Atlantic Pilotage Authority

Administration de Pilotage de l'Atlantique

SUMMARY OF

2017 – 2021

CORPORATE PLAN

Canada

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EXECUTIVE SUMMARY

The Atlantic Pilotage Authority (APA) provides a valuable and necessary service to the marine community in Atlantic Canada. The highly skilled marine pilots employed by the APA make a vital contribution to the protection of the environment, to safeguarding the lives of mariners, and to preserving and promoting the economic wellbeing of ports in Atlantic Canada. A reliable and responsible marine pilotage system plays a significant role in allowing Canadian businesses to remain competitive in the global marketplace.

The Authority's corporate objectives are the following:

To deliver safe and effective marine pilotage services in Atlantic Canada.

The most significant risks associated with this objective are not having sufficient pilot resources and the loss of pilot launch services. Low customer satisfaction would also present a risk for the reputation and operation of the Authority.

To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

The Authority faces external economic risk where traffic or revenues are not within the control of the APA. The Authority has more control over costs, but still faces the risk that operating costs may exceed the amount budgeted when tariffs are set.

STATEMENT OF OPERATIONS							
	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	PLAN 2018	2019	2020	2021
TOTAL INCOME	22,673	23,563	24,827	25,832	27,732	28,155	28,584
TOTAL EXPENSES	23,224	23,032	24,274	24,953	26,322	26,792	27,273
NET INCOME BEFORE SURCHARGE	(551)	531	553	879	1,410	1,363	1,311
SURCHARGE REVENUE	-	260	328	342	45	-	-
PROFIT (LOSS) FOR THE YEAR	(551)	791	881	1,221	1,455	1,363	1,311
RATE OF RETURN	-2.4%	3.4%	3.5%	4.7%	5.2%	4.8%	4.6%

To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

The highest risk of personal injury at the Authority occurs during the transfer of a pilot between the pilot boat and vessels being piloted. The ability to recruit suitable mariners for pilot positions and operate suitable pilot boats are also risks.

To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

It is very beneficial for the APA to be involved in marine projects as they develop. It is also greatly appreciated by industry. There is a risk that the APA would not have the expertise required to provide support or that industry does not think of the APA as a resource for these activities.

To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

The risk is that the Authority does not support the environmental, social, and economic policies, or does not follow Government directives and guidance.

Capital Budget

The Authority expects to complete the purchase of two additional vessels as it continues its fleet replacement program. The exact timing is subject to completion of remedial work required to bring the vessels to Canadian vessel standards.

Pilot boat refits and equipment are expected to increase in 2017 as there are five vessels due for Transport Canada and Lloyd's Register inspections. The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. The Authority is also investigating the purchase of a trailer to pull boats out of the water in Placentia Bay to do regular maintenance.

The lease for Head Office expires at the end of May 2017. An amount for Leasehold improvements is budgeted for the coming year. The budget also includes the Portable Pilot Units (PPU) being provided to the remaining pilots who have not received them to date. (See Section 7 for further details.)

	ACTUAL	OUTLOOK	BUDGET	PLAN			
	2015	2016	2017	2018	2019	2020	2021
PILOT BOATS							
CONSTRUCTION OR PURCHASE OF BOAT	-	2,200	800	-	-	-	-
PURCHASE OF PORTABLE BOAT	-	-	-	-	-	-	-
PILOT BOAT REFIT AND EQUIPMENT	558	649	1,080	750	650	700	700
WHARVES AND STRUCTURES	9	43	165	275	50	30	30
OTHER CAPITAL ITEMS	70	146	235	240	110	60	60
TOTAL	**$ 637**	**$ 3,038**	**$ 2,280**	**$ 1,265**	**$ 810**	**$ 790**	**$ 790**

Borrowing Plan

There is no additional borrowing being requested for 2017, but the Authority is planning on maintaining its line of credit at $2.5 million (See Section 9 for further details).

1. MANDATE, CORPORATE PROFILE

1.1. BACKGROUND

The Atlantic Pilotage Authority was established February 1, 1972, pursuant to the *Pilotage Act*.

The Authority is a Crown Corporation as defined by the *Financial Administration Act* (FAA) and is listed in Schedule III, Part I to that Act. The Authority is not an agent of the Crown.

