley A/B is 1,270-ft./387 m. (34-ft./10.3 m. depth); Lower Cove is 735-ft./224 m. (35-ft./10.7 m depth).	One tent structure terminal to accommodate 2 vessels; Lower Cove open.	Working in conjunction with City to develop waterfront area. Next mid-term step is the development of Pugsley terminal.	(S) Excellent access to the downtown area via walking / shuttle, (S) Solid reputation for assistance with Port and Tour Operators; (S) Good brand recognition by North American and European operators; (W) City does not always meet expectations; (W) Downtown area somewhat lacking for independent persons – lack of shopping, venues, etc.
Port of Sydney, Nova Scotia	3 Berths: 920-ft./280 m. ; 850-ft./259 m.; 1,110-ft./338 m. with depths from 24 to 40-ft. (7.3 to 12 m.). Anchorage available.	New cruise/cargo shed facility adjacent to 2 berths. Used for market area. Wide open apron for equipment movement.	Port of Sydney Master Plan underway.	(S) Solid secondary port as a destination; (S) Good tourism access to Cape Breton; (S) Cruise facility offers good operational elements; (W) Provides walking access to downtown area with very limited activities.
Port of Boston, Mass.	5 Berths: Black Falcon has 3,000-ft./914 m. usable (32 to 35-ft. – 9.75 to 10.6 m. - depth).	Black Falcon Terminal accommodates 1 to 2 ships with another using adjacent shed area. Other ships may use tents.	Began renovation to expand terminal for multi-use ships. Stopped following 9/11. Plan to begin work in 2007, Refurbish Black Flacon and add new terminal facility.	(S) Strong airlift and hotel components; (S) Excellent tourism infrastructure; (S) Strong brand recognition in conjunction with regional and international tourists; (W) Extremely high stevedoring costs from ILU; (W) Procedures for homeporting for FIS/stevedoring are poor.
Port of New York City, New York	3 Piers (88,90,92) 5 berths; 4 berths at 1,040-ft./317 m.; 1 berth at 774-ft./236 m. (all 34-ft./10.3 m. + depth).	All piers in three tier terminal(s) for stores; parking, processing of passengers. Original warehouses with no apron areas for work.	Currently renovating Manhattan berths. **(RCI has a two berth complex in New Jersey – Cape Liberty - (1,000+ft. berths) and there is a new Brooklyn Cruise Terminal (1,000-ft. + berth) supporting cruise operations.)**	(S) Strongest marquee value; (S) Excellent tourism infrastructure, hotel and airlift; (S) Strong brand recognition in conjunction with regional and international tourists.
Port of Portland, Maine	748-ft. berth; Ocean Terminal 1,000-ft./304.8 m., 600-ft, /188.8 m. and 300-ft./91.4 m. berths ((34-ft./10.3 m. depth); two anchorages A/B.	No dedicated Cruise Passenger Terminal at present. Open pier area for port calls.	In 2000 began waterfront development process. Planned to open $20M Cruise/Ferry Terminal with 2 -1,115-ft./340 m. berths (34-ft./10.3 m. depth) by 2007.	(S) Good venue for regional tourism; (S) Nice downtown area within walking distance; (S) Good reputation for working with cruise lines; (W) Limited tour product; (W) Can only berth 1 ship with another at anchor.

Table 5: Continued
Source: B&A, 2007

Port of Quebec City, Quebec	2 dedicated cruise berths at 767-ft./233.7 m. and 1,066-ft./325 m. (35 – 38-ft. – 10.6 to 11.6 m. depth). Additional facilities available.	New purpose-built cruise terminal open in May 2002. 2-storeys with large apron area.	Completed new terminal. No plans for future development. Need to market for homeport use of new facility.	(S) Exceptional marquee value in region; (S) Strong tourism infrastructure with excellent venues and tour options; (S) Downtown berths provide good access for passengers; (W) Limited airlift capability – must use Montreal; (W) Competition for hotel space in season.
Port of Halifax, Nova Scotia	4 available berths along downtown seawall – (2) 800-ft./260 m., (2) 600-ft./180 m. plus overflow. (all 29 – 40-ft. – 8.8 to 12.1 m. depths).	Large terminal facility complex and GTA.	Port completed a waterfront master plan and is currently under phase 1 of the renovation process with new facilities for local and tourism needs.	(S) Popular venue for regional tourism; (S) New homeport/port call to differentiate products; (S) Good local tourism infrastructure; (S) Access to downtown area.

Table 6 identifies the threat levels of each of the Ports identified in this section as they relate to port-of-call operations to Bar Harbor.

Table 6: Bar Harbor Competitors for Cruise Operations
Source: B&A, 2007

Competitor	Competitive Port-of-Call Threat Potential
Port of Saint John, New Brunswick	■
Port of Sydney, Nova Scotia	↓
Port of Boston, Massachusetts	■ / ↑ **(complementary)**
Port of New York City, New York	■ **(complementary)**
Port of Portland, Maine	↑
Port of Quebec City, Quebec	↓
Port of Halifax, Nova Scotia	↑
Key: Strong (↑), Fair (■), Weak (↓)	

Chapter 7 Projection of Cruise Growth Opportunities for the Town of Bar Harbor and Demand

7.1 Section summary

This chapter examines the potential future cruise passenger and vessel throughput for Bar Harbor based on our current knowledge of the region overall and historical data collected during the study. This projection base can assist the Town of Bar Harbor in determining future requirements for physical infrastructure in relation to anchorages, tendering, berth requirements, ground transportation and supporting upland tourism infrastructure. Based on an assessment on the total anchorages/berths required to support cruise operations, a total of necessary accommodations for Bar Harbor can be established over the long-term. A summary is found below:

- Conventional cruise passenger volumes under Approach A - Natural Growth scenario are envisioned to increase to between 144,908 (low) and 158,585 (high) passengers by 2020. Similarly, vessel calls are forecasted to be between 74 (low) and 81 (high) calls in 2020. The actual drop in passenger calls is based on the continued deployment of larger vessels into the region, increasing to a capacity of approximately 1,970-passenger per vessel in 2020;
- Under Approach B, cruise passenger throughput expands from approximately 128,000 passengers in 2007 to between 152,504 (low) and 194,679 (high) passengers by 2020. Cruise calls reach between 77 (low) to 99 (high) in 2020;
- Under Approach C, cruise passenger throughput expands to between 206,055 (low) and 236,087 (high) passengers by 2020. Cruises increase to 105 (low) to 120 (high) based on our projection models;
- As the size of the vessel's passenger capacity grows over the study period, a limiting factor on cruise calls or passengers will eventually prohibit and restrict growth. This will cap Bar Harbor's overall growth at approximately 215,000-passengers based on capping the season to fall months only (approx. 60-day season);
- Bar Harbor is a significantly different port-of-call with a distinct seasonality for both cruise and land-based tourism. To a great degree the success of Bar Harbor is very much linked to this identity. Changing cruise patterns that may predominantly utilize Bar Harbor during the peak summer months for land-based tourism may provide a negative impact on the destination overall and may provide for a limited cruise guest satisfaction over time if expansion of upland and tourism infrastructure is not incorporated to meet demand; and,
- Regional cruise growth and Bar Harbor cruise expansion offer some level of social and economic opportunities. However, Bar Harbor must determine to what extent they wish to support each facet of tourism using the limited infrastructure available within Bar Harbor and its surrounds.

7.2 General approach to forecast preparation

A. Growth Scenarios

From information assembled as part of the 2006 Study, we have assembled three general scenarios that reflect the most likely assumptions for growth for Bar Harbor over the study period. These are discussed in the following section.

Approach A - Natural Growth (Baseline plus 5-year average of Northeast Atlantic Coast). Under this scenario, cruise passenger and vessel volumes expand within the limits of Bar Harbor's present cruise offer. Local and State Government and regional stakeholders take little or no role in the expansion or implementation of new cruise facilities, improvements or expansion to existing facilities. Port-of-call operations continue to occur primarily due to the availability of operators in the region, the notoriety of Bar Harbor as a desirable place to conduct cruise call operations, the availability of cruise facilities to accommodate traffic and other factors.

Approach B – Regional Market Capture of Bar Harbor. Approach B looks at the historical and projected future capture rates of Bar Harbor in conjunction with the overall throughput envisioned for the region. Bar Harbor's growth is specifically tied to the capture rate in the regional marketplace. This Approach contemplates the expansion of Bar Harbor's cruise passenger throughput based on low to high capture rates over the study period.

Approach C – Expansion of Cruise operations on Scenario-based projections. Under this growth scenario, Bar Harbor focuses on expanding operations by expanding its potential cruise operations. Approach C considers all of the relevant scenarios presented under the Approach A Natural Growth and Approach B scenario, and also adds vessels into the region based on interviews with cruise line operators and our knowledge of the region. This Approach also further grows the seasonality of Bar Harbor through the development of cruise operations in the summer season. This scenario approach also serves to create a somewhat constrained analysis of potential growth for Bar Harbor.

Each of the three approaches described above are not mutually exclusive. For example, it is likely that progress toward Approach A will help bring about more realistic market viability for Approach B.

Figure 12: Bar Harbor Historical Growth, 2000 to 2007
Source: B&A, 2007

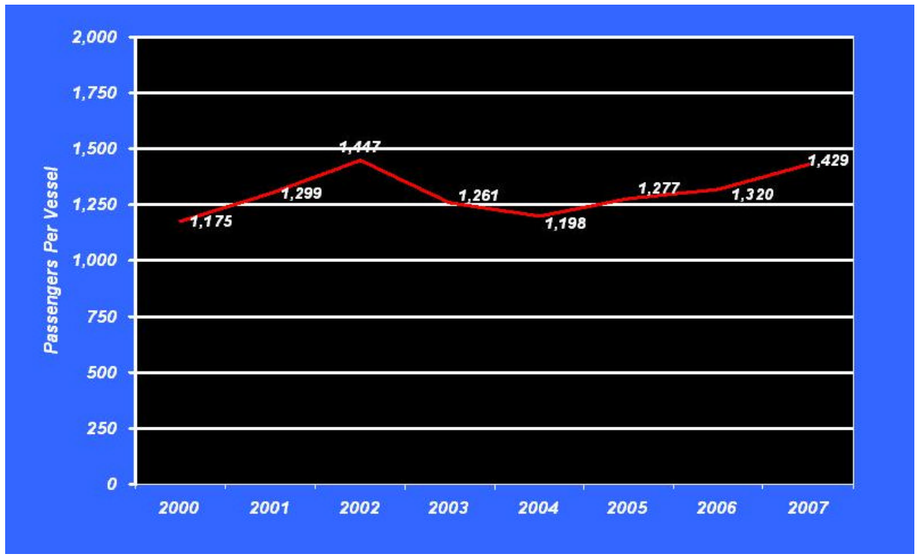
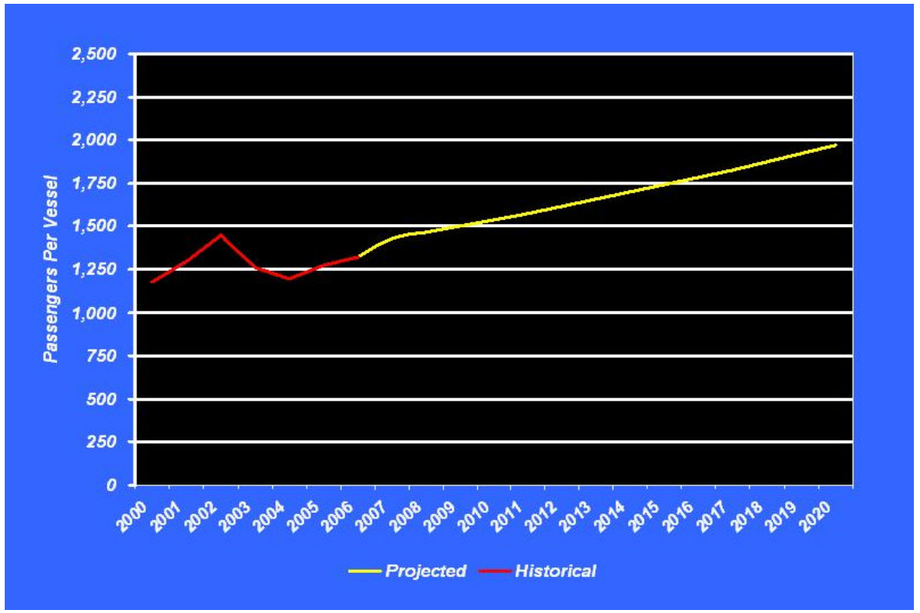


Figure 13: Cruise Passengers Per Vessel Projections at 2.5% Growth, 2007 to 2020
Source: B&A, 2007



7.3 Forecasts of cruise passenger and vessel throughput for the Town of Bar Harbor

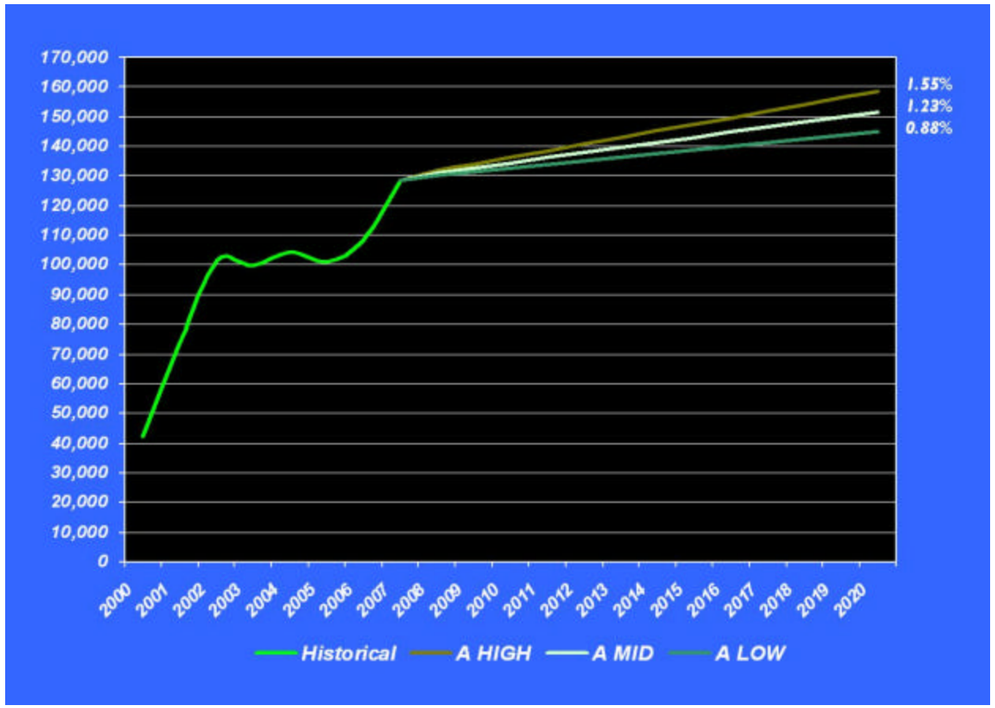
A. Approach A - Natural Growth Projection

In preparation of a Natural Growth projection for Bar Harbor, we have assumed the following:

- Cruise vessel activities in Bar Harbor reflect a normal growth parameter for the region and continually improving consumer perception.
- Growth rates of 1.7% (low), 2.4% (mid) and 3.2% (high) were used in the growth projections as a baseline for this scenario. The higher percentage under the more aggressive scenario reflects consideration that Bar Harbor will almost match the expected regional annual average of growth rates of between 1.88 and 2.95%.

As presented, conventional cruise passenger volumes under Approach A - Natural Growth scenario are envisioned to increase to between 144,908 (low) and 158,585 (high) passengers by 2020. Similarly, vessel calls are forecasted to be between 74 (low) and 81 (high) calls in 2020. The actual drop in ship calls is based on the continued deployment of larger vessels into the region, increasing to a capacity of approximately 1,970-passenger per vessel in 2020. This is a growth rate of 2.5% annually.

Figure 14: Approach A Natural Growth Projection, 2007 to 2020
Source: B&A, 2007

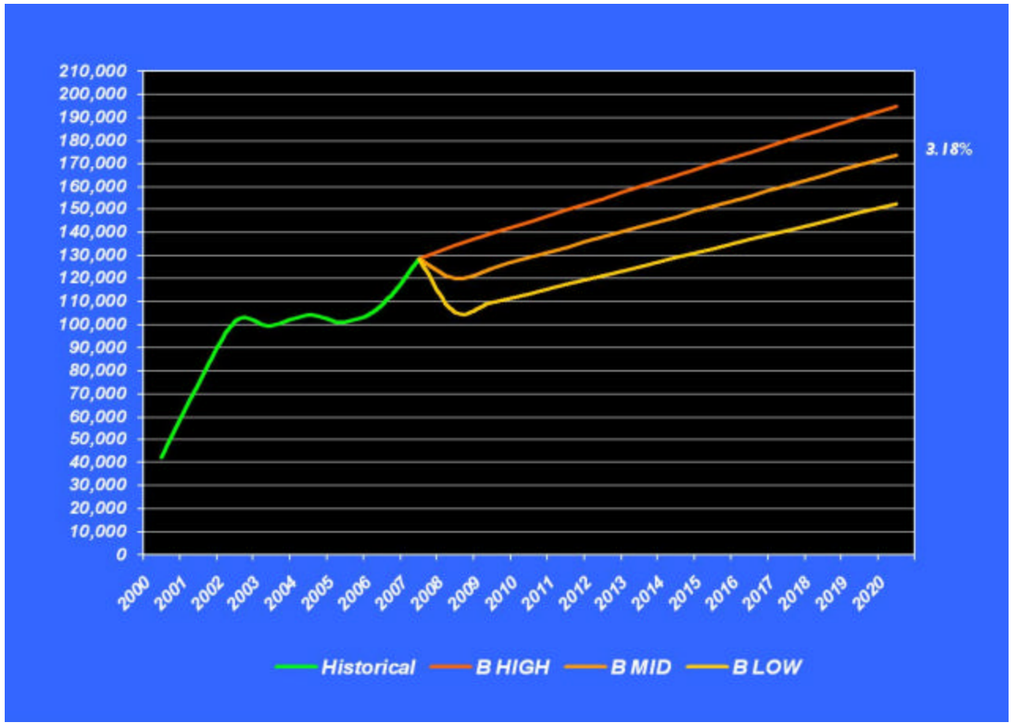


B. Approach B Projection

Approach B contemplates that Bar Harbor's growth continues based on continued overall market capture levels of between 36.16% (low) to 46.16% (high) over the study period. This may involve Bar Harbor taking an active role in growing its cruise business through fostering the success of cruise line operators serving international consumers.

Under Approach B, cruise passenger throughput expands from approximately 128,000 passengers in 2007 to between 152,504 (low) and 194,679 (high) passengers by 2020. Cruise calls reach between 77 (low) to 99 (high) in 2020.

Figure 15: Approach B Market Capture Projection, 2007 to 2020
Source: B&A, 2007



C. Approach C Projection

Under Approach C, cruise lines, finding the right incentives, pricing points, and products to put into place in the region allow for slightly greater deployment levels beyond those occurring presently. Based on feedback from cruise lines, we believe this is still a favorable assumption, albeit deployment trends (occurring later in the projection formula) being a likely necessity. A baseline annual growth of 1.7% is used over the projection period. Success as envisioned under this scenario allows for a single or several medium- to large-sized cruise vessels of 1,800 to 2,600 passengers to operate a seasonally in the region—from 8 to 16 calls—focusing on open- and closed-jaw deployments. Likely candidates for this operation include HAL, NCL and RCI. For Approach C, the following specific deployment assumptions apply:

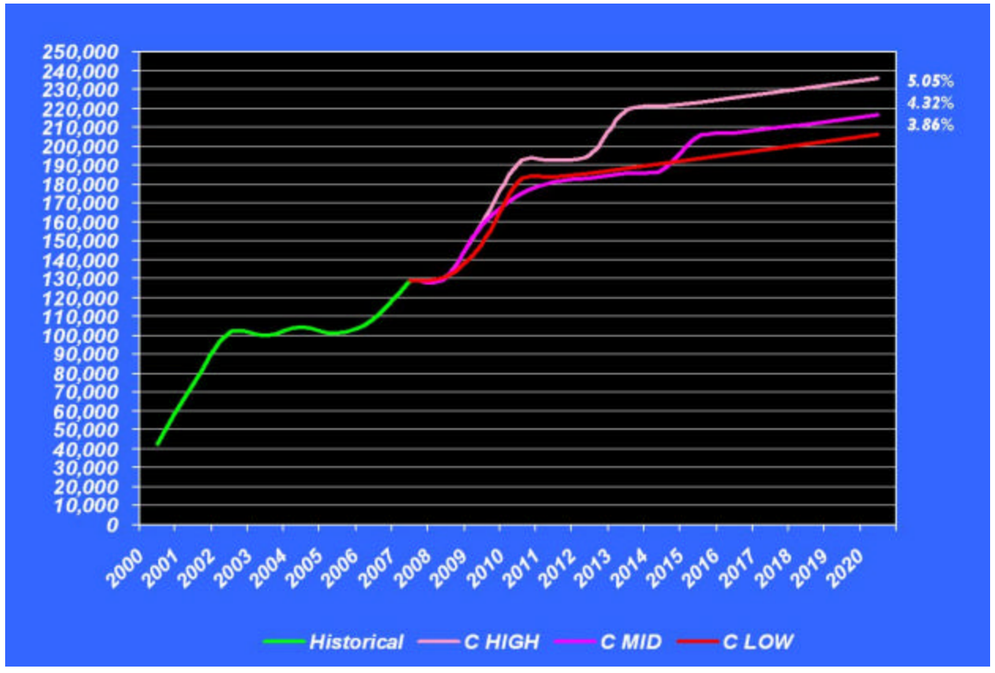
- For the low projection, an additional 20 calls of a large 2,600 and medium 1,844-passenger vessel are projected for deployment in 2009 and 2010 for extended summer season and fall capacity.

- For the medium projection, a similar approach as described above includes 8 large ship and 8 medium-sized vessels deployed along with 2 small ships of approximately 200-passengers on 20 cruises in 2009 and 2011 when new vessels are anticipated to be delivered into the worldwide fleet. This is a total of 36 additional calls overall.

Under the high projection, two large ships (2,600-passengers) are deployed on 8-sailings each in 2009 and 2013. Additionally, a medium sized ship of 1,800-passengers is deployed in 2010 on 16 calls. Finally, one 244-passenger small ship is deployed into the region on 20 cruises.

Under Approach C, cruise passenger throughput expands to between 206,055 (low) and 236,087 (high) passengers by 2020. Cruises increase to 105 (low) to 120 (high) based on our projection models.

Figure 16: Approach C Scenario Based Growth Projection, 2007 to 2020
Source: B&A, 2007



In order to fully assess the overall seasonality and traffic demands of the cruise facilities in Bar Harbor the total conventional traffic must be reflected and assessed over the study period. Table 7 provides an overall reflection of this anticipated traffic for the period from 2007 through 2020. This will also allow us to review the future potential seasonality for the Town of Bar Harbor and further assess the policies and impacts associated with artificially controlling cruise call and/or cruise passenger throughput over time. *We do believe that as the size of the vessels grow over the study period that a strict limiting factor on cruise calls or passengers will eventually prohibit and restrict growth.* This will cap Bar Harbor's overall growth at approximately 215,000-passengers based on capping the season to fall months only (approx. 60-day season).

Table 7: Projection Range of Conventional Cruise Passenger and Cruise Ship Call Throughput to Bar Harbor, 2007 to 2020
Source: B&A, 2007

	2007	2010	2015	2020
A Low (1.7% growth)	128,596	132,750	138,829	144,908
A Mid (2.4% growth)	128,596	134,472	143,084	151,696
A High (3.2% growth)	128,596	136,296	147,441	158,585
A Low Cruise Calls	90	86	80	74
A Mid Cruise Calls	90	87	82	77
A High Cruise Calls	90	89	85	81
B Low (36.16% capture)	128,596	113,284	132,876	152,504
B Mid (41.16% capture)	128,596	128,907	151,250	173,592
B High (46.16% capture)	128,596	144,567	169,623	194,679
B Low Cruise Calls	90	74	76	77
B Mid Cruise Calls	90	84	87	88
B High Cruise Calls	90	94	97	99

Table 7: Continued
Source: B&A, 2007

	2007	2010	2015	2020
C Low (scenario)	128,596	181,219	193,114	206,055
C Mid (scenario)	128,596	174,208	204,600	216,504
C High (scenario)	128,596	190,451	223,146	236,087
C Low Cruise Calls	90	118	111	105
C Mid Cruise Calls	90	113	118	110
C High Cruise Calls	90	124	128	120

7.4 Town of Bar Harbor traffic analysis summary

Part of the process in accurately identifying long-term anchorage/berth demand is to develop an understanding of the traffic patterns to the port or facilities in question. In the case of Bar Harbor, there is a defined seasonal, monthly and daily traffic pattern that emerges through analyzing the historical traffic data. The drivers associated with the Bar Harbor traffic patterns are inclusive of regional cruise market sector seasonality, profitability and competition from cruise regions throughout the year based on the same factors. In this context, we have assembled our traffic analysis for Bar Harbor with a primary emphasis on the Town of Bar Harbor anchorages. Based on our traffic evaluation the following factors have been identified:

- Seasonal and monthly traffic patterns are primarily driven by the fall foliage season with a focus on September and October. A secondary factor is the shoulder season redeployment of vessels from the European cruise patterns to those in North America, primarily the Caribbean region.

- All of the models envision some level of growth over the period with ranges from 49,000 to 66,000-passengers in the peak month in 2010; 54,000 to 78,000-passengers in the peak month in 2015; and between 58,000 to 82,000-throughput passengers during the peak month in 2020. Overall, on a percentage basis, September and October continue to be the peak months for the Bar Harbor model.

- Bar Harbor is a significantly different port-of-call with a distinct seasonality for both cruise and land-based tourism. To a great degree the success of Bar Harbor is very much linked to this identity. Changing cruise patterns that may predominantly utilize Bar Harbor during the peak summer months for land-based tourism may provide a negative impact on the destination overall and may provide for a limited cruise guest satisfaction over time if expansion of upland and tourism infrastructure is not incorporated to meet demand.

7.5 Monthly traffic analysis and seasonality

Figure 17 provides a snapshot of the monthly passenger traffic for Bar Harbor from 2000 through 2006. As illustrated, over the past six years there is a set pattern of cruise seasonality for Bar Harbor directly related to the fall foliage cruise season. Typically, the peak months for Bar Harbor are September (33%) and October (38.30% - 5 year average), with cruise passenger vessel traffic ceasing thereafter. There are no winter cruise activities to speak of with very few exceptions over the period from 2000 – 2006. Seasonal cruise activities can also be attributed to outside influences, primarily Europe, Bermuda and Caribbean markets.

In 2006 there has been a pronounced increase in cruise traffic in October with 43% of the cruise calls for the year occurring in this one month. Over the long-term we believe this will track more closely to the five year average and not continue to expand, primarily due to the availability of port berths. There is limited summer traffic with August averaging approximately 8.70% over the period. Although this consistency is essential to maintain and build for the future, it also clearly shows a very limited seasonality overall in the region to date. For Bar Harbor this is not only linked to seasonality of deployments, but also to the limitation of larger ships calling at the port.

Figure 17: Bar Harbor Monthly Passenger Traffic, 2000 - 2006
Source: B&A, 2007

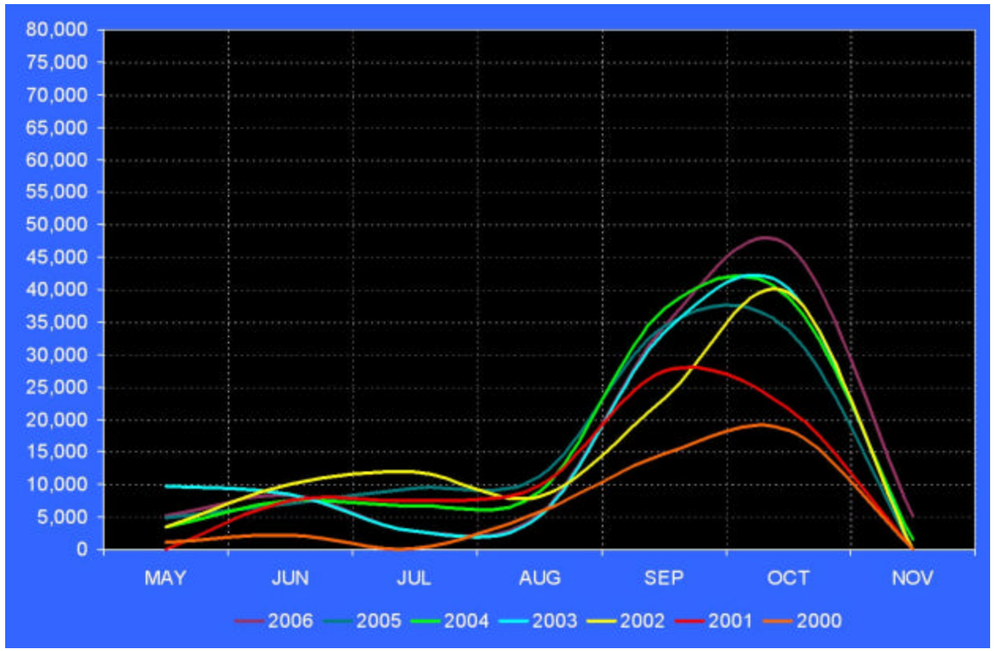
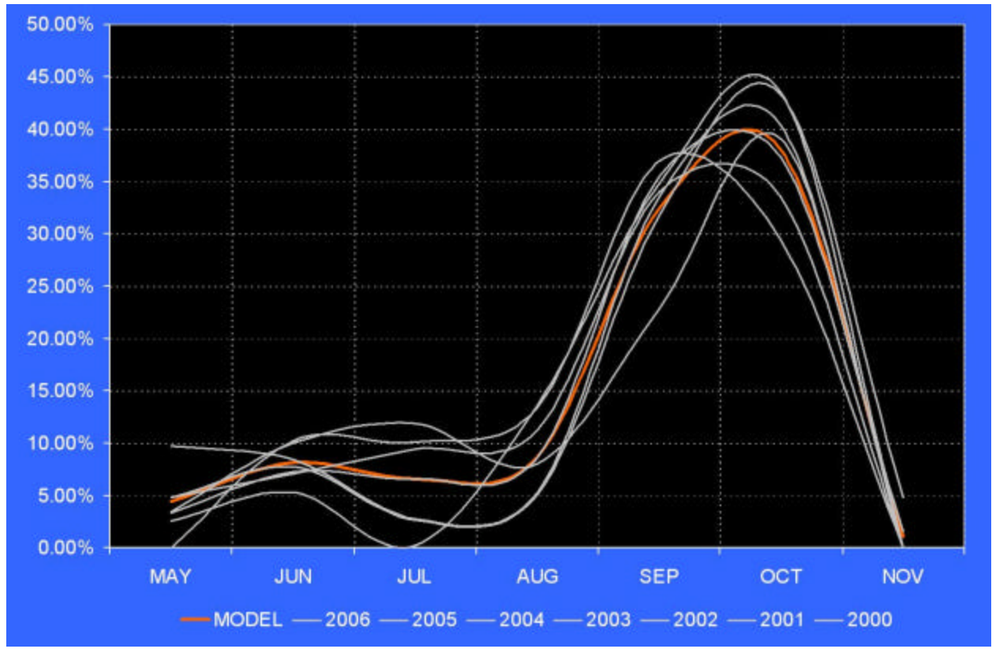


Figure 18: Bar Harbor Monthly Passenger Model, 2000 - 2006
Source: B&A, 2007



Based on historical data from 2000 – 2006 a monthly passenger model has been assembled as shown in Figure 18 based on the annual and monthly percentages of overall traffic to Bar Harbor. This pattern reflects the cruise seasonality of the Bar Harbor regional cruise market over the time period.

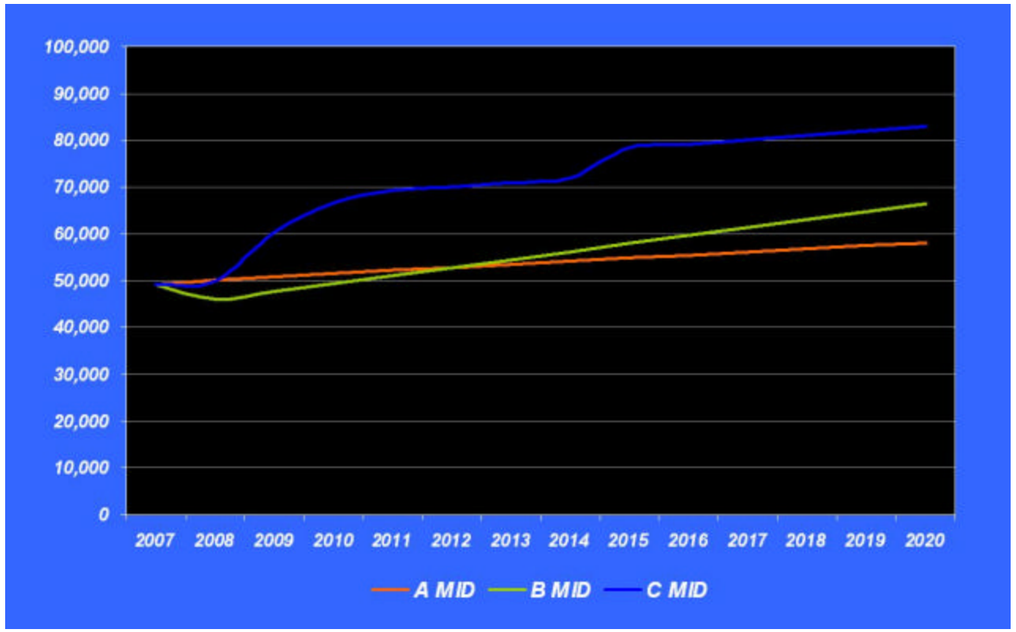
Based on our projection assumptions for this study most growth is envisioned to occur on a consistent seasonal pattern for regional traffic growth on sailings of less than 8-days. Traffic growth is also envisioned for the period from June through August on a limited basis. There is very little aggressive growth envisioned for the summer months based on the projection assumptions. This is primarily due to the competition from other worldwide summer destinations whereby the revenues will continue to draw traffic out of the Bar Harbor cruise market catchments over the 15-year study period. Overall, on a percentage basis, September and October continue to be the peak months for the Bar Harbor model over time.

Figure 19 refers back to the passenger projections with an illustration of the overall growth from 2007 to 2020 on a peak month basis – using October for the illustration as the month with the highest percentage of cruise traffic over time. If Bar Harbor chooses to assist cruise line operators with regional growth, with specific emphasis on Bar Harbor serving as a regional marquee cruise port, it will be imperative to serve the industry by looking to serve the demands of the peak months and peak days required by the industry.

Figure 20 provides a snapshot for the number of cruise calls for Bar Harbor over the 15-year study period. The figure also provides a look at the potential development of cruise facilities for Bar Harbor in order to accommodate the forecasted growth overall. To a large degree Bar Harbor's growth is constrained due to a lack of berthing facilities and upland infrastructure from which cruise lines can depend upon for long-term growth opportunities related to the deployment of Super post-Panamax vessels in the region. In addition, Bar Harbor has limited growth opportunities due to the current anchorage configuration, tendering options and upland GTA and associated tourism infrastructure.

Without the development of facilities to accommodate larger ships (3,000+ - passengers) it is likely that an artificial cap will be placed on future growth for Bar Harbor.

Figure 19: Bar Harbor Peak Month Passenger Traffic, 2007 - 2020
Source: B&A, 2007



Based on our assessment we envision a range of between 27 to 40 cruise calls per peak month. Much of the long-term passenger growth (not cruise call growth) will be a reflection of the cruise vessel passenger capacity. This will be defined by the type of cruise sailing from the key regional homeports over the period. We have estimated an approximately 2.5% annual growth per passenger vessel for Bar Harbor over the study period. However, we envision the overall regional passenger vessel load factor to exceed this factor. The range could be from approximately 2,000- to more than 2,600-passengers per vessel. As we move further out into the projection study period it is more difficult to accurately reflect this outcome due to the number of influencing factors on vessel size and capacity. However, based on our projection model we foresee a minimum of two anchorages/berths required in 2020 to support cruise growth, and perhaps three anchorages/berths should Bar Harbor grow to more than 180,000-throughput passengers per year in the long-term. In either case, the overall utilization rates remain high in the peak season.

Figure 20: Bar Harbor Peak Month Cruise Vessel Calls, 2007 - 2020
Source: B&A, 2007

7.6 *Daily traffic analysis*

Figure 21 shows the Bar Harbor daily passenger traffic comparison from 2000 through 2006 based on annualized cruise passenger traffic. From a passenger volume perspective Wednesday, Friday and Sunday consistently had the highest passenger throughputs and will likely continue to be the busiest cruise days throughout the 15-year study period. This pattern is indicative of a short cruise duration market with an emphasis on 8-day through 10-day sailings.

Figure 21: Bar Harbor Daily Passenger Traffic Comparison, 2000 – 2006
Source: B&A, 2007

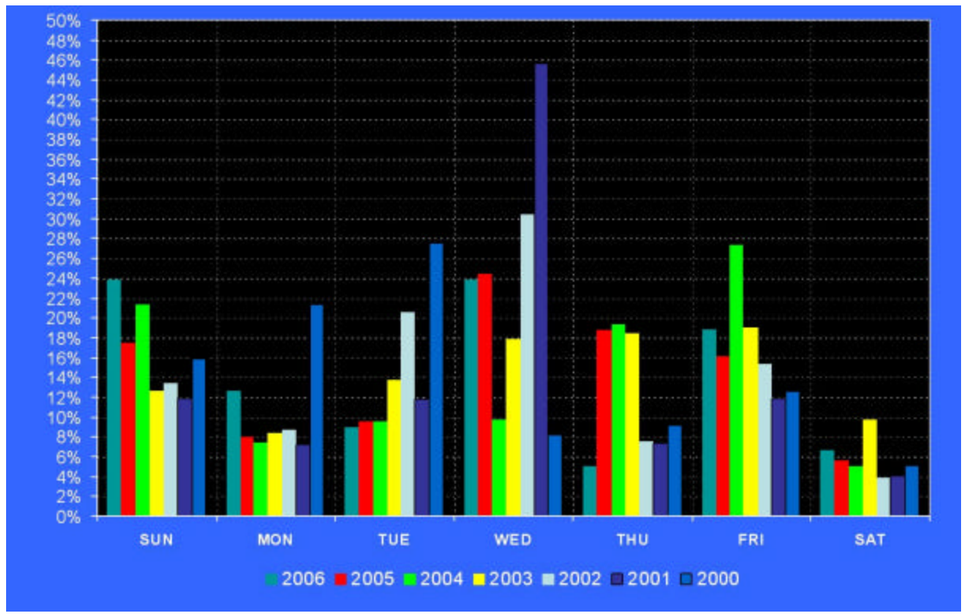
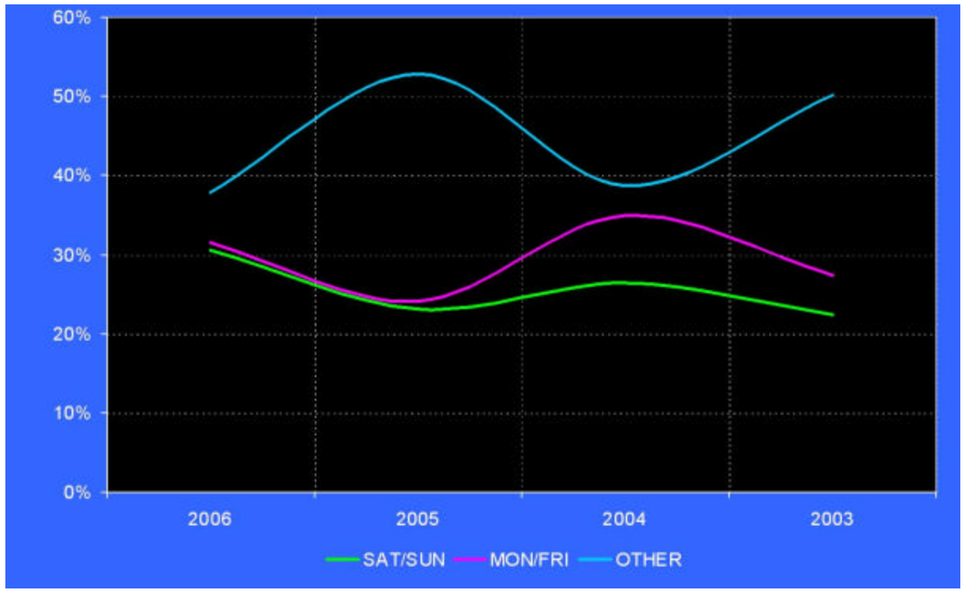


Figure 22 illustrates the relationship between cruise passenger throughputs on the days shown over time. Cruise patterns and homeport operations days have changed over the historical period due to various factors. Overall, Bar Harbor daily traffic is driven by weekend homeporting and cruise duration.

Figure 22: Bar Harbor Traffic Comparison: Sat/Sun; Fri/Mon/Wed; Other, 2000-2006
Source: B&A, 2007



For cruise destinations, the consistency of cruise traffic calling on a year-round basis is a positive attribute. This provides the destination with the ability to manage the cruise facilities through revenue planning, personnel scheduling and other defined areas of operations. If cruise traffic is inconsistent on an annual basis this poses challenges in terms of portioning reserves to maintenance during low cruise traffic periods and places more demands on other aspects of the cruise operation inclusive of manning, maintenance, marketing and others. However, this formula primarily applies to cruise homeport operations. Bar Harbor is a significantly different port-of-call with a distinct seasonality for both cruise and land-based tourism. To a great degree the success of Bar Harbor is very much linked to this identity. Changing cruise patterns that may predominantly utilize Bar Harbor during the peak summer months for land-based tourism may provide a negative impact on the destination overall and may provide for a limited cruise guest satisfaction over time if expansion of upland and tourism infrastructure is not incorporated to meet demand.

Based on the Facilities Demand Analysis the following conclusions have been formulated:

- Future passenger growth is dependent to a great degree on the addition of anchorage/berth/upland infrastructure and local policies to entice and support cruise lines into the Canada & New England region and operations to Bar Harbor. This is a supply led industry both in terms of cruise vessels spurring demand and the need for additional tourism infrastructure in a region to assist with growth;

- Bar Harbor already has the cruise demand for 2 anchorages now. Based on market demand Bar Harbor may require an additional anchorage(s)/berth(s) if it wants to meet the needs of the cruise industry with their Canada & New England future deployments;

- Regional cruise growth and Bar Harbor cruise expansion offer some level of social and economic opportunities. However, Bar Harbor must determine to what extent they wish to support each facet of tourism using the limited infrastructure available within Bar Harbor and its surrounds.

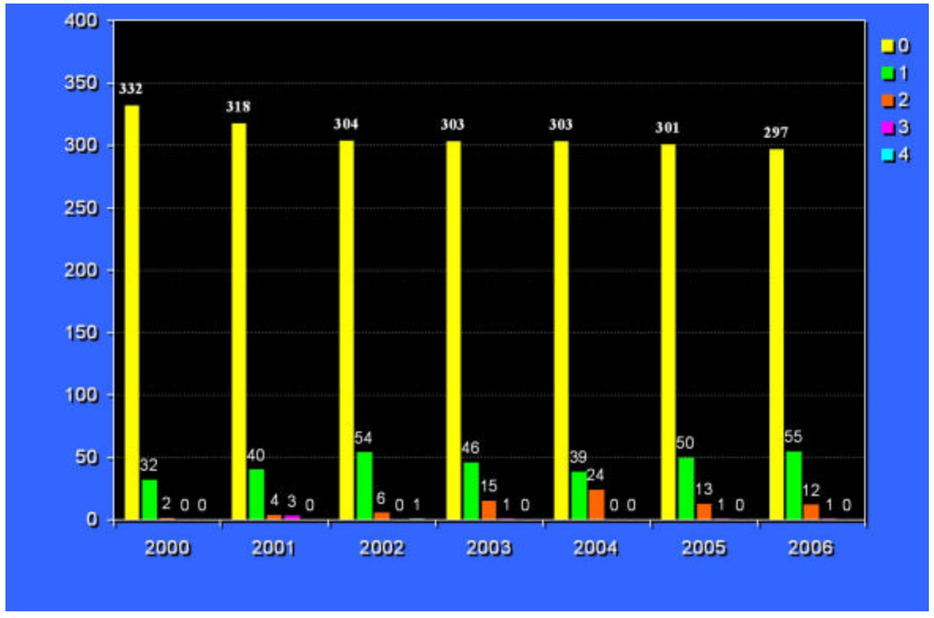
One of the keys to growth for the region and ports is who has the capacity to expand cruise facilities and tourism infrastructure and product offers. Thus, Bar Harbor has an opportunity to capture additional deployments with new cruise infrastructure in place.

7.7 Peak facilities demand

Translating cruise passenger traffic assessment and forecasts into anchorage, berth or facility demand over the projection period is an essential element in the overall evaluation and planning process for Bar Harbor. This process looks to provide the facility need over time and more specifically to focus on the timing of the facilities needed by Bar Harbor to accommodate future traffic demand. Facilities demand forecasting relies on identifying cruise deployment patterns, establishing vessel sizes of the future and forecasting vessel calls.

Figure 23 provides an overview of cruise calls per day per annum from 2000 through 2006. Over the historical period it is evident cruise patterns have remained consistent with even growth over the historical period. Since 2004, when there were 24 days with more than 2 vessels in port, this has been relatively portioned to 55-days with one ship and 12-days with two ships in 2006. This graphic is inclusive of all types of cruise activities to Bar Harbor.

Figure 23: Bar Harbor Cruise Calls Per Day, 2000 - 2006
Source: B&A, 2006



Based on the high day and month projection scenarios under each approach we envision that the peak month berth demand found in Figure 22 illustrates the requirements for Bar Harbor. This exercise provides for the maximum facility demand should Bar Harbor choose to further pursue the overall goals of the projections as illustrated from 2007 through 2020. From a planning perspective this allows for future decision-making processes to envision the potential maximum use and required facilities – whether they are tender, anchorage upland GTA or others. In addition, based on this assessment Bar Harbor can also adjust operations management accordingly to better utilize the facilities in order to ensure a daily traffic balance that may provide the ability to better manage tourism infrastructure.

Based on the peak month berth demand it is likely that today and into the short-term Bar Harbor could support 2 anchorage facilities. Over the mid- to long-term an additional anchorage/berth would be required to support operations if no management structure allowed for the disbursement of vessels off peak days. As illustrated in Figure 24 we have also used the highest most reasonable projection scenario to illustrate peak facility demand.

Figure 24: Bar Harbor Peak Month Facility Demand, 2007 - 2020
Source: B&A, 2007

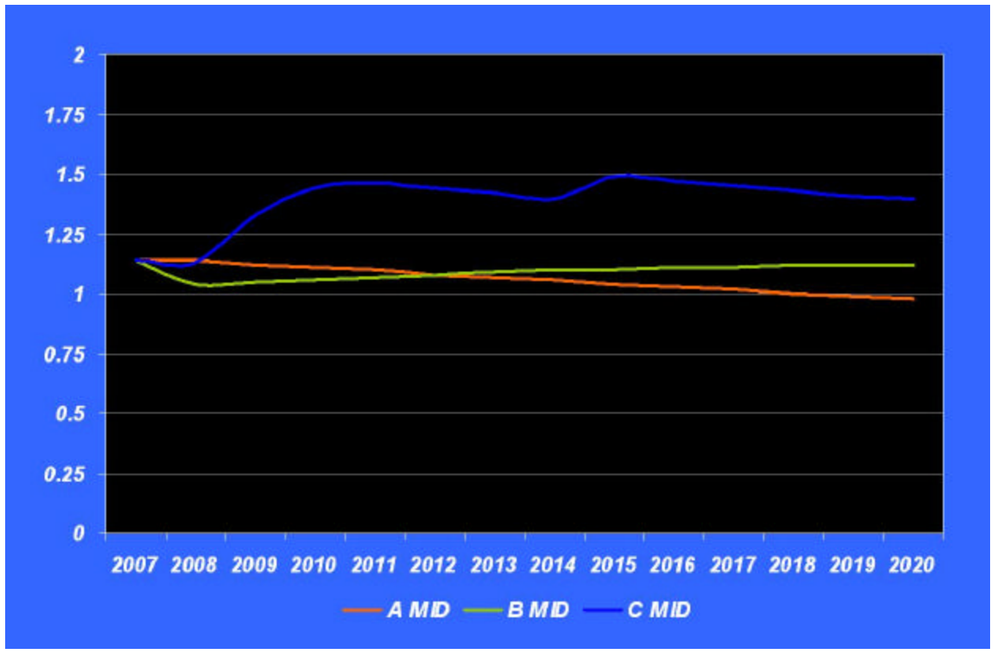
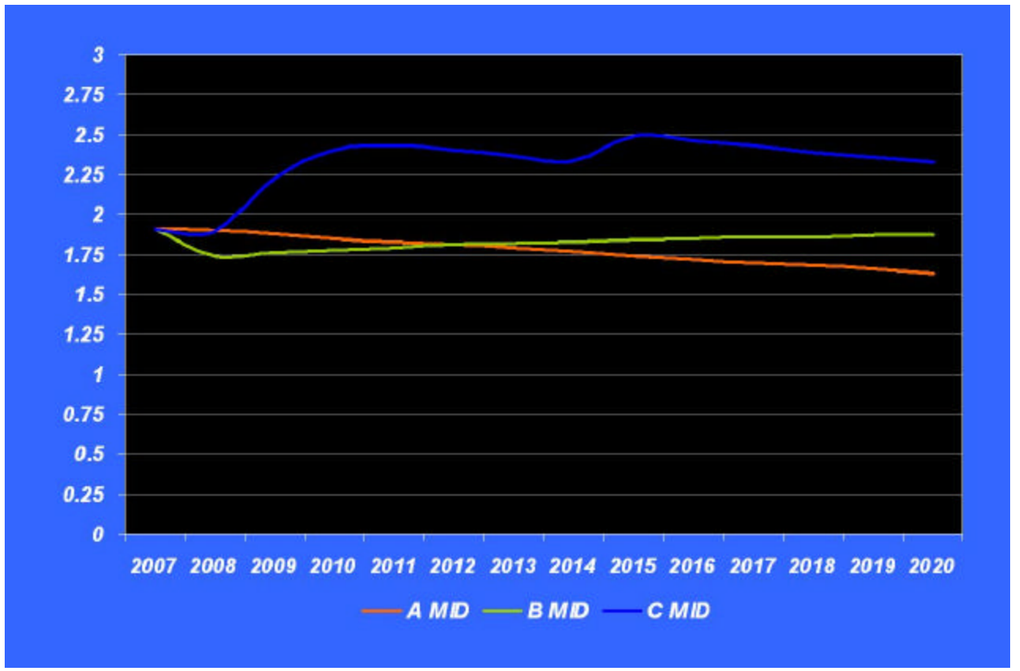


Figure 25: Bar Harbor Peak Day Berth Demand (Wednesday), 2007 - 2020
Source: B&A, 2007



Currently, Bar Harbor uses two anchorage locations based on the size of the present vessel configurations calling in Bar Harbor. A third anchorage is available as required along with a single small ship berth.

Our analysis of peak day activity indicates that based on the Approach C MID scenario a third anchorage/berth may be utilized after 2015 full time as illustrated in Figure 25. However, we would also envision that adequate facility management practices will provide the opportunity for Bar Harbor to utilize its facilities to their maximum efficiency over the study period. Working with cruise line operators on scheduling will be required to prevent peaking difficulties on key days. This likely will be Sunday and Wednesday (being the most prevalent days when congestion at facilities may be an issue) in the peak fall season. This is due to the primary fall foliage period for tourists, and transportation requirements for movement of passengers to and from the cruise hubs in the region.

Facility needs were based on vessel passenger capacities of 1,320 to 1,970 through the study period based on the vessel deployment scenarios presented.

Figure 26 illustrates the need for a primary anchorage/berth position currently through 2008; and the need for two primary anchorage/berth positions from 2009 through 2013; finally, an additional facility could be added in 2014 based on the Approach C MID throughput projection.