The Authority has not received parliamentary appropriations since 1995 and, under provisions of the *Pilotage Act*, is not eligible for future appropriations.

The Board of the Authority consists of a part-time Chairperson and not more than six other members, all appointed by the Governor in Council.

The Chief Executive Officer (CEO) has the direction and control of the day-to-day business of the Authority. The Authority is administered and controlled at its headquarters, which is located in Halifax, NS.

1.2. POWERS

To carry out its responsibilities, the Authority has established regulations, approved by the Governor in Council pursuant to the *Pilotage Act*, in order to:

- ⇨ Establish compulsory pilotage areas;
- ⇨ Prescribe ships or classes of ships subject to compulsory pilotage;
- ⇨ Prescribe classes of pilot licences and pilotage certificates that may be issued;
- ⇨ Prescribe pilotage charges payable to the Authority for pilotage services.

In addition, the Authority is empowered under the *Pilotage Act* to:

- ⇨ Employ such officers and employees, including licensed pilots and apprentice pilots, as are required for operations;
- ⇨ Establish internal regulations for managing its operation;
- ⇨ Purchase, lease or otherwise acquire land, building, pilot boats and other equipment and assets deemed necessary, and to sell any assets thus acquired;
- ⇨ Borrow, if necessary, in order to defray the Authority's expenses.

1.3. MISSION, VISION, AND VALUES

MISSION STATEMENT: To deliver safe, effective and self-sustaining marine pilotage services in Atlantic Canada.

VISION STATEMENT: The Vision of the Atlantic Pilotage Authority is to be a respected leader in marine pilotage safeguarding people, property and the environment.

To achieve the vision, the Authority must demonstrate:

- An industry-leading safety record
- Operational efficiency where customers receive tangible value for the tariff they pay
- Marine expertise where APA pilots are viewed as leaders in the field of marine navigation and safety
- A self-sustaining business model that allows the Authority to provide services and be financially self-sufficient

CORE VALUES:

- **Safety**
  The Authority will emphasize safety over any competing goals or pressures to ensure the protection of people and safeguarding of property.
- **Environment**
  The Authority will strive to protect and conserve the natural environment and local communities.
- **Service**
  The Authority is dedicated to being a trusted partner in providing effective and efficient marine pilotage services and expertise in marine navigation.
- **Relationships**
  The Authority will build and maintain long-term respectful relationships with employees, customers, contractors, and suppliers.
- **Accountability**
  The Authority will be accountable to the Federal Government, the public, and to its customers for actions taken and the results of its operations.

1.4. DESCRIPTION OF OPERATIONS

Since 1972, the Authority has operated, in the interest of safety, a marine pilotage service for all Canadian waters surrounding the four Atlantic Provinces, including the waters of the Bay of Chaleur in the Province of Quebec. This is the only program of business for the Authority.

The Authority provides licensed pilots to ships that enter Atlantic Canadian Ports in order to ensure that these ships travel within the pilotage area as safely as possible. The Authority also examines qualified mariners, and issues pilotage certificates to successful candidates to enable them to navigate their ships within designated compulsory areas without a licensed pilot on board. The Authority organizes its operations according to geographic location, and has designated seventeen areas as requiring compulsory pilotage, with one further area in the regulatory process to become compulsory. The Authority also endeavors to provide pilotage service to other areas, referred to as non-compulsory areas, upon request. Most of the pilots licensed by the Authority are employees; however, pilots may also be entrepreneurs, or a member of a body corporate contracting with the Authority for pilotage services. Pilot boat services may be owned and operated by the Authority or by a private operator who has a contract with the Authority. A complete breakdown of all revenue and costs related to the pilotage service is calculated and totaled for each port and area, and summarized for the entire operation.

Demand for the services of the Authority is, for the most part, determined by the shipping industry, over which the Authority has little or no control. The Authority evaluates its performance according to the achievement of a safe, efficient, and effective marine pilotage service while maintaining financial self-sufficiency.