Figure 26: Positions vs. Pax. Volumes – C Mid High Projection, 2007 - 2020
Source: B&A, 2007

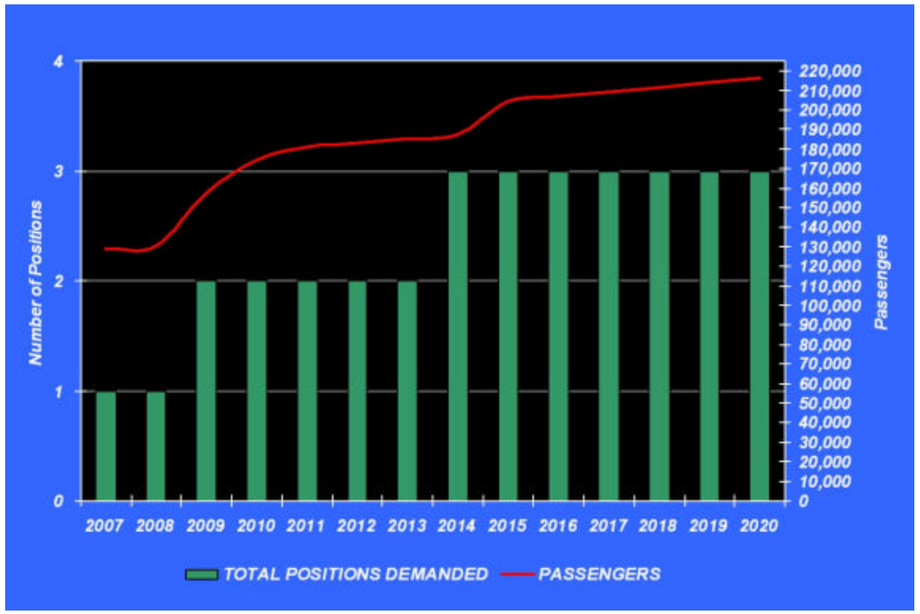


Figure 27: Positions vs. Pax Volumes – B Mid Medium Projection, 2007 - 2020
Source: B&A, 2007

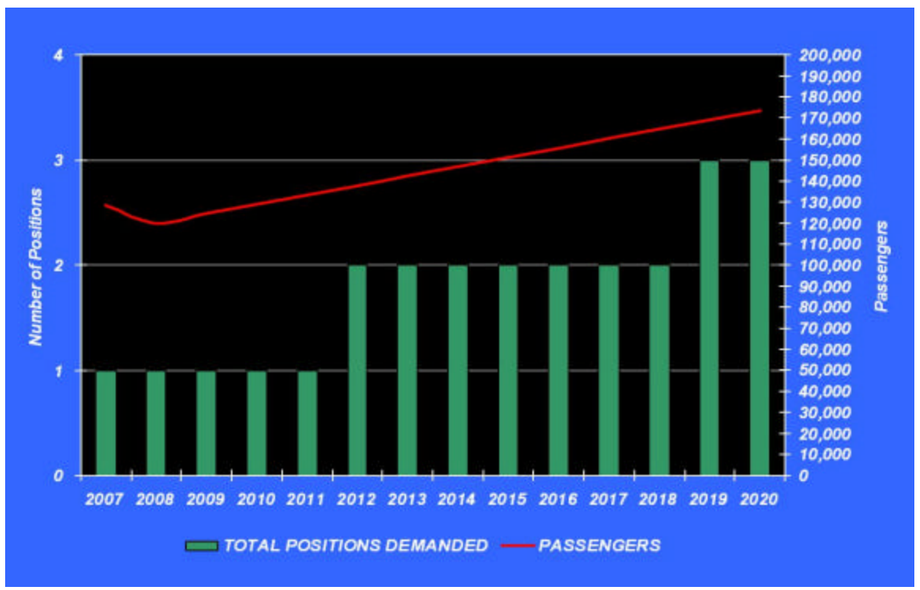


Figure 27 illustrates demand requirements for Approach B MID projection with approximately 128,000-passengers and 84 calls in 2010 and 173,000-passengers and 88 calls in 2020.

Figure 28: Berths vs. Pax. Volumes – A Mid Low Projection, 2007 - 2020
Source: B&A, 2007

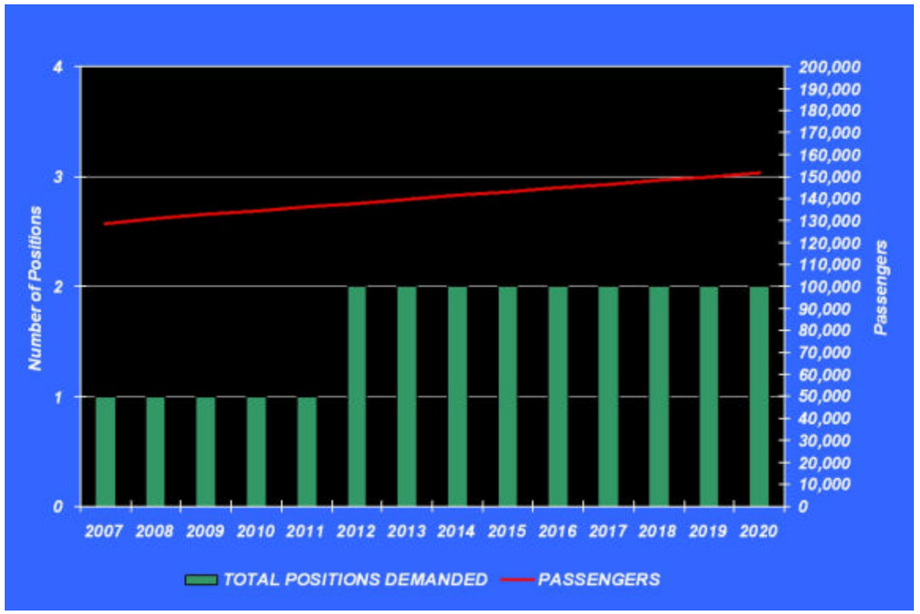


Figure 28 illustrates the facilities position demand requirements for the Approach A MID projection with approximately 134,000-passengers and 87 cruise calls in 2010 and growing to 151,000-passengers and 77 cruise calls in 2020. This approach does not take into consideration the daily peaking factors.

7.8 Facility demand and utilization

To assist in quantifying the number of cruise anchorages/berths demanded to support cruise passenger and vessel projections, a berth utilization assessment based on peak month days was reviewed. Section 7.7 assesses demand based on a number of components, but is mainly concerned with the annualized passenger throughput and vessel calls. The other part of the formula is the anticipation of use based upon not only annualized volumes, but also seasonality, peak day and peak month throughput as illustrated above. Based on the high projection scenarios under Approach C an examination of the effects on facility utilization based on peak month and day demands can be assessed. This process must also be combined with the ability of the facilities to accommodate the future vessel sizes anticipated in the region and specifically for Bar Harbor.

Based on the projection approaches, newbuilding trends and deployment strategies of the cruise industry the development of new anchorage/berth facilities in Bar Harbor to accommodate Super post-Panamax vessels is likely not mandatory within the next 5- to 10-years. However, if an anchorage / berth able to support vessels of more than 130,000-GT and more than 3,000-passengers could be provided to the cruise industry within the next 2 to 3-years, this would provide a platform for additional cruise growth for Bar Harbor. Without the addition of this accommodation, Bar Harbor will find it difficult to grow its cruise business to the extent of overall development in the Canada & New England cruise region.

The introduction of a Super post-Panamax vessel automatically triggers the need for a new berth beyond that available in Bar Harbor due to the marine and upland infrastructure support requirements associated with this type of vessel. In addition, it would be very likely that a separate facility outside of the downtown area would be required by the Town of Bar Harbor and cruise line to operate effectively.

Chapter 8 Cruise Related Capital Costs and Revenues

8.1 Section summary

Within this section a series of budgets for the Town of Bar Harbor cruise operations as presented based on the most likely future cruise vessel growth scenarios. Additionally, capital costs and program are included for the Nova Scotia Ferry site in terms of a potential future pier development opportunity, if deemed viable by the Town of Bar Harbor at a later time. We do not believe presently that a pier project would be of benefit to the Town of Bar Harbor. An exploration of the potential tender options associated with the Nova Scotia Ferry site was reviewed as part of Chapters 4 and 5. To construct and operate a tendering facility from this site would reduce the overall cost of a project to move cruise vessels from the downtown area. However, the site does provide additional challenges in terms of movement of passengers to the core downtown area via shuttle bus or sidewalk; Ground Transportation Area zone that does not conflict with existing ferry operations; and the potential retailing and other economic impacts on the downtown community. Thus, we do not believe a change to tendering operations at the Nova Scotia Ferry Terminal site at this point is feasible.

8.2 Cruise related revenue models

Based on the current fee structure for the Town of Bar Harbor cruise operations, we have prepared three separate simple revenue models using the most likely throughput projections through 2020. Although the current fee structure is known, we have made certain assumptions on the expense side of the equation as reflected in each of the attached spreadsheets.

For the fees we have used the current structure as presented by the Town of Bar Harbor. Additionally, we have presented alternative scenarios encompassing a recommended Port Development Fee.[17] We have calculated a 3% annual increase in wharfage; a 3% increase in tour coach and security fees; and a 10% annual increase in the Port Development Fee, which is used to pool funds for major cruise-related Port infrastructure.

On the expense side we have determined over time, based on the throughput and current operations of the Town of Bar Harbor that one ½ time person is likely required over the term of the study. We have also assumed 3% annual increase for all expenses.

Table 8: Revenue Model Summary, 2007 – 2020
Source: B&A 2007

Projections	2010	2015	2020
A MID (Low)			
Passengers	134,472	143,084	151,696
Cruise Calls	87	82	77
Gross Revenues	$578,069	$770,245	$1,062,169
Net Revenues	$527,984	$712,182	$994,858
Port Development Fund Total			$4,002,280
B MID (Medium)			
Passengers	128,907	151,250	173,592
Cruise Calls	84	87	88
Gross Revenues	$554,147	$814,202	$1,215,484
Net Revenues	$504,062	$756,139	$1,148,174
Port Development Fund Total			$4,244,859
C MID (High)			
Passengers	174,208	204,600	216,504
Cruise Calls	113	118	110
Gross Revenues	$748,886	$1,101,396	$1,515,953
Net Revenues	$698,801	$1,043,333	$1,448,643
Port Development Fund Total			$5,440,595

[17] A Port Development Fee can also be done via lump sum by project in conjunction with the cruise industry as is currently the practice.

Overall, gross revenues range from $994,858 in 2020 under the A MID projection (LOW) to $1,515,593 in 2020 under the C MID range (HIGH). Table 8 illustrates the overall range of gross and net revenues based on passenger throughput over time. Overall, direct cruise revenues to the Town of Bar Harbor are minimal based on the current fee structure; and the use of private tender facilities that do not allow for additional passenger fee revenues. A Port Development Fee or Charge increased over time produces in the range of $4.0 to $5.4 million over the period allowing for an implementation in 2007.

Based on community and Town Council feedback we recommend the Town of Bar Harbor explore the development of a Port Development Fee or Charge to the overall fee structure for the Town of Bar Harbor. This provides for a additional revenues to the Town of Bar Harbor, but more importantly a pool of funds that can be created and allocated to those infrastructure projects affected by cruise tourism. A more in depth analysis must be conducted by the Town of Bar Harbor to itemize those projects that are candidates for this type of fund. This process should be done by the Town in conjunction with local stakeholders, State of Maine and the cruise line industry. We do not imply through the recommendation of this additional development fund that current fee levels are not appropriate. Instead, we are recommending the creation of a funding mechanism for future cruise infrastructure projects that would, if not earmarked early in the process, likely either cause large financial impacts to the Town or affect the cruise line industry negatively over time in terms of both port charges and passenger satisfaction. Currently the Town of Bar Harbor, in conjunction with *CruiseMaine* has been allocated monies by the cruise line industry for projects within the community. This lump sum (Charge) approach can also be continued as deemed appropriate by the Town in conjunction with the cruise line industry.

Complete financial spreadsheets for models A MID, B MID and C MID are found below.

Bermello, Ajamil & Partners

Town of Bar Harbor
FIGURE 29: A MID PROJECTIONS FINANCIAL MODEL
4/15/2007

	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
OPERATING REVENUES															
Wharfage (Dock)	$19,477	$23,842	$25,021	$26,111	$27,243	$28,420	$29,642	$30,913	$32,233	$33,605	$35,029	$36,509	$38,047	$39,643	$41,302
Wharfage (Anchorage)	$90,539	$99,314	$100,668	$101,428	$102,137	$102,795	$103,398	$103,943	$104,428	$104,850	$105,206	$105,492	$105,706	$105,844	$105,903
Tour Bus Fee	$166,534	$203,855	$213,941	$223,256	$232,937	$242,998	$253,453	$264,317	$275,604	$287,331	$299,513	$312,168	$325,313	$338,965	$353,143
Security Fee	$32,594	$35,753	$36,241	$36,514	$36,769	$37,006	$37,223	$37,419	$37,594	$37,746	$37,874	$37,977	$38,054	$38,104	$38,125
Port Development Fees		$128,596	$144,130	$160,627	$178,983	$199,403	$222,117	$247,380	$275,474	$306,713	$341,446	$380,058	$422,978	$470,681	$523,695
Total Operating Revenues	$309,144	$491,359	$520,001	$547,935	$578,069	$610,621	$645,833	$683,972	$725,333	$770,245	$819,068	$872,205	$930,098	$993,238	$1,062,169
OPERATING EXPENSES (3% annual increase)															
Personnel (1/2 person position @$60,000 annual)	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317	$41,527	$42,773	$44,056	$45,378
Supplies and Services	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478	$3,582	$3,690	$3,800	$3,914	$4,032	$4,153	$4,277	$4,406	$4,538
Insurance	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593	$11,941	$12,299	$12,668	$13,048	$13,439	$13,842	$14,258	$14,685	$15,126
Utilities	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344	$1,384	$1,426	$1,469	$1,513
Other	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672	$692	$713	$734	$756
Total Operating Expenses	$44,500	$45,835	$47,210	$48,626	$50,085	$51,588	$53,135	$54,729	$56,371	$58,062	$59,804	$61,598	$63,446	$65,350	$67,310
NET REVENUES	$264,644	$445,524	$472,791	$499,309	$527,984	$559,033	$592,697	$629,242	$668,962	$712,182	$759,264	$810,606	$866,651	$927,888	$994,858
Repair & Replacement Fund Balance	$264,644	$289,591	$307,314	$324,551	$343,189	$363,372	$385,253	$409,007	$434,825	$462,919	$493,522	$526,894	$563,323	$603,127	$646,658
Port Revenue Fund Balance		$155,934	$165,477	$174,758	$184,794	$195,662	$207,444	$220,235	$234,137	$249,264	$265,742	$283,712	$303,328	$324,761	$348,200
FACTORS															
Number of Passengers	108,205	128,596	131,028	132,750	134,472	136,195	137,917	139,639	141,362	143,084	144,806	146,529	148,251	149,973	151,696
Passengers Tendered	106,582	126,667	129,062	130,759	132,455	134,152	135,848	137,545	139,241	140,938	142,634	144,331	146,027	147,724	149,420
Passengers Docked	1,623	1,929	1,965	1,991	2,017	2,043	2,069	2,095	2,120	2,146	2,172	2,198	2,224	2,250	2,275
Total Vessels	82	90	89	88	87	86	85	84	83	82	81	80	79	78	77
Vessels Docked	22	26	26	27	27	27	28	28	28	29	29	29	30	30	30
Vessels Anchored	60	64	63	62	60	59	58	56	55	54	52	51	49	48	47
Number of coaches	1,110	1,319	1,344	1,362	1,380	1,397	1,415	1,433	1,450	1,468	1,486	1,503	1,521	1,539	1,556
WHARFAGE (3% annual increase)															
Docked	$900.00	$927.00	$954.81	$983.45	$1,012.96	$1,043.35	$1,074.65	$1,106.89	$1,140.09	$1,174.30	$1,209.52	$1,245.81	$1,283.18	$1,321.68	$1,361.33
Tender	$1,500.00	$1,545.00	$1,591.35	$1,639.09	$1,688.26	$1,738.91	$1,791.08	$1,844.81	$1,900.16	$1,957.16	$2,015.87	$2,076.35	$2,138.64	$2,202.80	$2,268.88
OTHER FEES (3% annual increase)															
Tour Bus Fee	$150.00	$154.50	$159.14	$163.91	$168.83	$173.89	$179.11	$184.48	$190.02	$195.72	$201.59	$207.64	$213.86	$220.28	$226.89
Security Fee (12 hours @$45.00)	$540.00	$556.20	$572.89	$590.07	$607.77	$626.01	$644.79	$664.13	$684.06	$704.58	$725.71	$747.49	$769.91	$793.01	$816.80
Port Development Fee (10% annual increase)		$1.00	$1.10	$1.21	$1.33	$1.46	$1.61	$1.77	$1.95	$2.14	$2.36	$2.59	$2.85	$3.14	$3.45

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Town of Bar Harbor
FIGURE 30: B MID PROJECTIONS FINANCIAL MODEL
4/15/2007

	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
OPERATING REVENUES															
Wharfage (Dock)	$19,477	$23,842	$22,910	$24,476	$26,116	$27,831	$29,627	$31,505	$33,469	$35,522	$37,669	$39,912	$42,257	$44,705	$47,263
Wharfage (Anchorage)	$90,539	$99,314	$92,173	$95,078	$97,911	$100,667	$103,343	$105,933	$108,432	$110,834	$113,133	$115,325	$117,403	$119,360	$121,190
Tour Bus Fee	$166,534	$203,855	$195,887	$209,278	$223,297	$237,969	$253,319	$269,377	$286,170	$303,729	$322,083	$341,265	$361,308	$382,247	$404,117
Security Fee	$32,594	$35,753	$33,182	$34,228	$35,248	$36,240	$37,204	$38,136	$39,035	$39,900	$40,728	$41,517	$42,265	$42,969	$43,628
Port Development Fees		$128,596	$131,968	$150,571	$171,576	$195,276	$222,000	$252,116	$286,035	$324,217	$367,175	$415,483	$469,780	$530,782	$599,286
Total Operating Revenues	$309,144	$491,359	$476,120	$513,631	$554,147	$597,983	$645,492	$697,066	$753,141	$814,202	$880,788	$953,502	$1,033,012	$1,120,063	$1,215,484
OPERATING EXPENSES (3% annual increase)															
Personnel (1/2 person position @$60,000 annual)	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317	$41,527	$42,773	$44,056	$45,378
Supplies and Services	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478	$3,582	$3,690	$3,800	$3,914	$4,032	$4,153	$4,277	$4,406	$4,538
Insurance	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593	$11,941	$12,299	$12,668	$13,048	$13,439	$13,842	$14,258	$14,685	$15,126
Utilities	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344	$1,384	$1,426	$1,469	$1,513
Other	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672	$692	$713	$734	$756
Total Operating Expenses	$44,500	$45,835	$47,210	$48,626	$50,085	$51,588	$53,135	$54,729	$56,371	$58,062	$59,804	$61,598	$63,446	$65,350	$67,310
NET REVENUES	$264,644	$445,524	$428,910	$465,005	$504,062	$546,396	$592,357	$642,337	$696,770	$756,139	$820,984	$891,904	$969,566	$1,054,713	$1,148,174
Repair & Replacement Fund Balance	$264,644	$289,591	$278,791	$302,253	$327,640	$355,157	$385,032	$417,519	$452,900	$491,490	$533,640	$579,737	$630,218	$685,564	$746,313
Port Revenue Fund Balance		$155,934	$150,118	$162,752	$176,422	$191,238	$207,325	$224,818	$243,869	$264,649	$287,344	$312,166	$339,348	$369,150	$401,861
FACTORS															
Number of Passengers	108,205	128,596	119,971	124,439	128,907	133,376	137,844	142,313	146,781	151,250	155,718	160,187	164,655	169,123	173,592
Passengers Tendered	106,582	126,667	118,171	122,572	126,974	131,375	135,777	140,178	144,579	148,981	153,382	157,784	162,185	166,587	170,988
Passengers Docked	1,623	1,929	1,800	1,867	1,934	2,001	2,068	2,135	2,202	2,269	2,336	2,403	2,470	2,537	2,604
Total Vessels	82	90	82	83	84	85	85	86	86	87	87	88	88	88	88
Vessels Docked	22	26	24	25	26	27	28	28	29	30	31	32	33	34	35
Vessels Anchored	60	64	58	58	58	58	58	57	57	57	56	56	55	54	53
Number of coaches	1,110	1,319	1,231	1,277	1,323	1,368	1,414	1,460	1,506	1,552	1,598	1,644	1,689	1,735	1,781
WHARFAGE (3% annual increase)															
Docked	$900.00	$927.00	$954.81	$983.45	$1,012.96	$1,043.35	$1,074.65	$1,106.89	$1,140.09	$1,174.30	$1,209.52	$1,245.81	$1,283.18	$1,321.68	$1,361.33
Tender	$1,500.00	$1,545.00	$1,591.35	$1,639.09	$1,688.26	$1,738.91	$1,791.08	$1,844.81	$1,900.16	$1,957.16	$2,015.87	$2,076.35	$2,138.64	$2,202.80	$2,268.88
OTHER FEES (3% annual increase)															
Tour Bus Fee	$150.00	$154.50	$159.14	$163.91	$168.83	$173.89	$179.11	$184.48	$190.02	$195.72	$201.59	$207.64	$213.86	$220.28	$226.89
Security Fee (12 hours @$45.00)	$540.00	$556.20	$572.89	$590.07	$607.77	$626.01	$644.79	$664.13	$684.06	$704.58	$725.71	$747.49	$769.91	$793.01	$816.80
Port Development Fee (10% annual increase)		$1.00	$1.10	$1.21	$1.33	$1.46	$1.61	$1.77	$1.95	$2.14	$2.36	$2.59	$2.85	$3.14	$3.45

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Town of Bar Harbor
FIGURE 31: C MID PROJECTIONS FINANCIAL MODEL
4/15/2007

	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
OPERATING REVENUES															
Wharfage (Dock)	$19,477	$23,842	$24,880	$31,026	$35,293	$37,754	$39,357	$41,028	$42,770	$48,052	$50,051	$52,137	$54,312	$56,580	$58,947
Wharfage (Anchorage)	$90,539	$99,314	$100,102	$120,523	$132,318	$136,558	$137,282	$137,953	$138,566	$149,928	$150,322	$150,647	$150,896	$151,065	$151,148
Tour Bus Fee	$166,534	$203,855	$212,737	$265,286	$301,768	$322,810	$336,512	$350,800	$365,701	$410,863	$427,957	$445,787	$464,384	$483,781	$504,015
Security Fee	$32,594	$35,753	$36,037	$43,388	$47,635	$49,161	$49,422	$49,663	$49,884	$53,974	$54,116	$54,233	$54,322	$54,383	$54,413
Port Development Fees		$128,596	$143,319	$190,867	$231,871	$264,896	$294,907	$328,321	$365,528	$438,578	$487,872	$542,736	$603,801	$671,771	$747,430
Total Operating Revenues	$309,144	$491,359	$517,074	$651,091	$748,886	$811,179	$857,479	$907,765	$962,450	$1,101,396	$1,170,320	$1,245,539	$1,327,714	$1,417,580	$1,515,953
OPERATING EXPENSES (3% annual increase)															
Personnel (1/2 person position @$60,000 annual)	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317	$41,527	$42,773	$44,056	$45,378
Supplies and Services	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478	$3,582	$3,690	$3,800	$3,914	$4,032	$4,153	$4,277	$4,406	$4,538
Insurance	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593	$11,941	$12,299	$12,668	$13,048	$13,439	$13,842	$14,258	$14,685	$15,126
Utilities	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344	$1,384	$1,426	$1,469	$1,513
Other	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672	$692	$713	$734	$756
Total Operating Expenses	$44,500	$45,835	$47,210	$48,626	$50,085	$51,588	$53,135	$54,729	$56,371	$58,062	$59,804	$61,598	$63,446	$65,350	$67,310
NET REVENUES	$264,644	$445,524	$469,864	$602,464	$698,801	$759,592	$804,344	$853,035	$906,079	$1,043,333	$1,110,515	$1,183,940	$1,264,268	$1,352,230	$1,448,643
Repair & Replacement Fund Balance	$264,644	$289,591	$305,412	$391,602	$454,220	$493,735	$522,824	$554,473	$588,951	$678,167	$721,835	$769,561	$821,774	$878,950	$941,618
Port Revenue Fund Balance		$155,934	$164,452	$210,862	$244,580	$265,857	$281,520	$298,562	$317,128	$365,167	$388,680	$414,379	$442,494	$473,281	$507,025
FACTORS															
Number of Passengers	108,205	128,596	130,290	157,742	174,208	180,928	183,114	185,329	187,574	204,600	206,906	209,248	211,628	214,047	216,504
Passengers Tendered	106,582	126,667	128,336	155,376	171,595	178,214	180,367	182,549	184,760	201,531	203,802	206,109	208,454	210,836	213,256
Passengers Docked	1,623	1,929	1,954	2,366	2,613	2,714	2,747	2,780	2,814	3,069	3,104	3,139	3,174	3,211	3,248
Total Vessels	82	90	89	105	113	115	113	112	110	118	116	114	113	111	110
Vessels Docked	22	26	26	32	35	36	37	37	38	41	41	42	42	43	43
Vessels Anchored	60	64	63	74	78	79	77	75	73	77	75	73	71	69	67
Number of coaches	1,110	1,319	1,337	1,618	1,787	1,856	1,879	1,902	1,925	2,099	2,123	2,147	2,171	2,196	2,221
WHARFAGE (3% annual increase)															
Docked	$900.00	$927.00	$954.81	$983.45	$1,012.96	$1,043.35	$1,074.65	$1,106.89	$1,140.09	$1,174.30	$1,209.52	$1,245.81	$1,283.18	$1,321.68	$1,361.33
Tender	$1,500.00	$1,545.00	$1,591.35	$1,639.09	$1,688.26	$1,738.91	$1,791.08	$1,844.81	$1,900.16	$1,957.16	$2,015.87	$2,076.35	$2,138.64	$2,202.80	$2,268.88
OTHER FEES (3% annual increase)															
Tour Bus Fee	$150.00	$154.50	$159.14	$163.91	$168.83	$173.89	$179.11	$184.48	$190.02	$195.72	$201.59	$207.64	$213.86	$220.28	$226.89
Security Fee (12 hours @$45.00)	$540.00	$556.20	$572.89	$590.07	$607.77	$626.01	$644.79	$664.13	$684.06	$704.58	$725.71	$747.49	$769.91	$793.01	$816.80
Port Development Fee (10% annual increase)		$1.00	$1.10	$1.21	$1.33	$1.46	$1.61	$1.77	$1.95	$2.14	$2.36	$2.59	$2.85	$3.14	$3.45

8.3 Nova Scotia pier overview and capital cost estimates

As a part of this planning study, we were tasked by the Maine DOT with looking at alternatives for the creation of a pier structure to accommodate large cruise ships within the proximity of Bar Harbor should future cruise projections reflect the need or desire to do so. Based on our assessment the only advantageous area for the development of a new cruise pier facility is the Nova Scotia Ferry Terminal area. This was previously recognized as a potential site for future development in an earlier study.[18]

Development of any pier structure is a costly endeavor. In this particular case there is a limited return on investment due to the overall direct revenues it would potentially produce over a 20 to 30-year period for cruise operations. Further, development of a cruise pier at the Nova Scotia Ferry Terminal involves additional infrastructure costs, specifically with the development of shuttle operations to move passengers in/out of the Town of Bar Harbor, traffic signalization, and sidewalk, signage and other roadway improvements at the entrance to the terminal facility. Resulting economic impacts must be considered in determining the overall positive impacts in the community.

Generally, to design, finance and construct a pier of this nature is at least an 18-month to 2-year project. Based on our cruise projection models we do see a pattern of ships bypassing Bar Harbor in some small numbers presently due to the lack of cruise pier facilities. However, we cannot currently determine the overall future impacts on the growth of Bar Harbor if a pier is not included. We do believe this is minimal overall. Further analysis must be considered in this regard over time.

Based on the design vessel for Bar Harbor we have created a cost estimate to design/develop and construct a new pier at the Nova Scotia Terminal to accommodate large cruise vessels. The pier extension is intended to serve a 1,132' LOA cruise ship while allowing for ferry operations to the north, in the existing pier, pontoon and ramp arrangements.

Construction & Development

Total anticipated construction and development costs sum to $29,000,000.00. Insurance, bonding and other requirements associated with general conditions, allowances, contingencies, local contracting, permitting, security, marine construction conditions and other costs are not included. The estimate is for hard construction costs only.

Marine Construction Cost

With regard to dredging requirements, in order to accommodate a cruise ship of 32-feet of draft it would be necessary to dredge to -35' MLW (Mean Low Water) +/- 1' (in accordance with the Army Corps of Engineers standards) around the Nova Scotia Pier area. The dredge area would cover approximately 16,000 sq **ft**. It would be necessary to dredge a channel from the main channel to the pier area**.** Inclusive of initial work and maintenance, **marine dredge costs are estimated at $4,000,000.00.** It is important to note that this estimate assumes that there are no environmental issues with the type and quantity of dredge material, and the ability to dispose of the dredge material in an upland location within 3 miles of the site is without constraints.

The dredging process requires a mechanical clam shell dredge functioning from a barge, with the aid of a barge collector for the dredge material. The dredge material is then transferred from the collector barge to trucks, whereby it is trucked from a nearby dock, or berth, to the upland location where it is disposed of.

Elevated Pier

An elevated pier structure would require the construction of a cast-in-place, or pre-cast concrete form, from the north end of the existing pier. The pier extension is estimated to be 850' long by 50' wide, by 8" thick, composed of reinforced concrete construction. On the north end, a 25' long by 6' wide open web fiberglass catwalk connects the pier to a mooring bollard approximately 15' by 15'. The entire structure will be built on pre-cast concrete piles, driven into the bedrock, with cast-in-place concrete piles and cast-in-place beams. **The construction of the elevated pier is estimated at $25,000,000.00.** Construction costs are inclusive of lighting, ships fenders, bollards (150- to 250-ton) on the pier, one high capacity bollard, catwalk to mooring bollard, and mooring bollard.

Other Considerations

There are a number of caveats to the above estimates that must to be considered when approaching the expansion of the Nova Scotia Pier. These are categorized as Upland, Contracting, and Geotechnical considerations.

[18] The study was conducted by DeLuca-Hoffman Associates, Inc. in 1999.

Uplands Considerations

- A cruise ship of 2,000-passengers or more will require additional processing for Customs and Border Protection (CBP) functions, even if the functions are conducted in the vessel and the majority of the passengers are port-of-call visitors. This matter requires review and approval by the CBP, but the intent is to avoid the construction of a terminal facility. Small improvements to the existing gate building should suffice;
- A ground transportation staging area is needed. The area needs to be designed to receive cruise passengers, board them on coaches and cabs and other forms of ground transportation providing excursions to the passengers. The area needs to be capable of marshalling 20 coaches and 20 cabs, plus 3 to 5 shuttles for those passengers that want to get to town quickly, or can't walk;
- Sidewalk improvements from the pier to the center of town are needed. A good deal of walkers will use the sidewalk to get from the pier to the different areas of interest in town;
- Traffic improvements to the existing roads, traffic signals, way finding signs and other traffic control devices are needed along Eden Street and West Street in order to increase the safe travel of pedestrians and the added volume of vehicles; and,
- None of these items have been quantified and no estimated construction costs are included in the estimate listed above. The recommended traffic study may also consider the infrastructure improvements necessary to accommodate a larger influx of passengers through the Nova Scotia Terminal, and the subsequent effects of shifting tour/excursion operations out of the Town Pier vicinity.

Contracting Considerations

- Heavy marine construction is of limited availability worldwide. The timing for contracting this work;
- Cost of construction materials is escalating and the estimate provided is based on November 2006 prices. Cost escalations need to be anticipated given CPI; and,
- Availability of construction materials needs to be considered. At present concrete and re-bar are available, but the price has risen because of high demand worldwide.

Geotechnical Considerations

- A subsurface and soils report of the geotechnical conditions of the area where driven piles are intended for installation needs to be prepared by a qualified professional;
- Costs estimated for this project are based on driving pre-cast concrete piles. Piles are to be driven into bedrock of sufficient characteristics to withstand lateral, gravity and overturning forces applied to the pier; and,
- Depth and condition of the bedrock needs to be determined to design piles of length and strength to withstand the design loads.

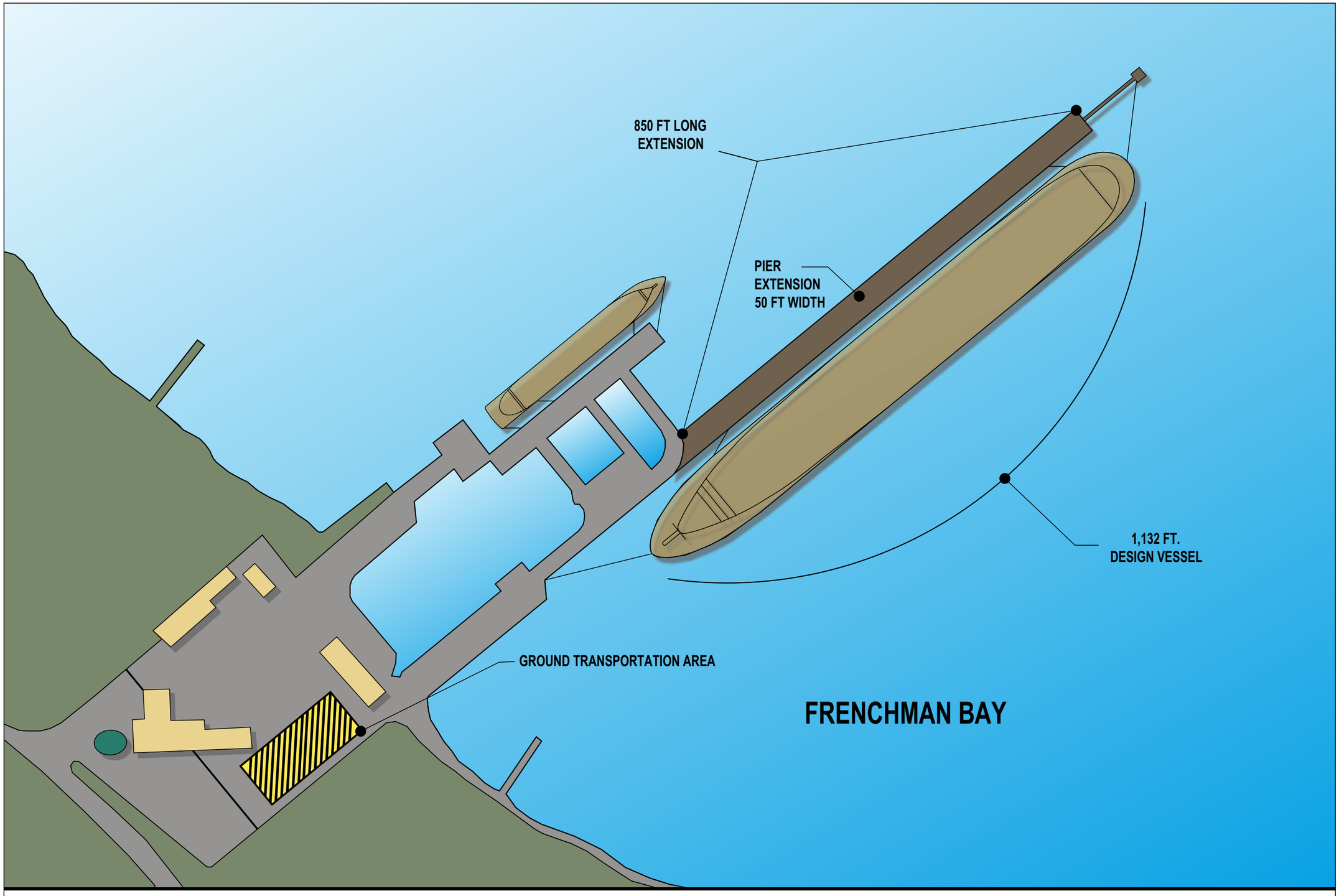

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FIGURE 32: NOVA SCOTIA PIER FACILITY EXPANSION
BAR HARBOR, MAINE

GRAPHIC SCALE
0 50 100 150 200 250 FT.

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Chapter 9 Cruise Vessel Growth Trends

9.1 Section summary

Within this chapter cruise vessel growth trends and the relevant physical requirements of cruise facilities to meet the needs and expectations of the cruise vessel, operator and passenger are presented. This chapter specifically illustrates the requirements of the industry relevant to the construction and deployment of cruise vessels into the worldwide cruise market and Canada & New England in general.

- In February 2006 Royal Caribbean International announced an order for the next generation of cruise vessel – Project Genesis - for delivery in fall 2009. As of September 2006 Norwegian Cruise Line (NCL) contracted with Aker Yards to build two new 150,000-GT, 325-meter LOA cruise vessels capable of accommodating more than 6,400-passengers and crew. The vessels are scheduled for delivery in 2009 and 2010.

- Four small ships have also been ordered in 2006 for the first time in more than five years – since the advent of American Classic Voyages. Pearl Seas Cruises have ordered two ships being built at Irving Shipbuilding in Atlantic Canada. These vessels ranging from 166 to 214-passengers are tentatively scheduled to be deployed along the Eastern Seaboard. For Bar Harbor this could provide additional small ship deployments for Canada & New England.

- The evolution of the cruise vessel has been one of the principal mechanisms propelling industry growth. Over the past five years, the newest and most popular generation of vessels continues to have greater volumes and lengths to accommodate the area needed for large scale outside cabin development. These vessels range in length from 965 – 1,200 feet and have lower berth passenger complements of between 1,950 and 3,600.

- For Bar Harbor, the net result of the cruise vessel development trends is that current and future anchorage, new pier facilities, tendering facilities and uplands areas will need to be able to accommodate these large cruise vessels for the destination to remain competitive in the regional marketplace and be able to fully accommodate the future generation cruise vessels' service requirements. This will include the ability to offer industry operators facilities and venues capable of accommodating a passenger complement upwards of 3,000 – 6,000 persons per vessel.

- Selection of a model design vessel(s) dictates a programmatic response for Bar Harbor, one that will allow the destination to meet industry needs, maintain competitiveness in the region, and plan port-of-call operations as deemed viable and within best practices policies established by the Town of Bar Harbor in order to be a marquee cruise tourism destination.

9.2 Cruise vessel newbuild program

Cruise lines have been highly successful in introducing new vessel inventory and developing onboard products that generated sustained interest in cruising. Lines continually work to improve the quality and quantity of on-board experiences with more diverse food and beverage venues, entertainment and deck activities, meeting and conference facilities, and recreation areas.

Amongst the largest of their efforts is the discarding of smaller vessels and older capacity, and the creation of larger and more lavish vessels furnished with veranda-style outside cabins, grand central atriums, health spas, and other amenities found in the best land-based resorts became the norm in the mid-1990s. This trend has continued as cruise line brands introduce innovative products and services on the newest vessels to further differentiate themselves from the competition and generate renewed public interest in cruising. Consumers generally meet each new vessel launch with enthusiasm, and ultimately, increased passenger bookings. Canada & New England is in a unique position to benefit from the deployment of newbuilds into the major Northeast market as well as provide a cruise sector for the placement of secondary-tier vessels of more than 5-years old that provide added capacity to the region without taxing cruise line deployments.

Review of future vessel deliveries remains the primary tool used to project future industry passenger growth. Responding to cruise passenger demand, cruise lines continue to order new vessels, although at a more restrained pace than observed at the peak of vessel orders in the late 1990s and early 2000's. As of October 2006, 29 new cruise vessels with a total berth capacity of 88,742 are scheduled for delivery over the next five years. For comparison purposes, in December 2002 the forward cruise vessel order book contained 26 vessels with a berth capacity of 56,428. This is an increase of 36% in

terms of berth capacity over a 4-year timeframe, with each new vessel currently on order carrying an additional 846 berths.[19]

In February 2006 Royal Caribbean International announced an order for the next generation of cruise vessel – Project Genesis - for delivery in fall 2009. It is approximately 43% larger than their current largest vessel delivered in spring 2006 – *Freedom of the Seas* - at 220,000 GT. In addition, as of September 2006 NCL contracted with Aker Yards to build two new 150,000-GT, 325-meter LOA cruise vessels capable of accommodating more than 6,400-passengers and crew. The vessels are scheduled for delivery in 2009 and 2010. A third sister vessel in the series is on option for delivery in 2011. The contract is subject to approval by Star Cruises shareholders. However, this move provides Star/NCL with the new large vessels required to fully develop the NCL fleet into a competitive North American brand, while also allowing for the transfer or deployment of older NCL vessels into the Star fleet.

Table 9: Cruise Vessels on Order Worldwide, October 2006
Source: www.cruisecommunity.com and B&A, 2007

Cruise Operator	Vessel Name	Gross Tonnage	Lower Berth Capacity	Cost (US$ Millions)
2006				
NCL	*Norwegian Pearl*	93,000	2,384	$500
2007				
AIDA Cruises	*AIDAdiva*	68,500	2,030	$390
Carnival Cruise Line	*Carnival Freedom*	110,000	2,974	$500
Costa Cruises	*Costa Serena*	112,000	3,004	$627
Cunard Line	*Queen Victoria*	90,000	2,014	$468
MSC	*MSC Orchestra*	90,000	2,568	$630
Princess Cruises	*Emerald Princess*	116,000	3,100	$525
NCL	*Norwegian Gem*	93,000	2,384	$500
RCI	*Liberty of the Seas*	158,000	3,643	$750

Table 9: Continued
Source: www.cruisecommunity.com and B&A, 2007

2008				
AIDA Cruises	*Unnamed*	68,500	2,030	$378
Carnival Cruise Line	*Carnival Splendor*	112,000	2,974	$584
Celebrity Cruises	*Celebrity Solstice*	118,000	2,850	$641
Holland America Line	*Unnamed*	86,000	2,044	$450
MSC	*MSC Poesia*	90,000	2,568	$425
MSC	*MSC Fantasia*	133,500	3,300	$550
P&O Cruises	*Ventura*	116,000	3,100	$602
Princess Cruises	*Unnamed*	116,000	3,100	$570
RCI	*Freedom Class 3*	158,000	3,643	$828
2009				
AIDA Cruises	*Unnamed*	68,500	2,030	$390
Carnival Cruise Line	*Unnamed*	130,000	3,608	$668
Celebrity Cruises	*Celebrity Equinox*	118,000	2,850	$641
Costa Cruises	*Unnamed*	92,700	2,260	$528
Costa Cruises	*Unnamed*	112,000	3,004	$579
MSC	*MSC Serenata*	133,500	3,300	$550
RCI	*Project Genesis*	220,000	5,400	$1,240
NCL	*F3*	150,000	5,200	$575
2010				
AIDA Cruises	*Unnamed*	68,500	2,050	$414
Celebrity Cruises	*Unnamed*	118,000	2,850	$698
NCL	*F3*	150,000	5,200	$575
Totals	29		87,462	$16,786 B
Small Cruise Line Vessels				
Pearl Seas Cruises (2008)	*Unnamed*	7,600	166	$50
Pearl Seas Cruises (2009)	*Unnamed*	8,700	214	$64
Seabou rn Cruises (2009)	*Unnamed*	32,000	450	$250
Seabourn Cruises (2010)	*Unnamed*	32,000	450	$250
Totals	4		1,280	$614 M
Grand Totals	33		88,742	$17,400 B

In addition, four small ships have also been ordered in 2006 for the first time in more than five years – since the advent of American Classic Voyages. Pearl Seas Cruises have ordered two ships being built at Irving Shipbuilding in Atlantic Canada. These vessels ranging from 166 to 214-passengers are tentatively scheduled to be deployed along the Eastern Seaboard. For Bar Harbor this could provide additional

[19] Project Genesis and the NCL newbuild orders account for a majority of berths per vessel. These figures are not inclusive of four small ship newbuild orders identified in Table 6.

small ship deployments throughout the summer season in addition to the increasingly larger vessels calling throughout Canada & New England.

In addition, the below referenced vessels have already been delivered to the world fleet since the beginning of 2006. These 6 vessels accounts for an additional 16,539 berths in the worldwide cruise fleet.

Table 10: Cruise Vessels on Order Worldwide, September 2006
Source: www.cruisecommunity.com and B&A, 2007

Cruise Operator	Vessel Name	Gross Tonnage	Lower Berth Capacity	Cost (US$ Millions)
2006 Delivered Vessels				
Costa Cruises	*Costa Concordia*	112,000	3,004	$565
Holland America Line	*Noordam*	85,000	1,848	$400
MSC	*MSC Musica*	90,000	2,568	$630
NCL	*Pride of Hawaii*	93,000	2,376	$395
Princess Cruises	*Crown Princess*	113,000	3,100	$500
RCI	*Freedom of the Seas*	160,000	3,643	$750
Totals	6		16,539	$3,240 B

It is anticipated that the last of the larger 100,000-GT plus vessels for delivery into the worldwide cruise fleet is far from over. Carnival Corporation has yet to jump into the fray with the potential for development of a mega-cruise vessel. However, based on recent decisions it is anticipated that Carnival Cruise Line may choose to build additional ships of their current class to provide new deployment capacity instead of opting for larger mega-ships. With the addition of the NCL vessels the average passenger capacity for newbuilds delivered in 2006 and currently on order are approximately 3,015-passengers with a Gross Tonnage exceeding 115,000. In fact, more than half of the vessels delivered or on order since the beginning of 2006 well exceed the 100,000-GT mark with this number increasing annually. This trend will further affect deployment in Canada & New England as the market matures and the region continues to develop new cruise tourism offerings and provides enhanced incentives for potential cruise consumers.

9.3 Cruise vessel evolution

The evolution of the cruise vessel has been one of the principal mechanisms propelling industry growth. It has also required that cruise destinations—both the maritime port facilities handling homeport and port-of-call operations as well as the destinations themselves—evolve to meet the challenges presented by these vessels if they wish to participate in the large-scale segment of the cruise industry. Cruise vessels have advanced through a number of developmental phases; from the small, 500-passenger vessels of the 1970s to the rise of the Post-Panamax, 3,600-passenger vessels of the late 1990s to the sophisticated ultra-vessels of today (see Table 11).

Table 11: Evolution of the modern cruise vessel
Source: B&A, 2007

Period	Length (ft.)	Draft (ft.)	PAX	Characteristics of the Period
1960	508	36	500	Vessels acquired & refurbished.
1970	705	32	650	Standard business model used with profitable results until the fuel crisis.
1980	803	29.5	1,500	Change in business model; experimentation with larger vessels and operating itineraries.
1990	902	26.25	2,600	Larger vessels becoming the destination. Shallower drafts.
1997	965	26.25	3,600	Mega-vessels that are floating cities. Focus on maximizing passenger capacity. One-region vessels not capable of Panama Canal Transit.
2000	1,000	29.5	3,000	Larger vessel volume concentrating on creating efficiencies with vessel design, outside cabin development, vessel services and flexible deployment.
2006	1,000+	29.5	4,000	Freedom class, 160,000-GT. Allows for increased onboard revenue areas, largest vessel in the world status and large economies' of scale.
Next Generation	1,100 – 1,400	29 – 36	5,000+	Product and service led design; new innovative marine hull design to support more above water structure. Separate apartment towers, entertainment zones and amenities. Limited port deployment options.

Over the past five years, the newest and most popular generation of vessels continues to have greater volumes and lengths to accommodate the area needed for large scale outside cabin development. These vessels range in length from 965 – 1,200 feet and have lower berth passenger complements of between 1,950 and 3,600. Cruise lines have focused on improved operational cost savings by ordering standardized hulls for multiple brands. By example, Carnival Corporation uses its *Spirit*-class vessel hull for Carnival, Holland America, P&O and Costa vessels.

Grand-, *Destiny*-, *Voyager*-class vessel orders, however, are not expected to disappear; several orders for each of these type vessels are still outstanding and it is likely that more will continue to be issued over the next decade. Costa was the first European operator to order a *Concordia*-class vessel based on the *Spirit*-class hull design. Carnival Corporation's *Queen Mary 2*, Pinnacle project and RCCL's newest Genesis Project vessel suggests that the quest for larger cruise vessels is not over (see Table 12). As illustrated above Star/NCL has also placed a firm order for two 150,000-GT vessels carrying more than 5,000-passengers each in 2,100-cabins.

Table 12: Sample of Large Cruise Vessel Types
Source: B&A, 2007

Type	First Post - Panamax	Today's Post-Panamax	Tomorrow's Largest Vessel 1	Tomorrow's Largest Vessel 2
Name	*Grand Princess*	*Freedom of the Seas*	*Genesis Project*	*F1*
Operator	Princess Cruises	RCI	RCI	Star/NCL
Group	Carnival	RCCL	RCCL	Star
Built	1998	2006	2009	2009/10
Pax (LBs)	2,600	3,634	5,400	4,200
Pax (Max)	3,000	4,200	6,400	5,200
GT	108,000	160,000	220,000	150,000 +
LOA (ft)	950	1,112	1,180	1,066
Beam (ft)	118	150	154	131
Draft (ft)	27	28	30	28
Air Draft (ft)	200	210	213	203

For Bar Harbor, the net result of the cruise vessel development trends is that current and future anchorage, new pier facilities, tendering facilities and uplands areas will need to be able to accommodate these large cruise vessels for the destination to remain competitive in the regional marketplace and be able to fully accommodate the future generation cruise vessels' service requirements. This will include the ability to offer industry operators facilities and venues capable of accommodating a passenger complement upwards of 3,000 – 6,000 persons per vessel.

Based on our cruise line interviews and understanding of the cruise line market these next generation vessels (more than 1,050 to 1,400-ft.) will be for the most part purpose-built and intended for specific deployments. They become much more of a destination than even today's vessels. Thus, while they are built and deployed for cruise it does not necessarily imply that Bar Harbor will be a port-of-call for this vessel type or they will sail within the region. It is more likely these will stay in itinerary patterns such as the Caribbean and Mediterranean where they have access to a variety of ports that can support cruise activities within a short distance in the region.

9.4 Design vessel requirements

Based on cruise line interviews and projection scenarios we have developed a design vessel requirement for port-of-call operations in Bar Harbor. Based on the design vessel consideration can be given to each of the primary infrastructure types (criteria) required to support design vessel operations for Bar Harbor with specific emphasis on the primary infrastructure of entrance channels, turning basins, anchorages, berth (if built), passenger terminal (if built), GTAs (Ground Transportation Areas) and other elements used to service cruise vessels in port.

Bar Harbor presently has demand to serve both Panamax and post-Panamax vessels. In 2006, Bar Harbor welcomed several post-Panamax vessels—inclusive of Princess Cruises' *Star Princess* and Cunard Line's *Queen Mary 2*.

Future Cruise Vessel Characteristics

In considering the types of vessels likely to be operating in the Canada & New England region over the short- (today through 4-years), mid- (5 to 9-years) and long-term (over 10-years), several important trends are worthwhile of consideration:

- The average length and size of cruise vessels on an international basis continues to increase. At present, the average vessel is approximately 700-ft. long, carries 1,400 passengers at 100%

occupancy and is 12 years old. Based on our market assessment and specifically cruise line input cruise vessels with lengths of between 800-ft. and 985-ft. will likely become the operational norm and be deployed in most major cruise regions—inclusive of the Canada & New England region—today and over the next decade. Some larger vessels, such as the *Queen Mary 2* will also call periodically.

- New SOLAS rules in 2010 will inevitably hasten the withdrawal from service a considerable number of vessels that were built before 1969. This series of SOLAS rules looks to eliminate all wood from cruise vessels. There are very few vessels left in the conventional worldwide fleets, thus there will be no significant impact on the Canada & New England region, specifically Bar Harbor as most, if not all vessels from the North American fleet currently calling meet and exceed these standards.

- With the exception of one HAL vessel, all of the other 35 large vessels scheduled for introduction over the next five years have a capacity of over 2,000 passengers. Twenty-two vessels have capacity of over 2,500-passengers. Project Genesis and the NCL vessels, scheduled for delivery in 2009/10, each has an estimated capacity of more than 5,000-passengers.

- Through our stakeholder outreach process, several lines—both regional and international—indicated their intention to place larger vessels in the Canada & New England region in the mid to long-term. These ships are likely to replace smaller vessels in fleets and would not necessarily be the largest ships of the worldwide fleet. A *Voyager-class* ship has already sailed in the region and is presently calling in Bermuda. However, this ship bypassed Bar Harbor due to a number of issues including the length of itinerary pattern and preference for berthing with such a large passenger contingent. It is likely, based upon this vessel's history in the region, that a *Voyager-class,* equal or larger vessel may be deployed to the region in the mid- to long-term.

Suggested Design Vessels for Bar Harbor

The previous discussion, cruise line stakeholder outreach and data provided throughout this report had as one of its purposes the discovery of what design vessel(s) Bar Harbor should plan demand scenarios and cruise operations planning scenarios on for the future. Selection of a model design vessel(s) dictates a programmatic response for Bar Harbor, one that will allow the destination to meet industry needs, maintain competitiveness in the region, and plan port-of-call operations as deemed viable and within best practices policies established by the Town of Bar Harbor in order to be a marquee cruise tourism destination. As a result of the previous analysis, the following design vessel particulars were established (See Table 13):

Table 13: Suggested Design Vessels for Bar Harbor
Source: B&A, 2007

Type	Design Vessel 1 (Panamax)	Design Vessel 2 (post-Panamax)
Pax / Crew	2,000 to 2,600 (pax) / 850 (crew)	3,000 to 4,000 (pax) / 1,200 (crew)
GRT	Up to 100,000	+ 100,000
LOA (ft)	900 to 985	985 to 1,200
Beam (ft)	Up to 118	Over 118 (generally 130 to 165)
Draft (ft)	Up to 28	28 to 32.8*
Air Draft (ft)	Less than 195	Up to 210
Note: Suggested design vessels represent primary ranges of the majority of vessels within these categories. **Queen Mary 2* has a vessel draft of 10m.		

These design vessels incorporate the features of the various classes that are becoming industry standards, including the *Destiny*, *Grand*, and *Voyager.* The *Freedom, Genesis* and *F3* classes as Super post-Panamax vessels are not incorporated as these ships will primarily not have the capacity to launch tendering operations for such a high capacity of passenger. In addition, anchorage restrictions may prohibit these vessels from entering the Harbor area. Planning for these design vessels, along with smaller ships currently sailing within the region and those on the new-build order list gives Bar Harbor the flexibility it needs over the mid- to long-term to absorb changes in the cruise industry.

Appendix A Worldwide Cruise Market

A.1 Section summary

This section analyzes the major trends prevalent for the worldwide cruise industry. Following is a summary that delineates the major issues that shape the current global cruise industry:

The cruise industry has emerged as one of the fastest growing and popular segments of the worldwide travel and leisure industry. Between 1990 and 2005, passenger levels have expanded from 4.4 to an estimated 14.5 million worldwide. With many of the fundamentals that contributed to the success of the industry still in place, cruise passenger volumes are expected to continue their positive growth trend. Projection of the worldwide industry suggests passenger carrying levels could expand from the present projected 14.5 million to between 19.3 and 30.1 million by 2020. Continued strong passenger growth is incumbent upon between 40 and 120 additional new vessels being placed into operation over the next 15 years, a trend that will create demand for a number of present homeport and port-of-call facilities to expand—especially those found within the industry's most popular and profitable regions—and over the mid- to long-term, encourage expansion into new market regions.

- Three major cruise operators dominate the cruise industry worldwide—Carnival Corporation, RCCL and Star/NCL Cruises. These cruise consortiums have widespread influence on cruise marketing, operations and deployment trends worldwide. A fourth relatively newcomer to the industry, MSC Cruises is aggressively ordering ships entering the North American market.