In addition, success is determined by how well the Authority adapts to changes in world trade, to the establishment of new business ventures, and to patterns that develop within the shipping industry. Shipping operates on market demand. The Authority does not attract ships to the Atlantic region; it merely responds to a demand that is influenced by a number of factors. These factors include changes of shipping patterns, fluctuations in demand within the world economy, volatility in oil prices, and the effect of regulatory changes by other nations.

The Authority operates within the marine transportation sector. No competition exists to provide this service in compulsory pilotage areas.

The Authority implements tariffs that are fair and reasonable after extensive consultation with the users of the service. These tariffs are designed to allow the entity to operate on a self-sustaining financial basis. In order to amend tariff regulations, the APA must pre-publish the proposed tariff amendments in the Canada Gazette. Upon publication, any interested person who has reason to believe that the proposed tariff charges are prejudicial to the public interest may file a notice of objection with the Canadian Transportation Agency (CTA). If an objection is received, the CTA may make an attempt to mediate between the parties. If the mediation is not successful and the objection stands, the CTA is required to investigate the proposed tariff charges and render a recommendation to the Authority and the Minister of Transport. The Authority is obliged to abide by the recommendation.

1.5. FINANCIAL POSITION

The Authority's financial statements are prepared in accordance with International Financial Reporting Standards (IFRS). The financial position as at December 31 under IFRS was as follows (in thousands of Canadian dollars):

	2015	2014
Current assets	3,606	4,561
Non-current assets	10,374	10,642
	13,980	15,203
Current liabilities	2,224	2,423
Non-current liabilities	5,201	5,638
	7,425	8,061
Equity	6,555	7,142
	13,980	15,203

The working capital as at December 31, 2015 and 2014 was $1,382,000 and $2,138,000 respectively.

Operating Statement for fiscal year ending December 31

	2015	2014
Revenue	22,673	22,562
Expenses	23,224	23,180
Profit for the year	(551)	(618)

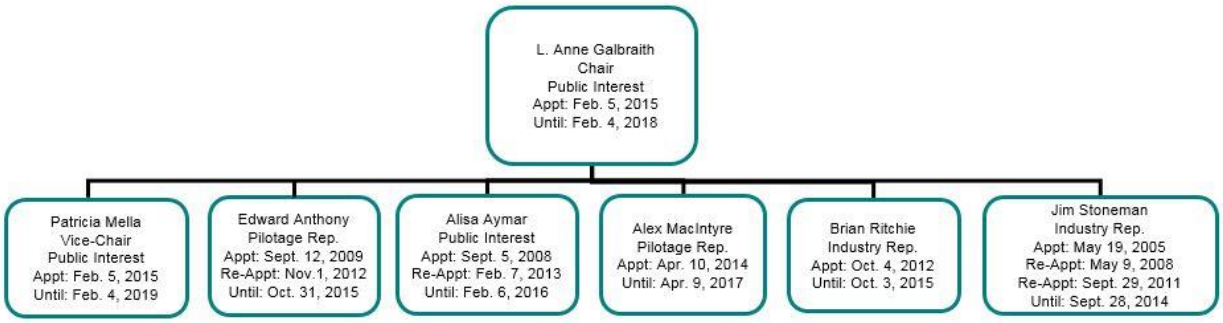
The Authority has had two consecutive years with significant losses. The loss in 2014 was due primarily to costs incurred to expand its pilot numbers in an attempt to improve service levels and prepare for retirements. In 2015, the Authority's revenues were below budget due to maintenance slowdowns at a number of facilities that affected tanker assignments and an overall decrease in average vessel size. Included in the 2016 tariff was a surcharge that is meant to recover a large portion of these losses over a three-year period and includes an agreement with industry to review it annually to determine its continued necessity and its effectiveness.