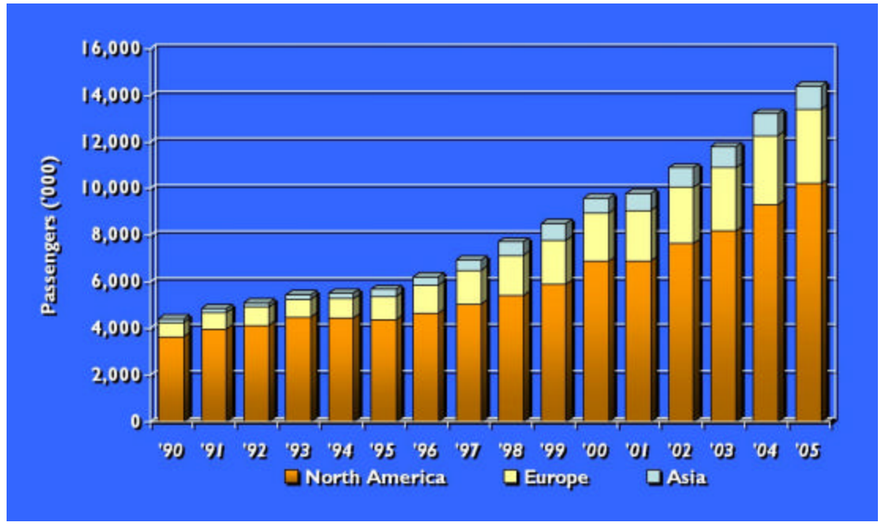
- Inclusive of all cruise operators, the Caribbean remains the principal location for cruise capacity placement, followed by the Mediterranean, Northern Europe and Alaska. In total, over twenty different cruise sub-regions are present within the global marketplace, with many of these consisting of even smaller deployment characteristics and typical itineraries.

- Cruise line selection criteria for homeports and ports-of-call generally fall into three categories: Appeal and demand as a travel and leisure destination; type and quality of cruise tourism infrastructure needed to support vessel operations, movement and quality of experience for cruise visitors; and, a market basis and strategic fit within a greater cruise ship deployment scheme.

A.2 Historic levels of worldwide growth

Over the past two decades, the cruise industry has emerged as one of the fastest growing and popular segments of the worldwide travel and leisure industry. In 1980, 1.4 million individuals embarked on a conventional cruise operated by a North American cruise line, a level that has climbed to approximately 10.0 million by 2005.[20] We estimate that 3.9-million international passengers were carried on European and Asian marketed vessels in 2005, elevating the worldwide cruise industry passenger total to nearly 13.9 million (Table 14). It is anticipated that 2005 cruise statistics generated an approximate 4.7% growth rate for North American passengers. Critical growth has also been seen in the U.K., European Continental and Asian cruise markets over this time period. Growth of the conventional worldwide market provides cruise lines with the impetus to expand current market offerings and expand into new and growing market sectors worldwide. With continued cruise passenger growth, this points to further expansion of the cruise industry. For the Canada & New England region, specifically Bar Harbor this means that the region overall is competing much more on a worldwide scale than in the past due to the deployment trends of the cruise line industry. In addition, growth in the industry has been tied to the deployment of larger ships in to the worldwide fleet as is illustrated later in this section.

Figure 33: Conventional Worldwide Cruise Passenger Growth, 1990-2005
Source: CLIA, PSA, and B&A, 2007



[20] North American operators are those lines that market the majority of their vessels to North American consumers in the U.S. and Canada. Similarly, European and Asian operators market a majority of their vessel offerings to each respective consumer market.

The industry's continued success over this period is primarily a result of the following:

- **Cruise lines created products that work to convert land-based resort guests into cruise passengers.** Cruise lines were able to package and mass market an all-inclusive resort package-at-sea that is highly price competitive when compared to similar land-based resort vacations. These all-inclusive packages were marketed through a variety of distribution channels inclusive of travel agents, internet-based retailers, charter operations and cruise line based phone and internet networks.

- **Cruise operators have effectively controlled competition, operational costs, and generated revenue streams from several sources beyond net ticket sales.** Innovations in cruise vessel design and the move toward larger vessels allowed cruise lines to reap increased economies of scale. The majority of cruise industry capacity is held by a handful of cruise conglomerates, a factor that has served to reduce competition by keeping barriers to entry into the market high; increased leverage on cruise destinations to keep cruise fees low; and, allowed for significant cost-savings resulting from a high degree of vertical integration throughout the cruise onboard and destination delivery cycle. This trend has magnified with the creation of a super-cruise group – Carnival Corporation, whose combined brand capacity exceeds that of its next nearest rival by some 30,000 berths and which accounts for over half the new vessels on order over the next five years.

- **Cruise industry products consistently deliver a high level of passenger satisfaction.** The Cruise Lines International Association (CLIA), through its annual passenger surveying efforts, has year after year reported the cruise experience consistently exceeds expectations on a wide range of important vacation attributes, and on a comparative basis versus other vacation categories, cruising consistently receives top marks. Satisfaction with cruise vacations keeps customers coming back; several cruise lines report client retention levels of well over 45%. Cruise lines place considerable emphasis upon passenger retention, as it is easier and less costly to retain a current passenger than to market to and cultivate new passengers.

- **The cruise industry is supply-led in nature, continually increasing passenger throughput by the development and introduction of new vessel berth capacity.** Over the past decade and more the cruise industry has grown through the introduction of new cruise vessels into the worldwide fleet. While some have been smaller niche vessels, the majority have continued to increase in physical size and passenger capacity over the past thirty years. In conjunction with this newbuild trend, the cruise line industry has concentrated on developing new cruise markets through the introduction of onboard products and services, distribution chains and other partnerships to fill the vessels introduced to the fleets. With the North American market growing well, the industry has turned their attention to the development of the European cruise consumer market that has similar demographics to that of its North American counterpart. As this area develops, the cruise industry has now begun to actively study and participate in the development of the Asia-Pacific cruise market through the development of distribution systems, products and services for the consumer and placement of vessels into the region to further stimulate growth.

Table 14: Cruise Passenger Source Regions, 1990 - 2005
Source: CLIA, Cruise Industry News Annual, PSA and B&A, 2007

Period	North America	Europe**	Asia	Totals	% Change
1990	3,640,000	620,000	162,000	4,422,000	-
1991	3,979,000	700,000	170,000	4,849,000	9.7 %
1992	4,136,000	777,500	178,000	5,901,500	5.0 %
1993	4,480,000	779,231	194,000	5,453,231	7.1 %
1994	4,448,000	822,854	240,000	5,510,854	1.1 %
1995	4,378,000	995,812	298,000	5,671,812	2.9 %
1996	4,656,000	1,204,529	359,000	6,219,529	9.7 %
1997	5,051,000	1,460,361	421,000	6,932,361	11.5 %
1998	5,428,000	1,715,075	572,000	7,715,075	11.3 %
1999	5,894,000	1,885,898	730,000	8,509,898	10.3 %
2000	6,882,000	2,058,964	643,800	9,584,764	12.6 %
2001	6,906,000	2,144,034	726,787	9,776,821	2.0 %
2002	7,640,000	2,397,876	852,377	10,890,253	11.4 %
2003	8,189,750	2,700,374	894,956	11,785,080	8.2 %
2004	9,310,250	2,958,260	940,003	13,208,513	12.1 %
2005	10,250,754	3,100,000	549,246	13,900,000	4.7%
Notes: **Includes Eastern Europe, Russia and Cyprus					

A.3 Future direction of the worldwide cruise industry

A.3.1 Geopolitical uncertainties, economic and other industry issues: 2001 to 2006

Without question, the events of September 11 and its aftermath created a period of uncertainty and flux both within the cruise industry and for tourism and leisure providers worldwide. Immediate reactions by the cruise industry to September 11 were increased financial conservatism, deployment drawback to North American and other home waters and amplified flexibility in deployment.

By October 2002, confidence was returning. The cruise industry, however, was due to face further challenges brought on by a combination of war, terrorism concerns, health issues and a relatively weak economic outlook. In particular, the Iraq War (March 2003), terrorism threats and the SARS pandemic in Asia had a dramatic impact on international travel. These major events led to a dramatic collapse in demand for air travel, especially to Asia. This experience was mirrored by the cruise industry throughout the world, but particularly in the Asia-Pacific region where a number of cruise calls were cancelled and itineraries redrawn to take tonnage out of the region. These events and others have caused a significant increase in North American based deployments through the addition of more than 20 new homeports over the period. However, overall Canada & New England has not seen the expected overall growth this may have produced primarily due to the draw of competing destinations (primarily Caribbean, Alaska and Mexico West).

Presently, signs point to the cruise industry moving into a boom period with all the major lines, comprising improved profitability and higher yields. Cruise industry sensitivities, and thus, a degree of financial and operational conservatism still remains due to the issues outlined above. For the near term, North American and European lines will continue to be cautious in deploying their fleet to more distant and potentially less financially productive regions. This is due in part to both a cost increase in regular and low-sulfur content fuels and the subsequent impacts on the purchasing and supply chain for those vessels deployed farther a field from normal North American and European suppliers.

Terrorism also continues to be a major point of worry for cruise lines, especially given the high profile of a cruise vessel as a potential target. In November 2005, the *Seabourn Spirit* was attacked 100-miles off the Somali Coast by pirates with machine-gun fire and rocket-propelled grenades. In August 2004, UK press reported that a terrorist plot to blow up the *Queen Elizabeth 2* during a cruise was uncovered. Similar terrorism concerns and threats exist for all shipping activities in the Straits of Malacca. While cruise lines and ports have radically improved port security, we anticipate lines will continue to take a somewhat conservative approach with deployment.

A.3.2 Future market direction of the worldwide cruise industry

In looking forward at the direction of the market in the future, each of the industry fundamentals responsible for its dramatic rise over the past two decades are expected to remain in place and continue to propel the industry forward in terms of passenger and financial expansion over the long-term. Strong 2005 cruise passenger growth and future bookings showed marked improvement over 2004 levels and industry experts suggest significant long-term consumer demand also exists in the marketplace. Despite short-term impacts of major world events, demand for cruises has shown particular resilience in times of conflict, recession and economic downturns.

Over the past 6 - 12 months significant new-build orders have been placed which have substantially increased the outlook for additional capacity worldwide. This increased volume with fewer vessels provides each cruise line with more flexibility on itinerary and port selection based on their overall brand fleet size. However, in combination many ports must increase their port infrastructure and tourism support products to meet the demands of larger vessels in port.

Barring some unpredictable event, the industry will see continued gradual revival in new building through 2006 and beyond. Controlled growth and an emphasis on increased vessel berth capacity, size and amenities will be more likely. Our scenarios for cruise vessel supply expansion for North American/European capacity - as measured in vessel berths over the next several years are:[21]

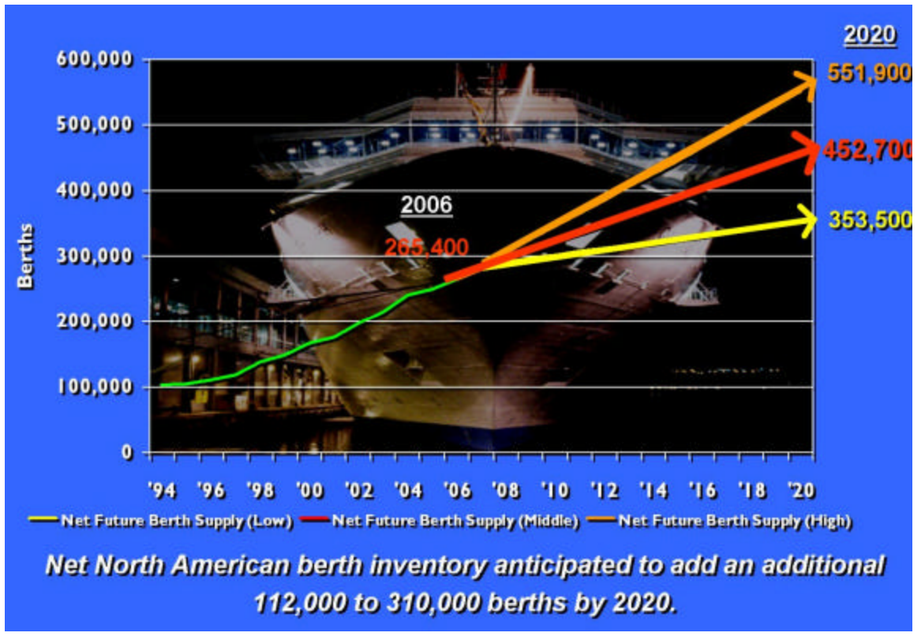
- **Scenario 1 (Low).** Two to three new vessels and an expansion of total supply by an additional 4,800 to 5,400 net new berths per annum.
- **Scenario 2 (Medium).** Three to six new vessels and an expansion of total supply by an additional 12,100 to 13,500 net new berths per annum.

[21] Scenarios present berths in net terms and envisage some withdrawal of older vessels, and thus, capacity from service. This occurs on a fairly regular basis at present. New Safety of Life at Sea (SOLAS) rules in 2010 will inevitably hasten the withdrawal from service of a considerable number of vessels that were built at or before 1969. This series of SOLAS rules looks to eliminate all wood from cruise vessels.

- **Scenario 3 (High).** Six to nine new vessels and an expansion of total supply by an additional 19,300 to 21,600 net new berths per annum.

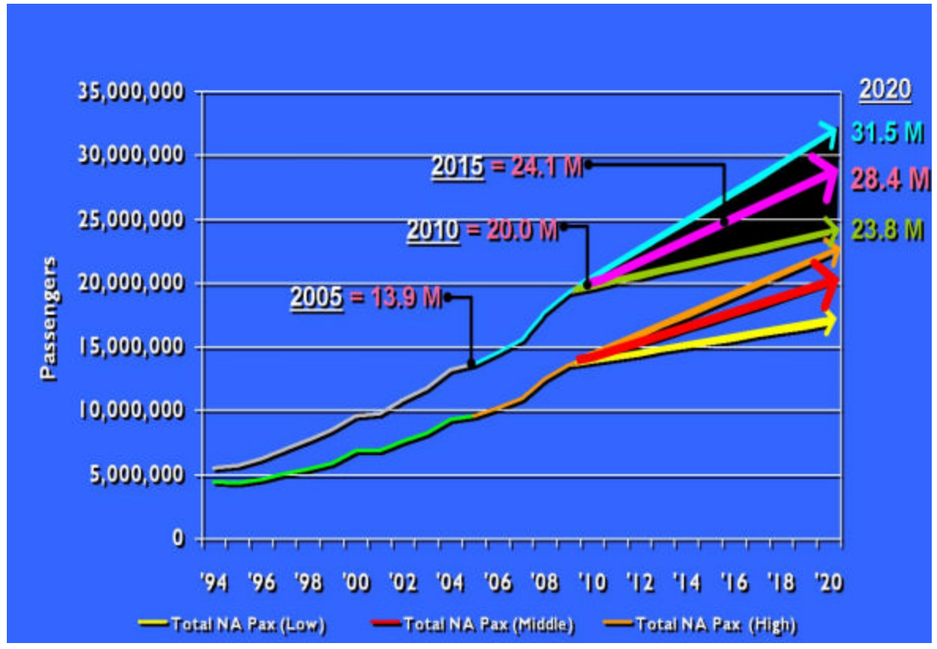
Our forecast for the growth of North American capacity is presented in Figure 32. As shown, total berth inventories are anticipated to grow from approximately 265,400 lower berths in 2006 to between 353,500 (low) and 551,900 (high) lower berths by 2020. Our projection model includes a number of assumptions extrapolated over the 13-year horizon, including anticipated rates of berth utilization, vessel occupancy, cruise itinerary duration, growth in average vessel size and other factors. Our model also assumes that consumer demand keeps pace with vessel supply over the period reviewed. Due to cruise lines placing cruise vessel orders at a maximum of four to five years into the future, our model is inherently less reliable beyond 2011.

Figure 34: Historic and Projected North American Industry Berth Supply
Source: B&A, 2007



Passenger forecasts for the worldwide industry- inclusive of North American, European and Asian carriers were generated and are presented in Figure 34. As shown, worldwide passenger carryings are expected to grow from 13.9 million to between 23.8 million (low) and 31.5 million (high) by 2020. The base North American passenger carryings are anticipated to grow to between 13.5 million (low) to 21.2 million (high) by 2020. The medium and high projections include additional factors which take into account more aggressive growth of European and Asian markets over the mid- to long-term.

Figure 35: Projected North American and Worldwide Passenger Levels, 2005 – 2020
Source: B&A, 2007



Projection scenarios herein anticipate that ports and destinations will rise to meet this opportunity of continued expansion of the cruise industry. With medium and high future growth scenarios above suggesting between 60 and 120 additional new vessels in operation, continued new vessel deliveries will place additional demand for port facilities. This trend will create demand for a number of present homeport and port-of-call facilities to expand - especially those found within the industry's most popular and profitable regions and over the mid- to long-term, encourage expansion into new market regions. Placement of new vessels will be especially challenging during the months of November through April when operations in profitable, cold-water regions are unfeasible.

Worldwide, there are approximately 135 to 165-homeport berths with the majority of these (55 - 65) in North America and (45 - 55) in Europe/U.K. destinations. In addition, there are many ports that provide berths for both homeport and port-of-call accommodations. Based on estimated growth we envision more than 200 homeport berths worldwide over the next 5 to 10-years to support vessel

growth and regional expansion. Overall, there are well over 500 worldwide berths considering all port-of-call and homeport berths. As a continuing cruise industry trend, the expansion of berth supply and the subsequent need of cruise lines to expand their overall regional cruise deployment coverage is a favorable trend for the Canada & New England region. This means more vessels are being delivered into the worldwide marketplace and subsequently deployments must reflect the desire of the lines to expand passenger levels in all market demographics inclusive of the Canada & New England region if cruise passenger demand and per diem return are met. This trend could impact the Town of Bar Harbor in terms of an expansion of the overall cruise season, deployment of larger ships to the region and Bar Harbor, and subsequent demand for additional ship calls on given peak days during the high fall cruise season of September and October.

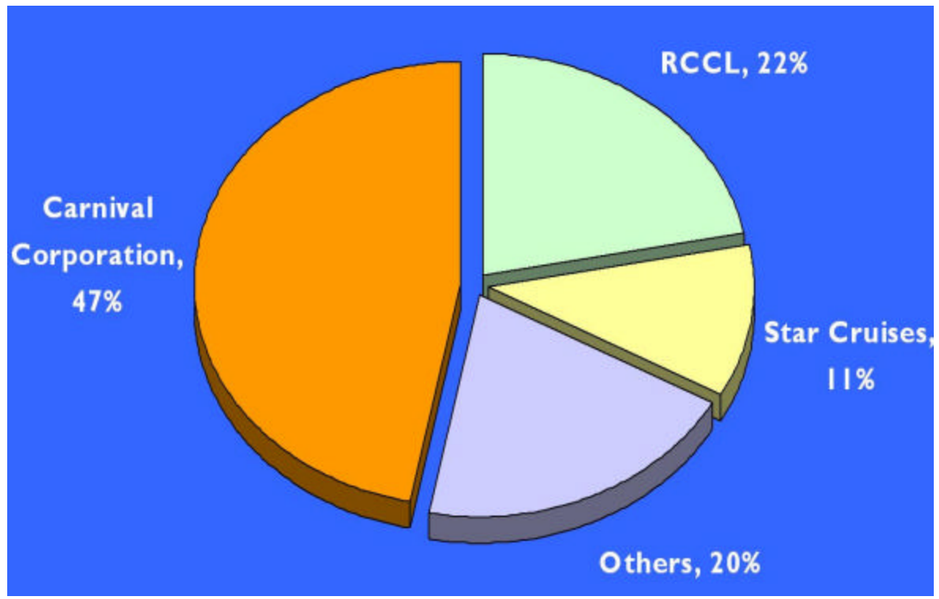
A.4 Cruise Lines, vessels and other industry characteristics

A.4.1 Leading cruise operators

Today, three major cruise operators dominate the cruise industry worldwide (see Figure 34). The "big three" were formed through merger and consolidation to provide each with better economies of scale, progressive marketing options and increased channels of distribution. In spring 2003, the Carnival Corporation and Princess Cruises merger was officially accepted by shareholders of P&O Princess, plc, thus forming the nucleus of a cruise company that, at the end of 2005, had more than 47% of total berth capacity worldwide. This merger continues to reshape the industry, creating one large super cruise consortium with widespread influence on cruise marketing, operations and deployments. RCCL (22%) and Star/NCL Cruises (11%) are the other major industry participants. The remaining 20% of industry capacity is shared among over 50 cruise lines, ranging from medium-sized lines typically operating between two and five vessels to small cruise line operators with one vessel.

We summarize several attributes of each of the major cruise lines as well as several smaller operators in the following section. Cruise line information is summarized in Table 15.

Figure 36: Cruise Capacity by Cruise Group
Source: B&A, 2007



Carnival Corporation. Publicly held and traded, Carnival Corporation controls over 145,000 lower berths on 85 vessels. Carnival Corporation presently has additional 15 - 18 cruise vessels on order or option. Carnival Corporation's portfolio of 12 brands is remarkable and includes many of the gold standard cruise companies: Carnival Cruise Lines, Holland America Line, Princess Cruises, Seabourn Cruise Line and Windstar Cruises in North America; P&O Cruises UK, Cunard Line, Ocean Village and Swan Hellenic in the United Kingdom; AIDA in Germany; Costa Cruises in Southern Europe; and, P&O Cruises Australia.[22] These brands combine to offer a range of vacation products to consumers with varied tastes, income levels, and national origins. Combined, more than 6.5-million people sail on Carnival brands annually.

Royal Caribbean Cruises, Ltd. (RCCL). Under its four brands Royal Caribbean International (RCI), Celebrity Cruises, Pullmantur and Island Cruises, as well as Celebrity Xpeditions, RCCL operates a fleet of 32 vessels with 7 additional vessels set for delivery before 2010. Current fleet capacity is slightly over 64,000 lower berths. In 2005, RCCL's brands combined to host more than 3-million cruise passengers.

[22]Carnival Corporation owns two land-based tour operations in Alaska—Holland America Tours and Princess Tours—that operate coaches, hotels/lodges and train cars for sightseeing.

RCCL is also a publicly held corporation.[23] Pullmantur S.A. has been recently acquired by RCCL. This is a major advancement in RCCL's efforts to increase their presence in the European cruise market. There are five older vessels in the Pullmantur fleet. However, this move allows a vehicle for the large consumer market and it will also allow RCCL to advance other efforts worldwide, inclusive of their plans to move smaller vessels into the Celebrity Xpeditions fleet, impact key markets such as Bermuda and create additional synergies in the European marketplace. It appears that Royal Caribbean International is finally going international with much of its fleet, while deploying Celebrity Cruises to a greater degree to fit and expanded North American clientele.

Star/NCL Cruises. Star Cruises is the leading cruise line in Asia, and with acquisition of NCL Holdings 2000, is the third largest cruise line operator in the world. Star Cruises' combined fleet consists of 19 vessels and over 28,000 lower berths. The NCL and Orient brands are marketed primarily to consumers from North America, Europe and Australia.[24] The Star Cruises brand is focused on tapping into the Asia Pacific consumer markets. As NCL is expanding its fleet through new vessel deliveries the plan was then to move older tonnage from NCL to Star Cruises (5 in total). However, to date only one vessel has been transferred to the Star fleet. NCL is preparing to become a publicly traded company in late 2006 or early 2007. Star/NCL recently contracted for two 150,000-GT 5,200-passenger vessels set for delivery in 2009/10. A third is on option.

While lines in the "other" category are far smaller in terms of fleet size than the "big three," the remaining 20% of the cruise industry includes a number of important and unique brands that provide increased diversity within the industry overall. Representative lines include:

Disney Cruise Lines. Disney Cruise Lines is the leading family entertainment cruise provider with 3-, 4-, and 7-night itineraries to the Bahamas and Caribbean offered on two cruise vessels (*Disney Wonder* and *Disney Magic*). While linking cruise offerings to upland facilities is not unique in the industry, Disney's combination of family brand and upland theme parks creates inherent interest their cruise product. In 2005, Disney Cruise Lines took their formula to Los Angeles with 7-night Mexican Riviera cruises during the peak summer season. These cruises were very successful based on feedback from the cruise line. To date, no new cruise vessel orders have been placed by Disney; while many industry experts anticipate this could change as early as 2006, we believe it is more likely a mid-term decision to deliver a new vessel into the Disney fleet and will likely occur after 2010.

Crystal Cruises. Crystal Cruises offers ultra-luxury cruises to destinations worldwide and is a sizable cruise line contributor to the West Coast marketplace. With headquarters in Los Angeles, Crystal Cruises is wholly owned by Nippon Yusen Kaisha (NYK), the largest shipping company in the world. Crystal Cruises has a two-vessel fleet, with the *Crystal Harmony* having been recently sold and now sailing as the *Asuka*.

MSC Cruises. MSC Cruises offers mid-class cruises to destinations throughout Europe and the Caribbean. MSC North America is currently under start-up operations and is intended to cater to a more upscale niche market with its vessels. This is a private family held Swiss/Italian company backed by MSC Cargo and privately held by the Aponte family. While they have strong financial backing, some industry analysts are hesitant as to what their level of success will be in the North American market due to brand placement. However, they have recently ordered an additional 2 large vessels and now have four set for delivery over the next three years. While unlikely that they will grow to the dominance of either RCCL or Carnival this line will certainly impact the industry worldwide over the next decade.

Radisson Seven Seas Cruises and **Silversea Cruise Line** are luxury-class cruise lines offering itineraries throughout the world to a mainly North American clientele. Both lines are privately held companies by the Carlson and Vlasov Groups respectively. At present, only Silversea Cruises is planning to expand its fleet through new-build capacity in line with what they currently offer with the Silver Whisper and Silver Shadow.

Similar in composition to the hospitality industry, each major cruise group is comprised of several cruise line brands with vessels positioned to appeal to different geographic markets and consumer tastes. The majority of cruise brands generally fall into one of the following four segments:

Luxury. The luxury segment offers cruises of greater than seven days on high quality, small and medium-sized vessels. Luxury vessels tend to sail worldwide and offer superior food and service.

Premium. The premium segment is geared towards more experienced cruisers, often older and more affluent with time to vacation. Service and food quality are emphasized under the premium segment.

Contemporary. Vessels found in the contemporary segment appeal to passengers of all ages and income categories with a focus on middle-income levels. While this segment has a healthy rate of

[23] RCCL owns Royal Celebrity Tours in Alaska.
[24] Star/NCL recently purchased a tour operation in Hawaii to support cruise operations.

past-passenger participation (estimated at between 30% to 50% of the industry), this segment is highly dependent on the continued introduction of new cruise passengers to the marketplace.

Budget. The budget segment tends to be a less expensive version of the contemporary market, with vessels generally older, smaller and offering fewer amenities. There are many of these operations existing in Europe. However, it is unclear with the implementation of the SOLAS regulations by 2010, whether this segment will be one that will be able to continue any growth through the acquisition of older vessels in the major world fleets.

Several other secondary market segments exist, including: Exploration and soft adventure cruises; niche cruisers; river cruises; and coastal operations. In addition, several tour operators have chartered vessels for their niche market segments.

Cruise capacity from the contemporary and premium segments of the North American consumer segments comprise the majority of Bar Harbor's cruise base. Holland America Line, a North American contemporary/premium brand, is the largest provider of domestic conventional cruises for the Canada & New England Region, particularly Bar Harbor. This is mainly due to a summer deployment for the *Maasdam* which provides 17 sailings into the region. European and North American cruise brands also visit Bar Harbor with an emphasis on the months of September and October in conjunction with the fall foliage season. Several smaller ships sail the coastline (5 brands on 25 sailings) producing 2,108-lower berth passengers. We anticipate that the seasonal fall trend will continue over the mid- to long-term. However, we would also envision the deployment of at least two cruise vessels sailing during the summer season in the region over the long-term. The contemporary and premium vessels constitute a large share of present cruise operations for Bar Harbor overall.

Table 15: Primary Cruise groups by brand, number of vessels & market segment, 2006
Sources: Cruise Industry News Annual and B&A 2007

Operator		Vessels	Market	
Brand	**Group**		**Segment**	**Geo. Consumer**
Carnival Cruise Lines	Carnival Corporation	22	C	NA
Princess cruises		16	C / P	NA
Cunard Line		2	P / L	NA / UK
Seabourn		3	L	NA
Windstar		3	L	NA
Holland America		13	P	NA
Sub-total	*Carnival – North American brands*	*59*		
Costa Crociere*	Carnival Corporation	11	P	E / A
Swan Hellenic		1	L	UK
AIDA Cruises		4	C	Germany
P&O Cruises UK		5	C / P	UK
P&O Australia		3	C	AUS
Ocean Village		2	C	UK
Sub-total	*Carnival – UK, European, others*	*26*		
Total for Carnival Corp.		*85*		
Celebrity Cruises	RCCL	8	P	NA
RCI		21	C / P	NA
Island Cruises		2	C	UK
Celebrity Xpeditions		2	P	NA
Pullmantur		5	C	E
Total for RCCL		*38*		
Orient Line	Star Cruises	1	C / P	NA / E
NCL		12	C	NA
Star Cruises**		6	C	A / AUS
Total for Star Cruises		*19*		
Selected Other Leading Operators				
Crystal Cruises	Crystal Cruises	2	L	NA
Disney Cruise Line	Disney Cruise Line	2	P	NA
Fred Olsen	Fred Olsen Cruises	4	C / P	UK
Louis Cruise Lines	Louis Cruise Lines	8	C / B	E
MSC Cruises	Mediterranean Shipping Cruises	8	C / B	E
Radisson Seven Seas	Radisson Seven Seas	4	P	NA
Silversea Cruises	Silversea Cruises	4	L	NA / E

Key: Segments: C = Contemporary, P = Premium, B = Budget, L = Luxury
Geo. Consumer: NA = North American, E = European, A = Asian, AUS = Australia, UK = United Kingdom
*Inclusive of Costa Kreuzfahrten– German brand
**Not inclusive of the Wasa Queen ferry/gaming vessel

A.4.2 Cruise vacationers

Although the cruise industry continues to strive toward globalization, the majority of cruise passengers are still sourced from two significant locations – North America and the United Kingdom. In 2005, these source markets accounted for more than 80% of the total worldwide cruise bookings. Continental Europe and Asia provide solid cruise numbers as well, although growth overall has been much slower.

Record cruise bookings were achieved worldwide despite the Iraq War and other security concerns, proving the resiliency and ability of the cruise industry to perform within the overall vacation market. The Passenger Services Association (PSA), the U.K. based cruise marketing group and Cruise Lines International Association (CLIA), North America's cruise marketing body released studies that provide some indication as to the consumer trends of the industry and more importantly the potential cruiser profile that is critical to the long-term success of the industry within the vacation market. Much of the detail provided below is gleaned from these survey reports and other market sources as indicated.

North American consumers

Consumer trends continue to be supportive of further industry growth worldwide. We highlight several of these[25]:

- Almost 51-million people have cruised at least once; and of these, nearly 29-million (10% of U.S. Population) have cruised within the past three years.
- The most likely number of North American cruisers over the next three years is 31-million with the best case of more than 50-million with incomes of more than $40,000 annually.
- Cruise passengers spent approximately US$1,690 per person on a typical contemporary weeklong cruise vacation inclusive of cruise fare and onboard expenses. Cruisers spend nearly 40% more than non-cruising visitors (US$1,180).
- The average cruiser has taken 3.4 cruises. Luxury cruise line passengers sail more with 9.1 cruises, followed by those who cruise with destination-driven cruise lines (8.4), premium cruise lines (5.9) and contemporary cruise lines (3.7).
- The average age of actual and potential cruise consumers continues to increase (age 48.3 in 1992 vs. 49 in 2006). Household incomes for cruise passengers are high, averaging US$104,000 in 2006 for North Americans, increasing from US$58,400 in 1992 and US$79,000 in 2000. As products continue to diversify, however, cruising (as evidenced by cruise prospects) continues to be considered by individuals with lower household incomes.

Table 16: Cruise Demographic Profiles, North Americans
Source: Cruise Market Profile, CLIA, 2007

	Category	Representative Sample	Cruisers	Non-Cruise Vacationers
Average Age	Mean Years	47	49	45
Average Income	(1,000's)	US$94	US$104	$90
Gender	Male	46%	49%	49%
	Female	54%	51%	51%
Marital Status	Married	80%	83%	79%
	Divorced/Sep.	10%	10%	9%
	Single	10%	7%	12%
Employment Status	Full-time	56%	57%	56%
	Retired	13%	16%	11%
Education	College Grad or Higher	52%	57%	50%
	Post Graduate	20%	23%	30%

- Approximately 67% of cruisers plan vacations between 4 months and 1 year in advance.
- Four out of five cruisers (79%) are interested in taking a future cruise. More than half (56%) of non-cruisers are interested in taking a cruise in the next three years.
- There is an increasing *perception* that online travel retailers provide the best cruise prices. Less than one in five cruisers and non-cruise vacationers now believe that the best price is available through a travel agency.
- Destination is paramount in vacation decision, followed by pricing.

[25] CLIA 2006 Cruise Market Profile, April 2006. Study conducted by TNS Travel & Transport.

- Canada & New England rankled 11th amongst the "Top 12" most appealing places for a next cruise – with the top ten being Caribbean/Eastern Mexico; Alaska; Bahamas; Bermuda; Hawaii; Mediterranean/Greek Islands/Turkey; West Coast of Mexico; Europe; Panama Canal; and Coastal U.S.

- Cruising is seen by a large majority of passengers as a good way to sample a geographical area/destination for future vacations. After sampling the geographical areas/destinations on their recent cruise, more than 75% say they will return for another type of vacation.

A.4.3 Primary cruise regions

Once focused primarily on the Caribbean and Mediterranean cruising regions, cruise operations are now found around the world. CLIA remains the primary source of detailed data on deployment by cruise sub-regions, and while not inclusive of all operators worldwide, this data provides a good overview of each of the primary cruise sub-regions present in the global marketplace.[26]

Inclusive of all cruise operators, the Caribbean remains the principal location for cruise capacity placement, followed by the Mediterranean, Northern Europe, Alaska and Mexico West (see Figure 37).[27] In total, over twenty different primary cruise sub-regions are present within the global marketplace, with many of these consisting of even smaller deployment characteristics and typical itineraries.

For North American lines, the Caribbean received a significant increase in terms of capacity placement between 1995 and 2005—over 15 million bed-nights—resulting from delivery and deployment of several of the industries new large vessels. Capacity growth was also very strong in the Mediterranean, with North American operators increasing their presence between 1995 and 2005. As presented deployment by North American operators in the Canada & New England sector has shown considerable increases early with a leveling off over the past few years.

Figure 37: North American Capacity Placement by Region, 1997 - 2005
Source: CLIA, and B&A, 2007

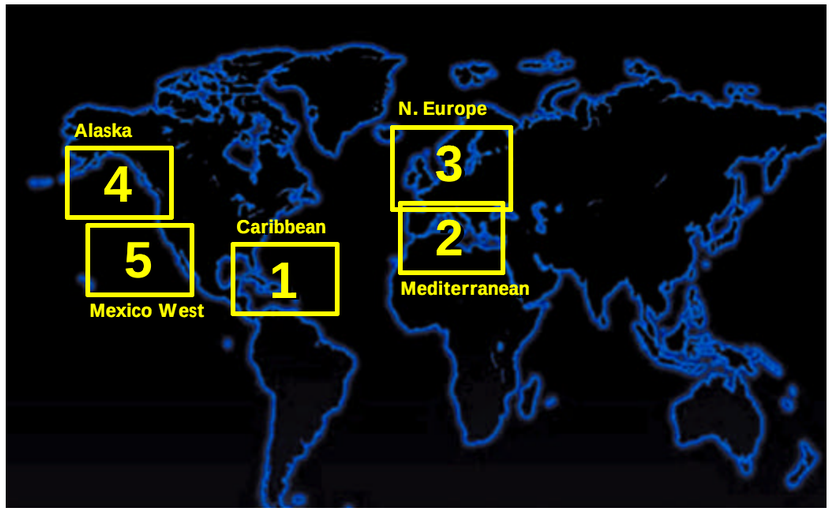


Table 17 provides an illustration of the worldwide cruise market deployments from 1997 through 2005. While the Caribbean produces the largest capacity deployment annually, a number of other regions are growing as well. The Canada & New England region has seen a typical growth pattern for the industry over the period. Additionally, Transatlantic, World and U.S. East Coast repositioning cruises are also typically a staple of the region. We have highlighted each of these sectors below to provide an illustration of the deployment trends found in the region overall. While contributing to the market, Transatlantic and World segments contribute very little overall to the cruise traffic in the region, particularly for Bar Harbor. The Canada & New England sector overall has seen a capacity gain over the period illustrated in Table 18. However, there was a significant gain/loss in 2004, mainly due to the deployment of the *Voyager-class* to the region and then subsequent movement to Bermuda in 2005. Based on cruise line feedback it is envisioned that growth will continue for the region at a slower pace than comparable competitive North American cruise regions.

[26] CLIA data, while one of the best data sets available, is not comprehensive as it largely excludes non-members. However, membership is not exclusively North American and many European-based lines increasingly choose to join CLIA. Members lines as of July, 2006, include: American Cruise Line, Carnival Cruise Lines, Celebrity Cruises, Costa Cruises, Crystal Cruises, Cunard Line, Disney Cruise Line, Holland America Line, MSC Cruises, Norwegian Coastal Voyages, Norwegian Cruise Line, Oceania Cruises, Orient Cruises, Princess Cruises, Regent Seven Seas Cruises, Royal Caribbean International, Seabourn Cruise Line, Silversea Cruises and Windstar Cruises.

[27] Operations in seasonal cruising regions usually occur over a six- to eight-month period, with vessels repositioned to another seasonal or year round cruising region during the off-season. By example, operations in Alaska typically occur from late April through late September, with vessels transiting the Panama Canal to return to the Caribbean to offer cruise itineraries through the winter.

Table 17: Cruise capacity placement by region, North American Operators
Source: CLIA, and B&A, 2007

Region	Bed-Nights									% Change 04 to 05
	97	98	99	00	01	02	03	04	05	
Caribbean	**15,986,819**	**17,117,659**	**16,666,328**	**21,510,142**	**21,833,347**	**26,741,052**	**28,999,049**	**31,210,605**	**31,450,239**	**0.77%**
Mediterranean	3,286,598	5,092,530	5,898,948	6,277,064	7,546,816	6,497,444	8,153,251	9,704,398	9,734,348	0.31%
Alaska	3,625,946	3,790,816	4,086,620	4,197,332	4,698,538	5,052,907	5,265,159	5,913,967	6,417,134	8.51%
Bahamas	3,115,496	2,891,352	3,060,866	3,200,346	4,698,724	2,876,295	3,305,636	3,656,705	4,397,472	20.26%
Trans Canal	2,817,313	2,612,788	3,036,208	2,573,444	2,396,424	2,092,723	2,783,975	2,930,528	2,718,752	-7.23%
Mexico West	1,887,210	2,421,126	2,529,106	2,680,934	1,166,756	3,386,475	3,390,768	4,827,262	5,759,636	19.31%
N. Europe	2,821,643	3,714,437	3,475,922	3,744,693	4,837,375	6,922,608	7,721,741	7,560,171	5,522,005	-26.96%
Bermuda	1,103,553	1,094,982	1,482,573	988,391	1,269,952	1,226,806	1,476,443	1,324,690	1,329,274	0.35%
Trans Atlantic	711,714	725,040	961,213	1,015,625	1,129,669	1,005,665	1,145,651	1,425,596	1,747,363	22.57%
Hawaii	570,164	745,216	885,268	857,390	1,557,438	1,903,302	1,953,200	2,629,458	2,907,444	10.57%
South Pacific	293,656	369,507	947,382	1,155,217	1,158,004	835,464	1,099,056	683,506	657,382	-3.82%
SE Asia	413,671	157,705	150,107	244,620	429,550	346,196	123,350	20,372	58,120	185.29%
Africa	107,060	291,850	184,373	502,773	401,011	259,962	188,964	17,640	67,624	283.36%
Canada / New England	492,541	527,530	681,689	1,107,689	1,138,975	1,150,950	1,105,274	1,488,585	1,174,160	-21.12%
Far East	315,498	218,988	188,038	201,582	215,022	360,022	219,358	403,538	644,148	59.63%
Mississippi	345,888	353,510	353,088	347,140	403,956	0	0	0	0	0%
World	440,986	545,242	565,824	414,342	613,046	582,314	375,384	462,934	460,670	-0.49%
S. America	482,506	943,392	657,992	825,670	1,422,755	1,394,808	1,653,535	1,088,569	1,417,357	30.20%
Coastal West	98,538	136,198	65,108	217,518	1,944,752	216,338	376,709	643,792	433,436	-32.67%
Indian Ocean	68,079	90,159	40,572	120,698	227,483	93,708	23,148	10,544	38,440	264.57%
U.S. Coast East *	n/a	50,648	113,387	1,402,429	80,312	147,422	837,540	60,072	34,056	-43.31%
Other	395,768	350,037	286,065	277,778	411,421	492,750	488,326	1,235,534	211,712	-583.6%
Totals	***39,380,653***	***44,240,712***	***46,316,677***	***53,862,817***	***59,581,326***	***63,585,211***	***70,685,517***	***77,298,466***	***77,230,956***	***-0.09%***

Notes: * Total included as part of Other prior to 1998.

A.4.4 Canada & New England Cruise Capacity Deployment

The region covers the waters immediately adjacent to the East Coast of the U.S. and Canada inclusive of the Atlantic Canada Provinces and the adjacent Northeastern United States – Maine, Massachusetts and New York- known as Canada & New England – exclusive of Bermuda.

Capacity overall in the region has grown considerably over the time period with growth leveling off somewhat in 2005. The Coastal East itineraries made up mainly of U.S. Coastal cruises has seen solid growth with relatively small ships in this market.

Table 18: Cruise capacity placement in Canada & New England, N.A. Operators
Source: CLIA, and B&A, 2007

Region	Bed-Nights									% Change 04 to 05
	97	98	99	00	01	02	03	04	05	
Trans Atlantic	711,714	725,040	961,213	1,015,625	1,129,669	1,005,665	1,145,651	1,425,596	1,747,363	22.57%
Canada / New England	492,541	527,530	681,689	1,107,689	1,138,975	1,150,950	1,105,274	1,488,585	1,174,160	-21.12%
World	440,986	545,242	565,824	414,342	613,046	582,314	375,384	462,934	460,670	-0.49%
U.S. Coast East *	n/a	50,648	113,387	1,402,429	80,312	147,422	837,540	60,072	34,056	-43.31%

Overall, the region accounted for approximately 1.5% of North American total capacity in 2005. These are similar levels to those dating back to 2001. Thus, it is reasonable to conclude that from a North American operator perspective, the region has benefited from the expansion of the cruise market and the diversification of itineraries. However, this has also meant that overall competition for traffic has expanded beyond the typical summer and fall cruise regions (Bermuda and Alaska) to also include Europe and Caribbean sectors. Why? Cruise industry interviews and others sources suggest that, at present, the market is accessible and less costly from which to operate vessels targeted to North Americans via New York and Boston homeports. North American operators have had success in understanding how to market and develop cruise products that appeal to the tastes of many diverse consumer groups. North American operators suggest that there are still opportunities present along the U.S. and Canada East Coast cruising region, and as such, this region will be one of the many focuses of their development in the mid- to long-term. Cruise line deployments will also continue to be based

upon outside influences directly related to other potential markets in Europe and Asia as they begin to open and develop. However, it is not envisioned that this region will become a booming "Alaska" within the mid- to long-term due to the lack of consumer demand and overall tourist appeal. This region is seen as a more subtle and less active cruise destination appealing to older premium and contemporary passengers.

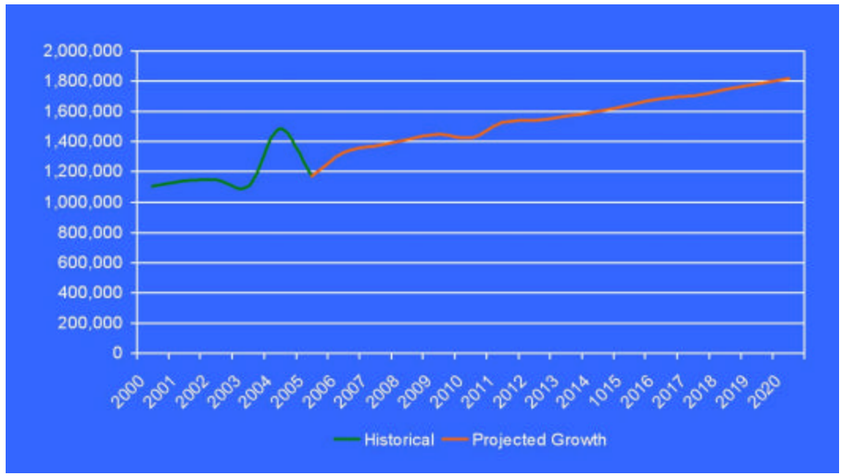
A.5 Primary Cruise Region Growth – Canada & New England

While Bar Harbor captures cruise passenger traffic from Transatlantic, Atlantic Coastal, World Cruises and others, the primary passenger source market is Canada & New England. As presented above, historical cruise capacity placement data indicate regional fluctuations on a year to year basis with the long-term trend suggesting a range from stability to growth (see Figure 38). Several additional mid- to long-term trends add weight to an overall positive outlook for the Canada & New England region:

- Global industry fundamentals remain positive;
- The Northeast consumer market offers a disproportionate overall share of cruise passengers in the North American market, which bodes well for future growth in the Canada & New England market due to name recognition and convenience; and
- Regional ports and destinations are actively pursuing infrastructure enhancement projects to support increased cruise vessel operations.

The region, however, is not without its challenges. Expanded commitment by cruise lines over the long term will be incumbent on mid-term success in marketing cruises, developing products that appeal to diverse consumer groups, and ultimately, selling cruises at per diems competitive with other worldwide regions. With these opportunities and challenges in mind, a trend progression analysis was conducted to project Canada & New England market growth through 2020. This is a simplistic scenario, but based on the overall size of the regional market today this provides a sufficient growth scenario through which one can gauge the anticipated growth of the region overall.

Figure 38: Canada & New England Regional Growth Projection, 2006 - 2020
Source: B&A, 2007



Results from the trend projection presented shows capacity placement in the Canada & New England region could conservatively expand from 1.1 million bed-nights in 2006 to a 2.4% annual growth yield of 1.8 million bed-nights by 2020. This is a conservative growth over the period of approximately 32.5%. Overall, the projection presents reasonable, albeit a conservative outcome. This projection for the Canada & New England region bodes well for future cruise tourism growth opportunities for the Town of Bar Harbor.

Appendix B Satisfaction Benchmarking

B.1 Section summary

Appendix B provides a brief summary of potential efforts the Town of Bar Harbor could consider from a benchmarking aspect. This is inclusive of economic and operational benchmarking approaches. As an example, it will help to address issues such as:

- *Assessing Economic Impact*. Spending patterns, total dollars, revenue flow, local business impact(s), direct and indirect affects of visitor spending.

- *Assessing Visitor Satisfaction.* A survey covering the territory more conducive to those elements required for meeting the needs and expectations of the cruise ship and land-based visitor. These include both port-related services and tourism infrastructure.

- *Determining Resident Attitudes.* A survey to assist in the assessment of the community's perception of and attitudes towards the development of Bar Harbor as a cruise destination, and to better gauge community support for potential future projects.

B.2 Operations satisfaction benchmarking

Survey Methodology and Distribution

1. Survey Information Gathering

The cruise industry continues its evolution within the Canada/New England cruise region through expansion efforts, refining product quality, and extending itinerary patterns to include new destinations. Throughout this process, benchmarking efforts on behalf of regional destinations assist in efforts to meet the needs and expectations of the cruise lines and passengers. These surveys and other benchmarking tools provide a baseline for the continued assessment of services, operations, hardware and other items essential for the development of the cruise line industry in the region. Benchmarking is an important element in the overall Bar Harbor directive towards being an attractive cruise destination. This will assist in preparing for future infrastructure and service requirements that satisfy the cruise lines and their guests, in order to keep them coming back year over year. Information gathering for Bar Harbor is an attempt to collect quantifiable information to assist in this process.

The regional ports cater to a variety of cruise line brands – from mass market (European and North American) to premium luxury brands – due to the variations of port appeal, infrastructure and tourism attractions. The Canada/New England region is a particularly popular cruise destination during late summer months and the fall foliage season – Bar Harbor being a significant port-of-call in repositioning itineraries. Cruise traffic has continued a steady, yet slow, pace of growth – with some minor deviations due to world events - therefore it is advantageous for Bar Harbor to receive feedback from those cruise line clients, other stakeholders and residents.

Visitor and Resident surveys attempt to gather information on measures of independent and dependent variables, demographic attributes, and other information with commonality to the survey instrument. Thus, survey questions vary depending upon the survey type. Listed below are the formatting variables and methodology elements of a survey.

2. Survey Format and Question Formulation

General Introduction. The survey introduction should describe the study or benchmarking purpose, group or institution collecting the research information, outline of the confidentiality of the responses, and the approximate time it will take to complete the survey questionnaire. In addition, the survey introduction should also try to explain the importance of the survey, and why the respondent's answers are important to the success of the research (i.e. give them a reason for taking time out of their busy schedule to complete the survey form).

Instructions. Use them to help the respondent understand the questions asked and how to complete and properly return the questionnaire. These directions can apply to an individual item (how to complete the question); a section of questions (explain a section of questions and guide the reader); the whole questionnaire (normally found in the introduction); and "Go To" instructions (when filters employed in the survey instrument). It will also be important in the production of the survey instrument that language, nationality and other factors are taken into account in the assemblage of instructions.

Question Order. The survey instrument should begin with questions that the respondent would enjoy answering. Placing easy questions at the beginning of the survey and increasing the difficulty

throughout is a good strategy. Placement of non-threatening and/or interesting items at the beginning of the survey will not scare off the respondent. Finally, make certain that the initial questions are relevant to the stated purpose of the survey. Here are additional question ordering points;

- Begin with factual and then move toward more abstract questions.
- Open-ended questions should be placed toward the end of the survey and be limited in number.
- Avoid ordering of questions that might introduce bias.
- Attribute questions should be at the end of the survey (e.g. income, age).
- Group questions into sections to provide a flow to the survey and ease interpretation of questions.
- Vary question format to avoid a "boring" survey.

Appearance and Length. For self-administered surveys the overall length is of great importance. The survey should not be too long, but at the same time it should not appear to "cram" as many questions on a page as possible. Keep it short and avoid clutter. Both the font and type space should be easy to read and pleasing to the eye. For surveys that are done on paper – use good quality paper and reproduction methods. For structured interviews and telephone surveys there are no hard and fast rules, although it is important to keep the overall length of the survey within a time period that does not interfere with the agenda of the respondent.

Question Types. There are three basic types of questions that may be included in the survey form. They include:

- **Open and closed-ended questions.** Open-ended questions allow the respondent to provide his/her own answer to the particular question. These are best at the end of a survey. Closed-ended questions require the respondent to select their questions from amongst those provided in the survey instrument. These response categories should be exhaustive in nature by outlining additional information sources such as "Other" and "Please Specify" in order to fill in the appropriate response. Respondents should not feel compelled to answer more than one response, unless specified. Types of closed-end questions include:

- **Like-Type:** Agree/Disagree; Like/Dislike; Support/Oppose.
- **Checklist:** Selects those that best fit the requirement.
- **Rank Order:** Ranking in order of importance.
- **Attitude Choice:** Force respondents to select one of the possible responses.

The advantages of open-ended questions are that they allow the respondent to answer in their own words; and allow for possible responses that the survey may not have anticipated. Disadvantages include time consuming nature of the questions; sometimes difficult to interpret; and they may intimidate some respondents. Closed-ended questions also have advantages such as the uniformity of response; easy to code; less intimidating; and not too time consuming. The disadvantages include the non-inclusion of key questions and the other category does not work effectively; respondent may employ qualifiers to the answer; and they response may not actually capture the beliefs of the respondent. Whether a survey uses open vs. closed-ended questions depends upon the question content; respondent motivation; survey type; type of respondent; availability of coders; and the time available to develop the questionnaire.

- **Contingency questions.** These are questions that are primarily used to identify and filter out certain respondents, who may not be appropriate to answer certain questions within the survey. By example: when asking a question on marine conditions, you may use a qualifier contingency question to allow for only those respondents with the proper background to answer the question. This may include: "Are you satisfied with sidewalk widths…if yes go to question (2); if no skip (2)"; and,

- **Matrix questions.** These questions can be used when there is a series of related closed-ended questions with the same response categories. The advantage to this type of question is that they are efficient and increase the chances of a respondent answering each question. They also allow for easy comparison across responses by the researcher. However, they may also cause the respondent to be sloppy or set a response trend. They should be used in small sets only.

Question Wording. The wording of the questions in this type of survey may be important for a number of reasons. First, you may be requesting responses from persons that have different language backgrounds; the question must have validity and reliability; and must have a reason to be asked. Questions should provide a context and frame of reference for the respondent by laying out a time frame for the response. Others include:

- Ask questions respondents can reliably answer. Make sure the question is applicable to the respondents skill-set and knowledge level.
- K.I.S.S. (Keep it Simple Simon). Keep the wording simple. People should know what you mean by creating less confusion and ambiguity. Do not include jargon or technical terms unless the survey is addressed to a particular set of respondents.
- Make sure the terms mean the same thing to all potential respondents.
- Avoid using negative items that often lead to misinterpretation and confusion. By example: Do you agree that all piers should be 500-meters?
- Also avoid using biased items and terms. Respondents should not feel there is a wrong or disapproved answer.
- Avoid leading questions that encourage a particular response.
- Do not artificially create opinions by not allowing the respondent to answer, "I don't know"; "No opinion"; or use of a filter question.
- Avoid asking a combination of questions in the same question by watching for the word *and* in the question.
- Do not use extreme questions that will not result in a variation of responses.
- Vary wording within matrix questions to keep the respondent involved.
- Provide the subject matter before providing the alternatives for the question.
- Finally, if the question is of a sensitive nature it might be better to address the question through an indirect approach.