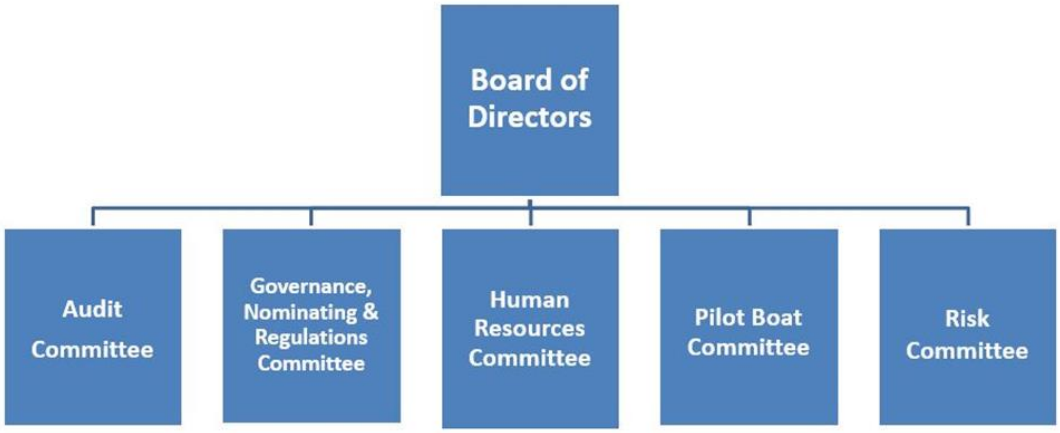
1.6. GOVERNANCE

Similar to other Crown corporations, the Atlantic Pilotage Authority operates at arm's length from its sole shareholder, the Government of Canada. While the shareholder provides policy direction for the corporation's ongoing operations, as stated in the Financial Administration Act, the Authority (Board) ensures that the corporation fulfills its mandate by setting the corporation's strategic direction and organizational goals, and by monitoring their implementation. The Authority reports to Parliament through the Minister of Transport.

The Chair and Members of the Board are appointed by Governor-in-Council for terms of two to four years. The Board is composed of members with marine pilotage experience, members with shipping industry experience, and members representing the interests of the public at large. An effort is also made to have the Board reflect the widespread geographical area within the APA jurisdiction. This cross section of industry and business knowledge, experience, business acumen, and regional perspective provides an excellent background for the Board's deliberations. The Board of Directors meets at least quarterly with other meetings scheduled as needed. The Board has created a number of committees with specific responsibilities, and further information on these committees is provided below.

The following organizational chart indicates the composition of the Board as at September 1, 2016, followed by a chart indicating the Board committees that are in place. The Members remain on the Board until a re-appointment or replacement is made by Order-in-Council. The Chair does not serve beyond the end of their term.





Audit Committee - The Audit Committee is a core committee of the Authority's Board of Directors. The FAA specifically requires the Authority to establish an audit committee. It is responsible for the following:

- provide financial oversight for the authority;
- improve the quality of the financial reporting;
- enable the directors to contribute their independent judgement;
- create a climate of discipline and control that will reduce the opportunity for fraud;
- increase stakeholder confidence in the credibility and objectivity of corporate performance.

Governance, Nominating and Regulations Committee – is responsible for the following:

- Define roles and responsibilities for the Board and Management.
- Develop a composition strategy for the Board that identifies the skills, experience, qualifications, and diversity characteristics needed on the Board.
- Develop and maintain a profile of requirements for the positions of Director, Chair and CEO.
- Critically review management's recommendations proposing amendments to any Corporate By-Laws, Policies and Procedures and Committee Terms of References.
- Assess and make recommendations on the structure of committees for the Board, with the involvement of the Chair.
- Set standards and procedures to address conflict of interest issues and situations, investigate any specific conflict of interest concerns, and report to the Board.
- Develop and follow a rigorous process of selection of candidates to satisfy the Board's competency profile as a whole. The committee will report to the Board of Directors to obtain approval of recommended candidates.
- Critically review management recommendations proposing amendments to any regulations associated with *Pilotage Act*, General Pilotage Regulations, and Atlantic Pilotage Authority Regulations.
- Actively solicit information about significant risks and exposures to such amendments;
- Review the integrity and effectiveness of such amendments;
- Review any significant findings and recommendations made by the external and/or internal auditors regarding regulations and follow up on management's subsequent actions.

Human Resources Committee – is responsible for the following:

- Evaluation of the CEO and recommendation of compensation and benefits.
- Review management succession plans.
- Review significant changes to the organizational structure of the Authority as recommended by the CEO.
- Review the mandate for the bargaining team for collective agreement negotiations.
- Review the hiring schedule for pilot positions.
- Perform other functions as may be assigned by the Board.