The different survey instruments will vary dependent upon its specific use (e.g. Bar Harbor as a preferred port-of-call and/or land-based tourism destination), and who the survey it geared towards.

3. Survey Respondent Identification and Distribution

Survey Instruments

Each of the particular surveys outlined in this project for potential distribution is unique to an individual set of respondents:

- Based on our past experience, an *Economic Impact* survey encompassing those questions most-related to the spending patterns, total dollars, revenue flow, and local business impact(s) is a very helpful tool in assessing the direct and indirect affects of visitor spending.
- A *Visitor* survey covering the territory more conducive to those elements required for meeting the needs and expectations of the cruise ship and land-based visitor. These include both port-related services and tourism infrastructure.
- Finally, a *Resident* survey to assist in the assessment of the community's perception of and attitudes towards the development of Bar Harbor as a cruise destination, and to better gauge community support for potential future projects.

The surveys should be designed in Microsoft Word format and simplified, so respondents can fill out the form on the computer (via e-mail) without the need of further reproduction efforts. They can also be printed out and returned via fax if necessary. Each survey could also be included in an HTML format and placed in the Bar Harbor website(s) to be filled in and collated through this direct source. The task would then be to get the respondents to go into the website and fill out the survey form. Another possible scenario is via mail, which may be time consuming for the initial processing and costly for postage. These surveys are produced in the English-language only; however, they can be translated accordingly. For each survey a cover sheet should be produced outlining the reasoning for the survey; survey content; and instructions for completing and responding to the survey as indicated above.

The goal of the survey instrument is to collect a variety of reliable and accurate data in order for the association to use this material as a benchmarking tool for future use. Thus, the respondents identified as a source for the surveys must be able to have the time, ability, knowledge base and information availability to participate in this survey. Based upon the persons targeted there may well be different responses that may not accurately reflect the best possible answer to the questions posed. In addition, this survey tool is further complicated by the potential variety of respondents located in different locations (shipboard vs. office). Viewpoints and answers may differ from these sources, so the survey must be consistently presented and interpreted to allow for these differences.

Below is a *Visitor* survey template that has been prepared for Bar Harbor. A similar survey may be adapted to address related *Resident* issues; each may incorporate the appropriate *Economic Impact* elements.

Figure 39: Town of Bar Harbor *Visitor* Survey (Template)
Source: B&A, 2007

Town of Bar Harbor Visitor *Survey*

The Town of Bar Harbor is conducting a cruise line guest services survey of your overall satisfaction with your visit(s). The objective of this survey is to provide information to assist in the enhancement of the visitor's experience and identify the future infrastructure and service needs. This survey should take about 10 minutes to complete. Your responses will be held strictly confidential.

1. Please rate the following facilities and services.

- **Town and surrounding area. (both the Town and inland destination, if applicable)**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Activities during the visit on arrival and departure. (meet & greet / entertainment)**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Tourist information (availability / quality / quantity / appropriate language).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **If applicable, accommodations (availability / quantity / standard / pricing).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Ground services access and parking (independent / shore excursion / ground services).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Ease of access to the town tourist center (or inland destination access).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Port and terminal facilities (cleanliness of toilets / availability of other services).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Passenger terminal (seating capacity / protected area from elements / general cleanliness).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Food & beverage services (availability / quality / service / price).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Shopping in the town (product diversity / proximity / hours of operation / payment options).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.
- **Staff hospitality at port facility (attitude / quality of service / understanding / punctuality).**
  ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very dissatisfied ☐ Don't Know
  Please explain:_____.

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2. Please identify and rank those items most needing improvements.
(1 being most important and 5 being least important)

	1	2	3	4	5
☐ *Welcoming reception for cruise line passengers*	☐	☐	☐	☐	☐
☐ *Cruise Ship Passenger Reception Facility*	☐	☐	☐	☐	☐
☐ *Passenger reception and shore excursion dispatch area(s)*	☐	☐	☐	☐	☐
☐ *Anchorage or Berthing process*	☐	☐	☐	☐	☐
☐ *Tendering procedure (if applicable)*	☐	☐	☐	☐	☐
☐ *Motor coach and/or taxi and car parking area(s)*	☐	☐	☐	☐	☐
☐ *Tourism related materials for the town and surrounding area*	☐	☐	☐	☐	☐
☐ *Ground services and/or shore excursion process*	☐	☐	☐	☐	☐
☐ *Independent activities*	☐	☐	☐	☐	☐
☐ *Cruise Ship Terminal Services (food & beverage, shopping)*	☐	☐	☐	☐	☐

Please explain (if needed):_____.

3. Please compare the facilities at Bar Harbor with other ports in the region.

- **Welcome reception.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.
- **Port services.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.
- **Tariff and service prices.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.
- **Tourism opportunities.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.
- **Port infrastructure.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.
- **Port equipment.** ☐ **Better than other ports** ☐ **Neutral** ☐ **Worse than other ports**
  Please identify the BEST port in this category:_____.

The following questions will be used for clarification purposes only.

1. ***What is your cruise line? _____. And ship(s) calling?_____.***
2. ***How many times in 2002 did you call? _____. And type of call?*** ☐ **Homeport** ☐ **Port of call**
3. ***How long is the ship in port? _____hours. And does the ship?*** ☐ **Berth** ☐ **Anchor**
4. ***What is the port-of-call prior to your visit? _____. After? _____.***

We thank you for your assistance in completing and returning this survey

Visitor services survey 2006 (Sample)

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Respondent Selection

The management level and position that the survey is delivered to for completion will also play a role in the question responses. Bar Harbor should identify those persons and levels of management that reflect the best ability to accurately identify and answer questions relevant to the survey. If the survey is sent to a management level – such as Sr. V.P. or Chairman – it may not be filled out, or it may be given to another person in the organization for completion, as this person does not have the knowledge level to complete the survey accordingly. Targeting those positions within the corporation that have day-to-day oversight of operations; the ability to gather information to answer questions; and understand the potential benefits of assisting in completing the survey is essential to achieve the response level for the survey instrument. Target respondents for the surveys may include:

- **Economic Impact Survey:** Survey questions that address *Economic Impact* issues should be incorporated into both the *Visitor* and *Residents* surveys. Questions should target local retailers and restaurants, tour operators, cruise passengers and land-based visitors, and residents. Questions aim to assess to overall economic impact with regard to average passenger spending, local business dependence, and visitor demographic.

- **Visitor Satisfaction Survey:** This survey would be distributed via personnel in a port-of-call scenario to be done either through the utilization of survey takers or via direct input and return from each passenger selected. Only a small percentage of each cruise line would be targeted. The cruise line and ship should always be advised, provide approval and be involved in the survey process.

- **Resident Survey:** This survey should be geared towards assisting in the assessment of the community's perception of and attitudes towards the development of Bar Harbor as a cruise destination, and to better gauge community support for potential future projects. Residents may further assist Bar Harbor in identifying those items of need and defining more specific timelines for the implementation of these hardware/software infrastructure and service programs.

Survey Distribution

Due to the very nature of surveys, the distribution and collection process may be somewhat difficult to accomplish. However, with persistence and effort a percentage of responses will assist in garnering the feedback necessary to benchmark port operations. Below are some suggestions for survey distribution:

- **Timing:** Bar Harbor should determine a specific timetable rotation for issuing a survey. The *Visitor* survey is best conducted as cruise passengers are either making their way back to the ship or onboard the ship prior to its departure, or (for land-based visitors) distributed and completed at central locations (such as Acadia National Park or Tourism Center location). Interviewers may be used to expedite the process. Again the cruise line should always be informed of the surveying and grant approval prior. They can also assist in this effort. Finally, the *Resident* survey can most likely be sent at any time during the year with consideration for holidays and seasonality.

Methods: The survey instrument should be sent or placed in the most appropriate and easily accessible position for each of the survey respondents. Methods of distribution may include mail; e-mail; fax; on-line web site; interviewer; telephone; or others. Each of these methods should be evaluated by the necessary parties for their usefulness prior to survey distribution. You may also combine methods as required to accomplish the task. Make sure you allow time for the respondent to receive and complete the survey instrument prior to setting a deadline for return of the survey.

Appendix C Terminology Used In This Study

Several definitions, cruise industry terms and acronyms used throughout this report may not be familiar to the reader. We define several of these terms in the following section.[28]

1) **Adequacy.** Sufficient to satisfy a requirement or meet a need. Barely satisfactory or sufficient.[29]

2) **Air Draft.** The maximum height of a ship above the waterline.

3) **Apron.** Area immediately adjacent to the vessel berth where ships' lines, provisioning, gangway and other operations occur.

4) **Anchorage.** Location where a ship may anchor. In destinations where docks are not present to accommodate ship operations, anchorages are used and passengers are shuttled to/from the cruise vessel to a landside location using a small boat (tender). Anchorages are generally only used in ports-of-call.

5) **Beam.** The width of the cruise ship at its widest part. *Panamax Vessels* refer to ships with beams than can transit the Panama Canal (beam is equal to 36m or less). *Post-Panamax Vessels* have beams that exceed the width of the Panama Canal, or greater than 36m.

6) **Bed (berth)-nights.** A typical cruise industry form of capacity measurement representing the number of lower berths (a bed on a cruise vessel, with the aggregate total generally determining the vessel's normal passenger capacity) times nights of operation in a region.

7) **Berth.** (1) A bed, generally attached to the deck and/or bulkhead onboard a ship. (2) An anchorage or dock space for a ship in port.

8) **Bunkers.** Marine fuel used for propulsion.

9) **Cabotage Laws** (also referred to as *coastwise shipping laws*). Relates to the ability of foreign-flagged vessels to transport goods and passengers between domestic ports. Cabotage Laws are often put into place to protect domestic shipping industries.

10) **Conventional cruises.** Leisure oriented voyages on deep-water, ocean-going cruise vessels of two-or-more nights often to a variety of destinations. Conventional cruises are offered either by regional or international operators marketing to a variety of consumer sectors and nationalities.

11) **Cruises-to-Nowhere.** Generally geared toward a local consumer market (within a one-hour drive) with the mainstay of the cruise experience is focused around on-board gaming, food and entertainment.

12) **Deadweight Tonnage**. Refers to the actual weight of cargo, fuel and stores required to bring the ship down to her load-line marks.

13) **Displacement Tonnage.** The amount of water displaced by the vessel or the actual weight of the ship. (This measure is not often used to describe cruise ships, but it is meaningful in describing military vessels. It is typically applied to a ship in normal operating state i.e. with fuel and stores on board).

14) **Dockage.** Fees levied by a port or destination for the right to dock a vessel.

15) **Draft.** The depth of water required by a vessel to float; the measurement in meters of the extent to which the ship projects below the surface of the water.

16) **Ferry.** Term usually applied to a vessel transporting passengers and vehicles from point to point. The key difference between these operations and conventional cruises is that ferry operations have as their primary business focus offering transportation services, not a travel and leisure experience.

17) **Gross Register Ton (GRT).** A measure of a ship's enclosed volume. This term has emerged as the standard measure of communicating a ship's size. A *Mega-ship* generally refers to a vessel of 70,000 GRT or larger.

18) **Ground Transportation Area (GTA).** Zone in which vehicles, including buses, taxis and private cars are organized and accessed as part of cruise terminal/destination embarkation and disembarkation activities.

19) **Homeport** (also referred to as *baseport*, *port of embarkation*, *turnaround port*). A marine facility and destination city that serves as the base of operations from which the cruise begins and/or terminates.

20) **Itinerary.** Ports visited on a given cruise. Two itinerary types are generally observed. *Open-jaw itineraries* refer to those deployments where the cruise begins at one homeport and end at another. *Closed-jaw itineraries*—the more common type observed—begins and end from the same homeport.

21) **Length Overall (LOA).** Total length of a cruise vessel, including any incidental structure that may extend this dimension.

22) **Lower Berth Capacity.** The number of beds of standard height on a cruise vessel. The number of lower berths determines the vessel's normal passenger capacity. *Maximum Passenger Capacity* refers to the total number of passengers that can be accommodated on the cruise ship in lower berths and other flexible berths (also referred to as *upper berths).*

23) **Mixed-Use Facility.** Refers to facility or complex with more than one type of real estate or operational use. Mixed-use facilities are generally: (1) Contiguous in nature; (2) Developed within a broader master plan constructed at one time or in phases; and, (3) Provide for a symbiotic relationship to occur among all uses such that the sum of the mixed-use facility from a real estate or operational perspective is greater than its parts. Mixed-use maritime facilities often include cruise, ferry, marina, commercial, residential, recreational and other upland transportation facilities.

24) **Need.** A condition or situation in which something is required or wanted. Necessity; obligation. To be necessary.[30]

25) **Panamax vessel.** Size standard that equals the largest ship dimension capable of transiting the Panama Canal. Generally based on the beam of the ship. See Beam.

[28] Bermello, Ajamil & Partners, Inc. 2006, and Israel, Giora and Laurence Miller, Dictionary of the Cruise Industry, Seatrade Cruise Academy, 1999.

[29] The American Heritage Dictionary of the English Language, Fourth Edition by Houghton Mifflin Company, 2000.

[30] The American Heritage Dictionary of the English Language, Fourth Edition by Houghton Mifflin Company, 2000.

26) Passenger Tax (also referred to as a *head tax*). Port charge assessed against each passenger aboard the vessel. Generally the principal income stream to ports and destinations for accommodating cruise activities.

27) Port-of-call (also referred to as a *way-port*). One of several destinations visited as part of the cruise itinerary. The focus of the port-of-call is on tourism activities adjacent to the cruise arrival area and the transportation of passengers to regional points of interest.

28) Post-Panamax vessel. Size standard that exceeds the largest ship dimension capable of transiting the Panama Canal. Generally based on the beam of the ship. See Beam.

29) Terminal. Building where cruise passengers embark and/or disembark in a homeport destination.

30) Throughput Passenger (also referred to as a *revenue passenger*). Total number of passengers arriving and/or processed at a cruise homeport and port-of-call.

31) Transit Passengers. By literal definition, the status of cruise passengers at a port-of-call.

Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path	Short								Mid												Long											
								2007				2008				2009				2010				2011				2012				2013				2014
								1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	+
Policy	P-1	High	CRUISE PARTNERSHIPS	Formalize cruise industry relationships through the development of a communications plan aimed at the key areas of Marketing, Operations and Environmental concerns related to the cruise ship operations in Bar Harbor.	BH, Chamber, DOT	3 to 6 months	n/a																														
Policy	P-2	High	TRANSPORTATION GUIDELINES	Include within a policy format all of those transportation related elements associated with tourism operations in Bar Harbor. These guidelines are inclusive of traffic movements, parking, operations, monitoring, licensing, and other elements for land and cruise tourism based transportation.	BH	3 months	n/a																														
Policy	P-3	High	CRUISE PASSENGER THROUGHPUT POLICY	While already in place for 2 ships per day, we recommend revising the policy to establish daily caps based on seasonality (summer and fall seasons), passenger capacity based on the tourism capacity of Bar Harbor and Acadia National Park (as the main tourism asset of the area) and other factors in conjunction with the cruise line industry.	BH, Cruise Lines, Acadia	2 months / on-going	n/a																														
Policy	P-4	High	CRUISE FEES	Bundle all cruise related fees into one source inclusive of anchorage and tender fees, security, transportation fees and others controlled through the Town of Bar Harbor cruise operation.	BH, Cruise Lines	2 months / on-going	P-3																														
Policy	P-5	Medium	COMPREHENSIVE PLAN	Incorporate key recommendations and assessment items of the CTDMP into the Town of Bar Harbor's Comprehensive Plan. Items may include traffic, parking and other issues.	BH	1 month	P-2																														
Policy	P-6	High	HARBORSIDE TENDER FACILITIES	As part of the approvals criteria for the development of the overall site plan, a stipulated requirement should be to include adjacent to the pier site, an upland Ground Transportation Area able to support the movement of tender passengers through the facility.	BH, Cruise Lines, Developer	12 to 18 Months																														
Policy	P-7	High	ENVIRONMENTAL MONITORING PROGRAM	Establish recurring environmental monitoring program for cruise operations. Sample, test and monitor wastewater discharge from docking and anchored vessels, stack emissions, solid waste disposal (if any), and overall water quality to sustain acceptable standards dictated by the appropriate rules, regulations, and publications applicable to Bar Harbor operations.	BH, Cruise Lines	1 month / on-going	n/a																														
Policy	P-8	Medium	TOWN OF BAR HARBOR TOURISM ENTITY	This is aimed at serving tourism as a whole. Track, manage, assess issues, market, and train and formalize tourism development process for the Town of Bar Harbor.	BH, Chamber	6 to 12 Months	n/a																														
Policy	P-9	Medium	MOTOR COACH LICENSE FEE	Initiate a license fee system for all motor coaches entering the Town of Bar Harbor inclusive of land and cruise tourism operators.	BH	1 month / on-going	P-2																														
Policy	P-10	Medium	INFRASTRUCTURE DEVELOPMENT / MAINTENANCE FUND	Establish a mechanism whereby through a fee or lump sum system a fund is established to pay for items related to cruise tourism infrastructure requirements to assist in sustainability and operational issues amongst others.	BH, Chamber, Cruise Lines	6 to 12 Months	P-1																														
Policy	P-11	Medium	CRUISE TOURISM WORKSHOP	As part of an annual process conduct a cruise tourism workshop with stakeholders to review and adjust guidelines as necessary based on infrastructure and other changes; Discuss issues impacting the Town of Bar Harbor; conduct a review of the oversight process of guidelines, operations and environmental issues; and provide training and information programs for the local community and cruise tourism stakeholders.	BH, Chamber, Cruise Lines, Cruise Maine, Tour Operators	2 months / on-going	P-1, P-8																														
Policy	P-12	Low	TRANSPORTATION PROVIDERS TRAINING PROGRAM	Assist tour operators and transportation providers in the development of training programs based on transportation guidelines, policies and other elements associated with cruise tourism operations and management in the Town of Bar Harbor.	BH, Chamber, Cruise Lines, Cruise Maine, Tour Operators	3 months / on-going	P-2																														

Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path
GTA	G-1	High	PARKING AND QUEUING AREAS	Establish specific parking and queuing zones for motor coaches within the Town of Bar Harbor for cruise and land-based coaches such as those adjacent to the Agamont Park GTA on Newport Drive. Sites include Newport Drive, West Street, Main Street (all adjacent to the current GTA) and within Harborside as stipulated for a new tender facility. A coach queuing area should be established at the Ball Park.	BH, Tour Operators	1 month	P-2
GTA	G-2	High	ONE WAY MOTOR COACH MOVEMENT	One way motor coach movement within the Town of Bar Harbor is encouraged. Specifically, inbound from Hwy #3 to Eden Street and inbound via Mt. Desert Street, turning North along Main Street to the GTA and then outbound via West Street only. Inbound from Acadia National Park motor coaches can move along Cromwell Drive to Main Street and out West Street.	BH, Chamber, Tour Operators	3 months	P-2
GTA	G-3	High	EMPTY TOURISM TRANSPORTATION VEHICLES	These vehicles should avoid circulating through the Town of Bar Harbor residential areas once passengers are dropped off in the area. Instead, the vehicles should be encouraged to utilize the queuing area at the Ball Park or other area outside the Town until required for pick-up.	BH, Tour Operators	1 month	P-2
GTA	G-4	High	DOWNTOWN DROP-OFF AREA	A cruise tourism passenger drop-off area should be established adjacent to the Village Green. Preferred sites would be on Mt. Desert Street in front of Window Panes or along the East side of Main Street adjacent to the Park.	BH, Chamber, Tour Operators	2 month	P-2
GTA	G-5	High	RESOURCE SCHEDULING	Tour operators should schedule vehicles to maximize the efficient use of the vehicle, thus limiting the overall numbers of transportation units required to move cruise passengers within the Town of Bar Harbor. Limit the total number of motor coaches on the roadways and parked within the town. Use the Ball Park for alternative queuing area when possible.	BH, Tour Operators, Acadia	2 months / on-going	P-8
GTA	G-6	High	AGAMONT PARK ONE WAY LOOP TRAFFIC	Encourage one-way loop traffic for all tourism transportation vehicles, delivery vehicles and non-local vehicular traffic around Agamont Park from Main Street to Newport Drive to Agamont Lane and along West Street.	BH, Tour Operators	1 month / on-going	P-2
GTA	G-7	High	HANDICAP ZONE USE	Tourism transportation should only use these areas by permit or those vehicles equipped with a wheelchair lift for the loading and unloading of passengers only. No parking or queuing is permitted.	BH, Tour Operators	1 month / on-going	P-2
GTA	G-8	Medium	TOURISM TRANSPORTATION TRAFFIC FLOW	Motor coaches should not slow or stop for sightseeing opportunities within the Town of Bar Harbor or impeded or slow vehicular traffic within the town. Common courtesy should be used at all times. No stopping or parking on West Street, unless to turn into Harborside or other property. No tourism transportation traffic should use Ledgelawn Avenue as an alternative route or parking area. There should be limited use of residential streets within the Town of Bar Harbor for tourism transportation.	BH, Tour Operators	1 month / on-going	P-2
GTA	G-9	Medium	LIMITED MOTOR COACH ACCESS ON WEST AND COTTAGE STREETS	Two-way motor coach traffic should be limited / controlled on Cottage and West Streets due to roadway congestion, parking, bicycle and pedestrian uses.	BH, Tour Operators, Chamber	1 month / on-going	P-2
GTA	G-10	Medium	TAXI AND SMALL TOUR VEHICLE LOADING AREA	Establish a parking zone for loading and unloading of cruise passengers for 4 to 6 vehicles along the Northeast parking area of Harbor Place. Move these vehicles from the front of the building during peak tour operations hours (8 – 10:00AM) to assist in the flow of passengers to the GTA.	BH, Tour Operators, Chamber	1 month / on-going	P-2
GTA	G-11	Medium	PARKING SPACE REMOVAL	Remove the 2 bottom parking spaces on the west corner of Main Street adjacent to West Street (on cruise ship days only) to ease movement of coaches and traffic in area and as a preventive accident measure.	BH	1 month	n/a

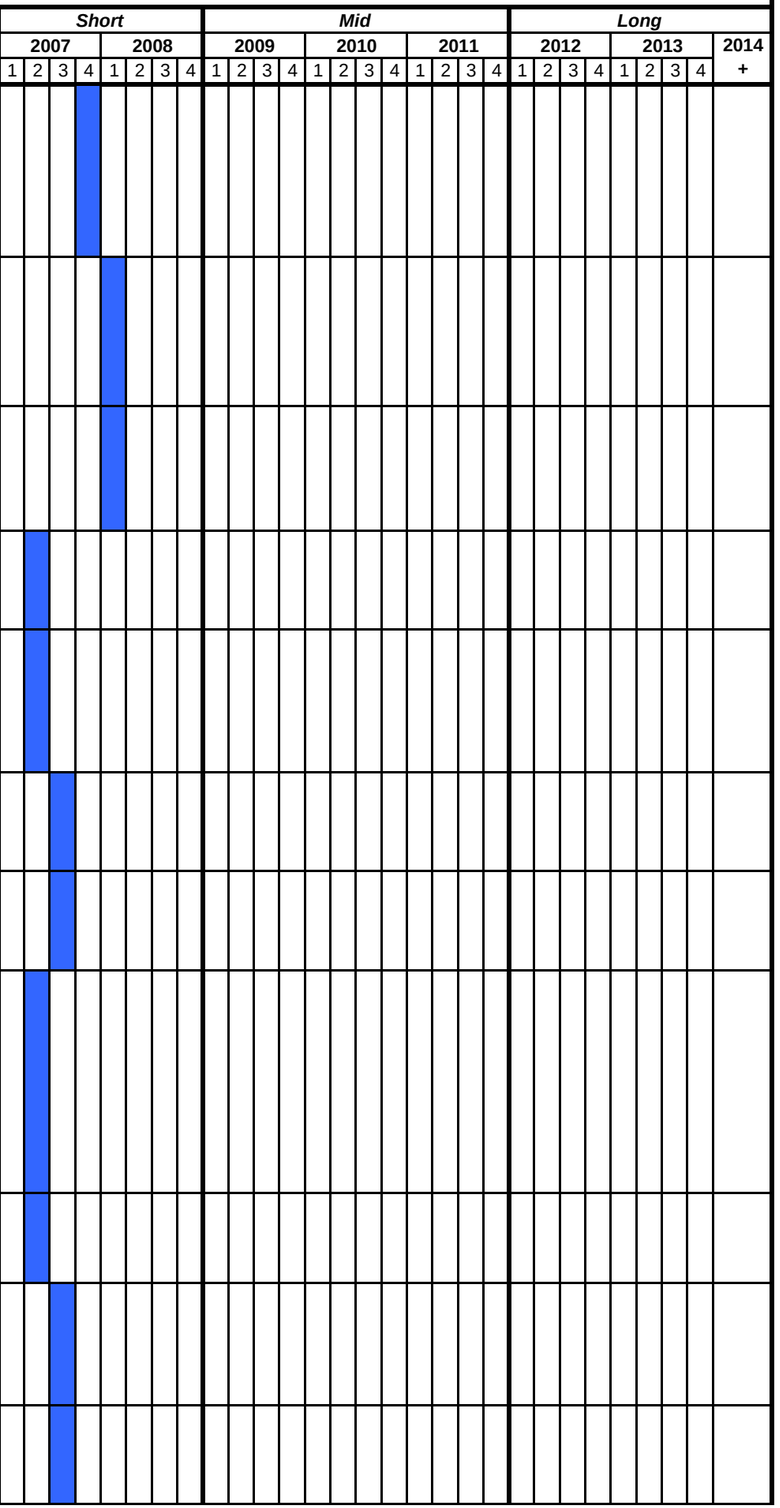


Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path
GTA	G-12	Low	TOUR TRANSPORTATION COMMON COURTESY	Tourism vehicles should avoid impeding pedestrian and vehicular traffic throughout the Town of Bar Harbor with specific emphasis on the corners or West & Main, Cottage & Main and Mt. Desert & Main Streets.	BH, Tour Operators	1 month	P-2
GTA	G-13	Low	ROADWAY SAFETY PROCEDURES	Transportation providers should use caution within the Town of Bar Harbor with pedestrians, bicycles and parked vehicles along the narrow streets, such as West Street) and others throughout the community. Common courtesy should be instilled in all drivers.	BH, Tour Operators	1 month / on-going	P-2
GTA Regs	GR-1	High	ENGINE IDLING	Limit engine idling to less than 5-minutes at all queuing and loading areas for all tourism transportation within the Town of Bar Harbor. Monitor, advise and fine transportation providers as required.	BH, Tour Operators	1 month / on-going	P-2
GTA Regs	GR-2	High	NOISE AWARENESS	Tourism Transportation providers should be aware of noise in association with their operations primarily in the early AM hours. Attention should be paid to back-up signals, horn and other coach noises. Effort should be given to minimize noise through assistance with backing in the queuing area of the GTA, limited engine idling, and use of the horn throughout the town.	BH, Tour Operators	1 month / on-going	P-2
GTA Regs	GR-3	High	VENUE TOUR SCHEDULING	Tour Operators, transportation providers and the Town of Bar Harbor should work cooperatively with Acadia National Park to schedule cruise (and land-based coaches if possible) to limit congestion and overcrowding issues associated with the key Park venues, specifically Cadillac Mountain, Jordon Pond House and Thunder Hole.	BH, Tour Operators, Acadia	2 months / on-going	P-2, G-5
GTA Regs	GR-4	Medium	TOURISM VEHICLE FLUIDS	Tourism transportation providers should monitor any engine oil / fluid leaks when operating in the Town of Bar Harbor inclusive of queuing, loading and unloading areas.	BH, Tour Operators	1 month / on-going	P-2
GTA Regs	GR-5	Medium	OVERLAND (land-based) TOUR MOTOR COACH SYSTEM	Establish a system to address related issues with the Town of Bar Harbor and Acadia National Park concerning motor coach transportation providers' guidelines, licensing, scheduling and monitoring.	BH, Tour Operators, Acadia	2 months / on-going	P-2, G-5
GTA Regs	GR-6	Low	TOURISM TRANSPORTATION MONITORING PROGRAM	Establish self-monitoring program for tour operations (cruise and land based) in conjunction with local police to enforce the guidelines as presented within the Town of Bar Harbor.	BH, Tour Operators	6 months / on-going	P-2, G-8
GTA MGNT	GM-1	High	GTA EFFICIENT USE MANAGEMENT	Encourage increased cooperation between cruise vessel staff and Tour Operator(s) to increase the efficient use of the GTA. Promote onboard grouping of shore excursion coach tour loads and movement via single tender moves to the loading area. Encourage overall cooperation amongst tour operators, transportation providers, taxis and other as a common courtesy to the overall efficiencies of the area.	BH, Tour Operators	2 months / on-going	n/a
GTA MGNT	GM-2	High	AGAMONT PARK GTA LOADING AREA	Allow up to three motor coaches to load and unload along West Street adjacent to Agamont Park and Harbor Place. Curb area should be modified to allow to accommodate the entrance and exit to loading area for motor coaches. Allow up to four motor coach loading / unloading spaces along the east side of Main Street adjacent to Agamont Park for AM cruise tour departures.	BH	3 to 6 months	n/a
GTA MGNT	GM-3	High	HARBORSIDE / AGAMONT PARK GTA'S	It is recommended that the Harborside tender facility site serve as the primary (ONLY) GTA for the Town of Bar Harbor. The GTA should move from Agamont Park to the Harborside Site with Agamont Park continuing to serve as a motor coach parking / queuing area.	BH	6 to 12 months	n/a

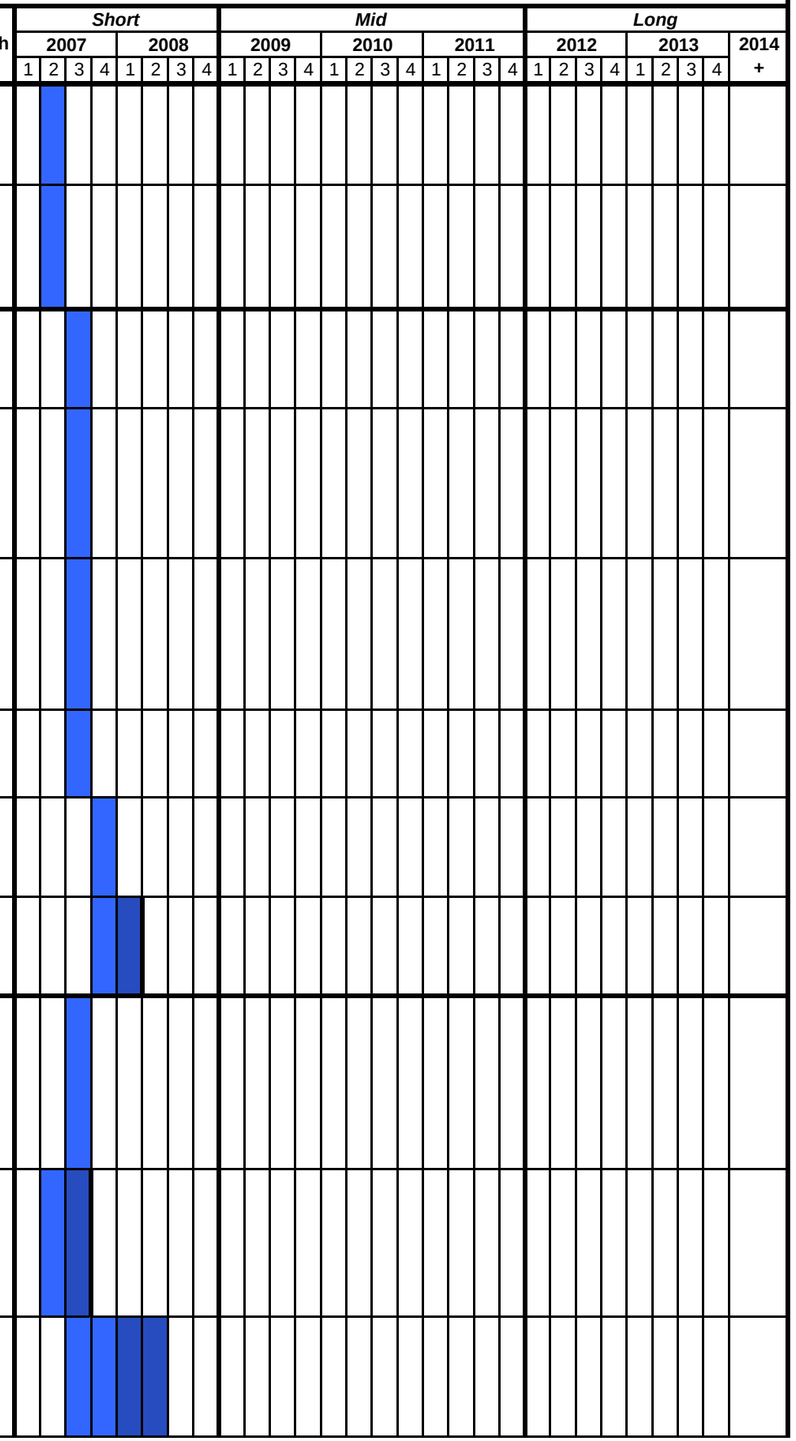


Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path
GTA MGNT	GM-4	Medium	TOURISM TRANSPORTATION PARKING AND QUEUING RESTRICTIONS	Restrict queuing and parking along Agamont Drive and north side of Newport Drive.	BH, Tour Operators	1 months / on-going	P-2
GTA MGNT	GM-5	Medium	HARBOR VIEW PARK GTA LOADING AREA	Increase use of the area along the north side of West Street adjacent to the water's edge for tour loading / unloading. Modify curb area to accommodate up to 3 motor coaches.	BH	6 to 12 months	n/a
GTA MGNT	GM-6	Low	AGAMONT PARK GTA LIMITS	Reduce the use of Agamont Park as a coach queuing area for PM cruise tour operations. Restrict the use of West Street adjacent to the Town Pier Parking and Agamont Park for land-based motor coach loading / unloading. This activity should be moved to the Motor coach Queuing area on Newport Drive. All tourism transportation should be encouraged to use the Ball Park for queuing and parking operations.	BH, Tour Operators	1 months / on-going	P-2
GTA MGNT	GM-7	Low	PEDESTRIAN ZONE	Consideration should be given to the development of a pedestrian only loading zone immediately in front of Harbor Place to assist in the safe and secure movement of cruise passengers and land-based visitors through this area during high congestion times to / from Agamont Park, GTA loading area and sidewalk system to the core downtown area. Short-term, the removal or limitation of two vehicle parking spaces immediately in front of the main Harbor Place entrance may assist in the ease of cruise passenger movement out of the facility in the AM tour load hours.	BH	3 to 6 months	n/a
GTA Marine	GTMA-1	High	TENDER OPERATIONS PLANNING	The Town of Bar Harbor should work cooperatively with the cruise lines and private tender facility operators to provide advance information concerning tendering guidelines inclusive of tender route maps, no-wake zone enforcement, docking/undocking recommendations, oversight and monitoring.	BH, Cruise Lines, Harbor Comm.	6 months	n/a
GTA Marine	GTMA-2	High	TENDER UTILIZATION	Through a joint effort with the cruise line and Tour Operator encourage maximum utilization of tenders to avoid inner harbor congestion, high concentration of emissions and increased wakes throughout Frenchman Bay.	BH, Cruise Lines, Harbor Comm.	1 month / on-going	GTMA-1
GTA Marine	GTMA-3	High	TENDER EMISSIONS	Encourage the use of low sulfur fuels in tenders to reduce emissions and request cruise lines to monitor all fluids that may potentially leak into Frenchman Bay. Comply with vessel visible emission standards and take all available steps to minimize emissions while in port.	BH, Cruise Lines, Harbor Comm.	1 month / on-going	GTMA-1
GTA Marine	GTMA-4	High	TENDER WAKE REDUCTION	Encourage cruise line to use an alternative docking method for loading and unloading passengers within the inner harbor. The goal is to not use the bow or stern line as a spring line and then hold the boat against the dock with a throttled engine. This effort will reduce noise, emissions and wake production within the inner harbor.	BH, Cruise Lines, Harbor Comm.	1 month / on-going	GTMA-1
GTA Marine	GTMA-5	Medium	INNER HARBOR TENDER OPERATIONS	Establish a maximum tender capacity for the inner harbor area to avoid congestion and minimize accidents.	BH, Cruise Lines, Harbor Comm.	3 months / on-going	GTMA-1
GTA Marine	GTMA-6	Medium	COURTEOUS USE OF TENDER FLOATS	Tender drivers should act in a safe and responsible manner when utilizing the Town of Bar Harbor inner harbor and private float facilities to minimize wake production, noise emissions and operate in a way that exhibits common courtesy to all others.	BH, Cruise Lines, Harbor Comm.	1 month / on-going	GTMA-1
GTA Marine	GTMA-7	Medium	RADIO COMMUNICATIONS	Communication amongst fishermen, cruise vessels and tender drivers is encouraged to avoid accidents within the inner harbor and Frenchman Bay.	BH, Cruise Lines, Harbor Comm.	3 months	n/a

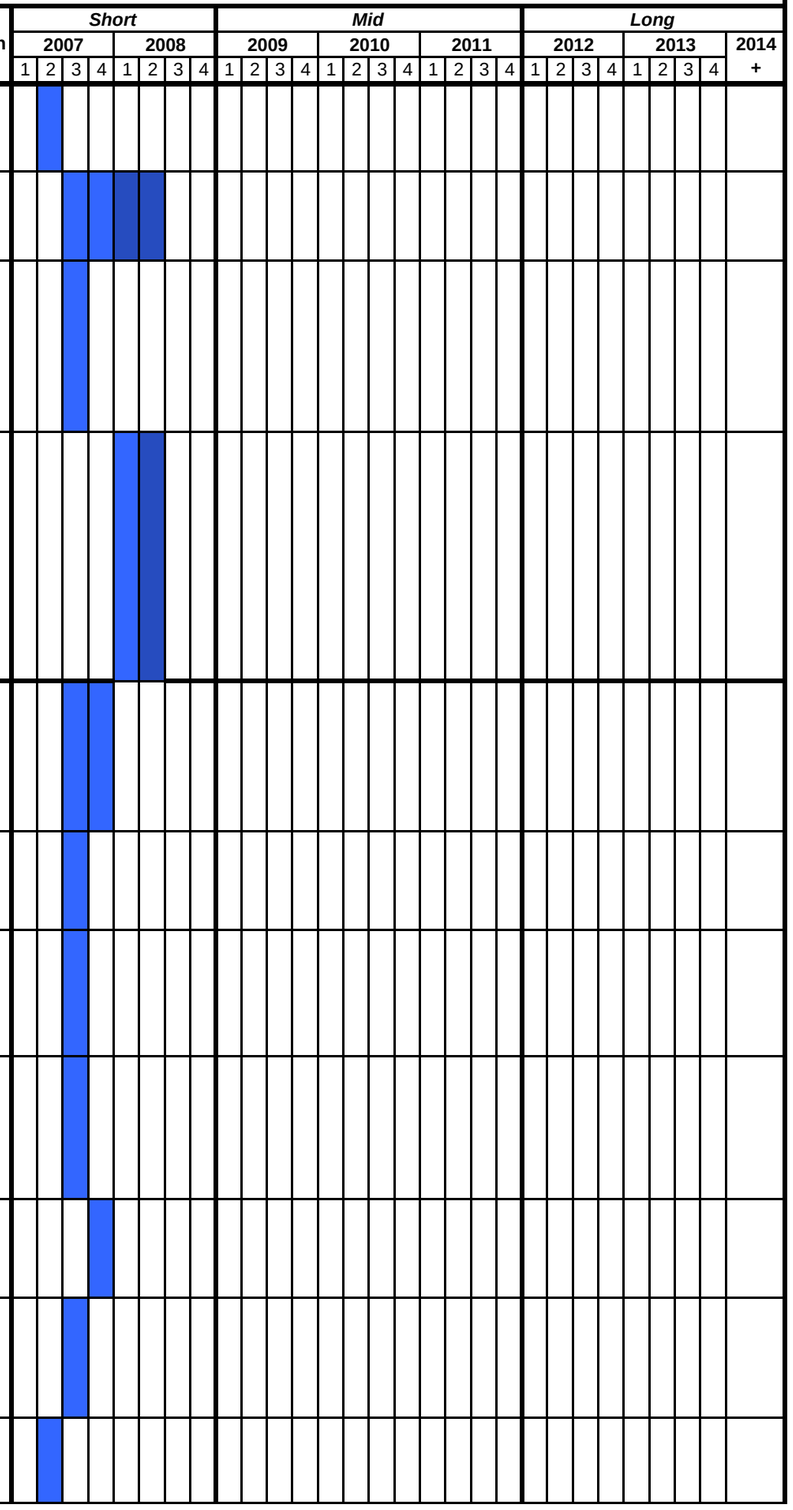


Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path
GTA Marine	GTMA-8	Low	VESSEL PUBLIC ANNOUNCEMENT AND SIGNALS	Minimize external announcements and signals while anchored or berthed in Frenchman Bay unless required by US Coast Guard or safety/security issues.	BH, Cruise Lines, Harbor Comm.	2 months / on-going	n/a
GTA Marine	GTMA-9	Low	CITY TENDER FLOAT FACILITIES	Utilizing an existing or new area adjacent to the Town Pier for tender operations is not recommended. There are significant financial implications as well as direct impacts to the fishing fleet, parking area, traffic circulation and taxation/revenues associated with the possibility of pulling business from a private facility operator.	BH, Cruise Lines, Harbor Comm.	1 month	n/a
GTA Marine	GTMA-10	Low	TENDER DRIVER EDUCATION	Provide the cruise lines with an educational pamphlet illustrating the impacts of the tender operations on the local fishing fleet, lobster pots, boat ramp use, etc. as a tool to assist in reducing conflicts with these entities.	BH, Cruise Lines, Harbor Comm.	6 months / on-going	GTMA-1
GTA Ped	GTAP-1	High	WAY-FINDING SIGNAGE AND KIOSKS	Provide an increase in way-finding signage throughout the Town of Bar Harbor in key locations to provide information and encourage pedestrian movement and flow throughout the community, specifically tourism and retail areas. Staffed tourism kiosks in primary access areas to the Town, such as Harbor Place, Harborside, Agamont Park, and the Village Green as examples provides for additional information and survey collection source sites.	BH, Chamber	6 to 12 months	n/a
GTA Ped	GTAP-2	High	ISLAND EXPLORER TOWN CIRCULAR ROUTE	Develop a circular Island Explorer bus route through the Town of Bar Harbor to assist in the movement of visitors throughout the community, thereby reducing traffic and parking issues and promoting broader economic impacts in the town.	BH, Chamber, Acadia	2 months / on-going	n/a
GTA Ped	GTAP-3	Medium	SIDEWALK ENHANCEMENT	Sidewalks and streetscapes in the Town of Bar Harbor should undergo a beautification effort to create a more pleasurable experience for the walking visitor. These enhancements to sidewalk (inclusive of curb-cuts, delineated pedestrian crosswalks, street furniture, litter bins, etc.), and streetscape beautification in the realm of uniform signage and landscaping treatment will enhance the overall visitor experience.	BH, Chamber	12 to 18 months	P-10
INF	INF-1	High	AGAMONT PARK GTA LOADING AREA MODIFICATION	As identified, modify loading area adjacent to Agamont Park on West Street to accommodate 3 motor coaches and make movement easier. Curb cut to be adjusted accordingly.	BH	12 to 18 months	GM-2
INF	INF-2	Medium	HARBOR VIEW PARK GTA LOADING AREA	As identified, modify loading area adjacent to Harbor View Park to accommodate a minimum of two motor coaches and expand passenger park waiting area and sidewalk accordingly.	BH	12 to 18 months	GM-3
INF	INF-3	Medium	STREETSCAPE IMPROVEMENTS	Plan for sidewalk enhancements to address sidewalk congestion issues and allow for easier pedestrian movement and flow throughout downtown area.	BH	3 months	GTAP-3
INF	INF-4	Low	TRANSIT CORRIDOR IMPROVEMENTS	Specifically address needed street enhancements on West Street to encourage a more pedestrian- and cyclist- friendly corridor, while also looking at potential traffic control measures that would ease traffic congestion.	BH, DOT, Acadia	12 to 18 months	n/a
INF	INF-5	Low	NOVA SCOTIA FERRY PIER PLAN	Prepare a future concept plan for the Nova Scotia Ferry Pier to accommodate the design cruise vessel for berth and tender operations. While we do not recommend implementation of a cruise facility at the site presently, this step would allow for future planning flexibility and perspective.	BH, DOT	24 to 36 months	n/a
COS	COS-1	High	RESIDENT SURVEY	Provide a mechanism for an annual resident survey as a tool for land and cruise tourism impacts that will assist the town to better react to activities that impact residents, local businesses, and industry stakeholders.	BH, Chamber	2 months / annually	n/a

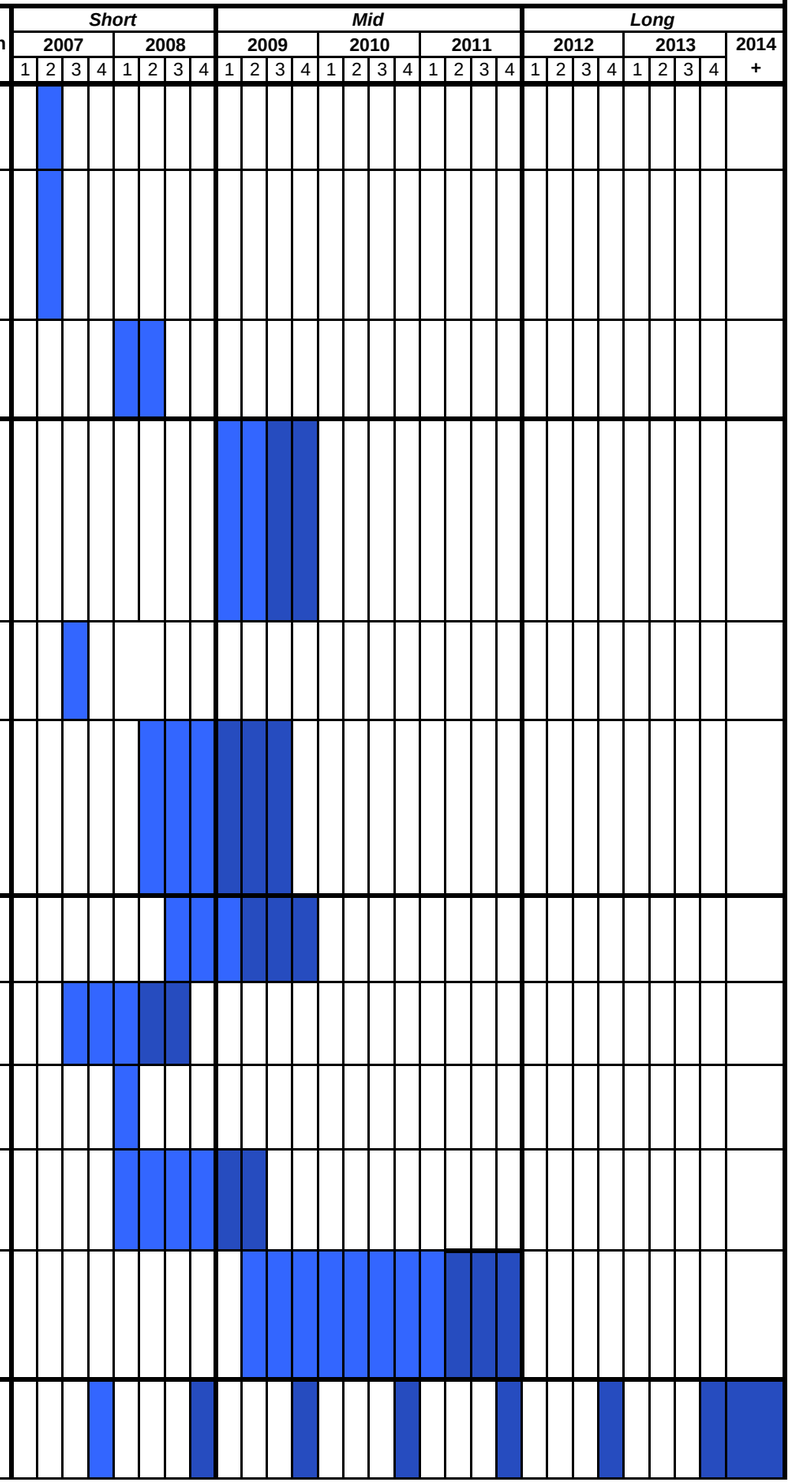
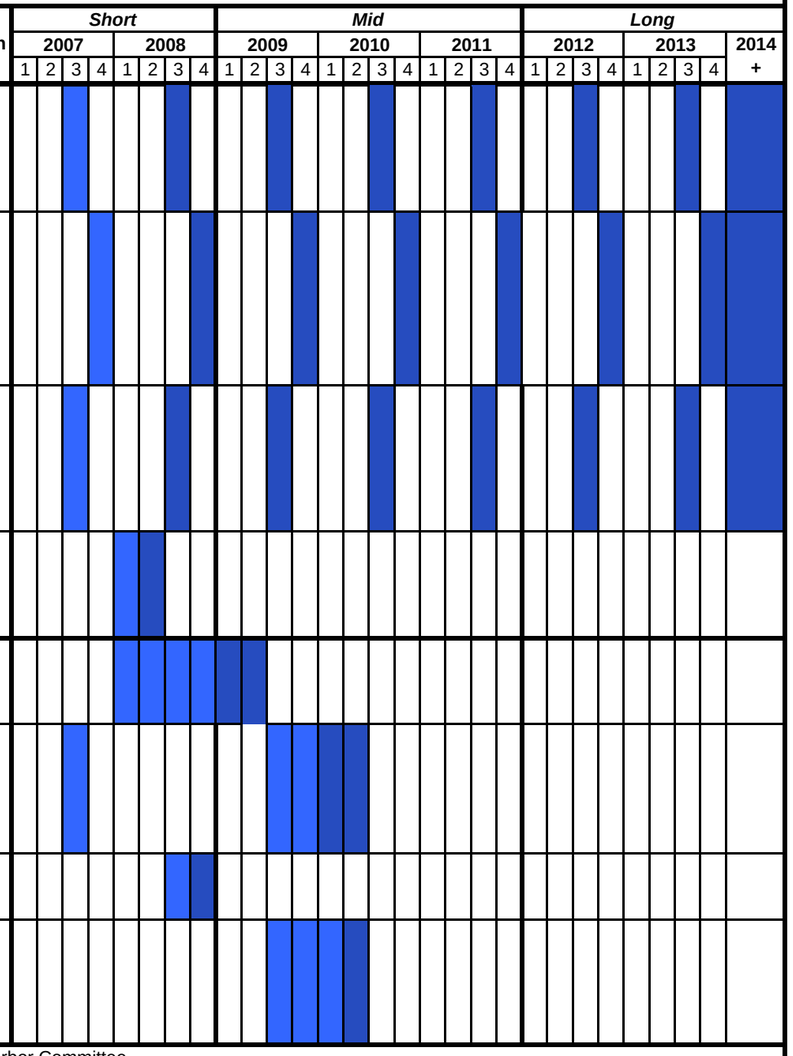


Table 19: Recommended High, Medium and Low Priority Recommendations for the Town of Bar Harbor, CTDMP

Source: B&A 2007

Category	No.	Priority	Strategies	Description	Responsibility	Duration	Critical Path
COS	COS-2	Medium	VISITOR SPENDING SURVEY	Provide for annual visitor spending survey to provide a gauge as to the cruise and land-based tourism spending patterns and impacts associated with each sector of the tourism market. Provide for necessary assistance and implementation of programs to influence future spend in the community.	BH, Chamber	3 months / annually	n/a
COS	COS-3	Medium	PUBLIC WORKSHOP / MEETINGS	Provide for an annual public tourism meeting / workshop focused on issues affecting the community for cruise and land-based tourism. Offers direct feedback, venue for discussion, and forum to interact with cruise operators, tour operator, transportation providers, venues, Acadia National Park, Chamber of Commerce and others impacting and affected by tourism in the Town of Bar Harbor.	BH, Chamber, DOT, Cruise Maine, Cruise Lines, Tour Operators	1 month / annually	n/a
COS	COS-4	Low	VISITOR SATISFACTION SURVEY	Provide for an annual survey of cruise and land-based visitor satisfaction for the Town of Bar Harbor and surrounding venues, such as Acadia National Park. This is an instrument to assist in the development of programs and infrastructure to further enhance tourism offerings to provide for increased visitor satisfaction and community involvement.	BH, Chamber	3 months / semi-annually	n/a
COS	COS-5	Low	TOURISM OPERATIONS MONITORING	Develop a public and self-monitoring system based on established guidelines for tourism management and operations. Provide for monitoring feedback through different avenues, such as e-mail, online, phone or others.	BH, Tour Operators	3 to 6 months	P-2
OTHER	O-1	Medium	TOURISM DEPARTMENT / CVB DEVELOPMENT	As identified, establish a tourism entity within the Town of Bar Harbor responsible for Tourism Development, Marketing, Monitoring and other with reports to the Town of Bar Harbor.	BH	12 to 18 months	P-8
OTHER	O-2	Medium	TOURISM SUSTAINABILITY STUDY	In conjunction with tourism stakeholders in and surrounding the Town of Bar harbor conduct a study to determine present and future tourism sustainability guidelines, inclusive of development options, infrastructure requirements, venue expansion, roadway impacts and others.	BH, Chamber, Acadia	6 to 12 months	n/a
OTHER	O-3	Medium	PARKING STUDY	Conduct a study to offer solutions for parking issues throughout the town.	BH	3 to 6 months	O-4
OTHER	O-4	Low	TRAFFIC STUDY	Conduct a comprehensive traffic study focused on the future opportunities and options for traffic solutions related to congestion within the Town of Bar Harbor. This will assist in anticipating future planning needs and set parameters for development.	BH, DOT	6 to 12 months	O-3



BH = Town of Bar Harbor; DOT = Department of Transportation; Chamber = Bar Harbor Chamber of Commerce; Acadia = Acadia National Park; Harbor Comm. = Bar Harbor Marine Harbor Committee.