Pilot Boat Committee - is responsible for the following:

- critically review management reports associated with the operation of pilot boats (either owned by the Authority or contracted), and, whenever deemed necessary, actively solicit any further information through the appropriate parties;
- critically review new technological advances related to the pilot boat, administration, pilots, or other aspects of the operation, and when necessary solicit further information through the appropriate parties;
- actively solicit information about significant risks and exposure related to pilot boats, and review the adequacy of controls and procedures to manage those risks; and
- review any significant findings and recommendations regarding pilot boat operations made by the external auditor and follow up on management's subsequent actions.
- assist Management in developing and following a long-term strategy for the Authority's fleet renewal program

Risk Committee - is responsible for the following:

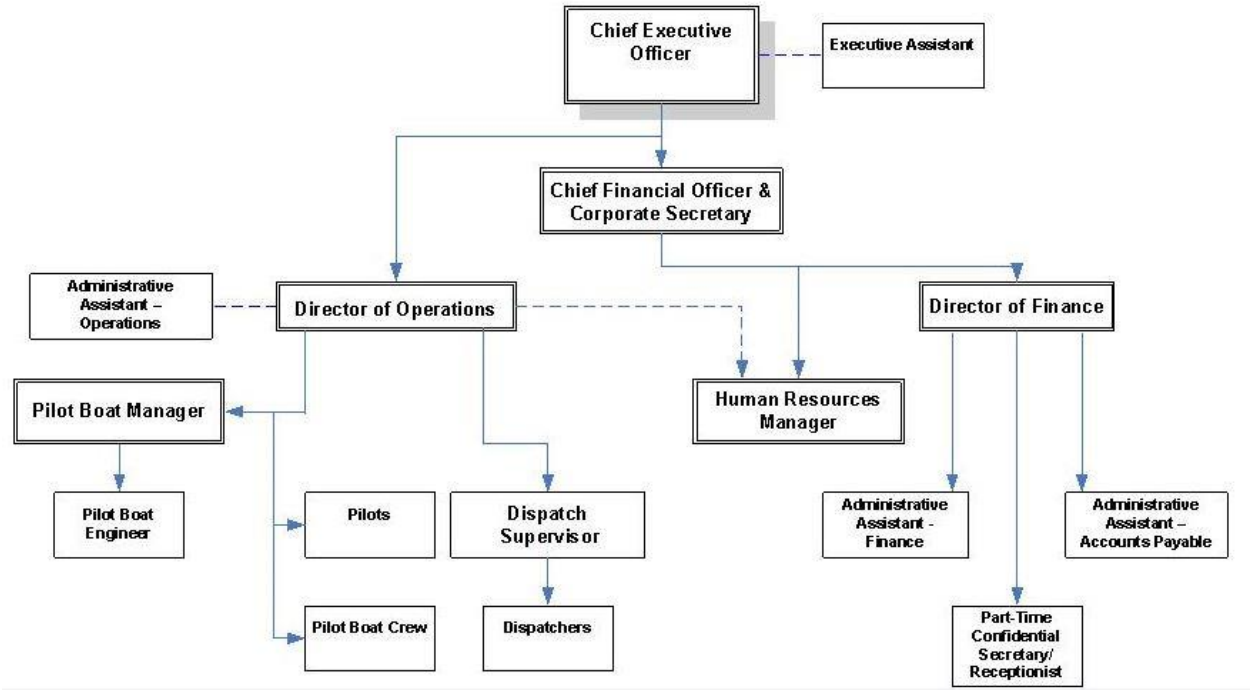
- Actively solicit information about significant risks and exposures and review the adequacy of internal controls to manage those risks;
- Review Management's appraisals of financial and operational risk and oversee Management's progress towards mitigating the risks as defined in the Enterprise Wide Risk Management Framework (EWRMF).
- Ensure oversight of the process, financial and management control and practices relating to a specific Pilotage Risk Management Methodology (PRMM); critically review facilitator's, stakeholders' and management reports associated with a PRMM and then make a recommendation to the Board to ACCEPT, REJECT or AMEND the recommendation(s).

1.7. ORGANIZATIONAL STRUCTURE

The Chief Executive Officer (CEO) is appointed by the Board of Directors and oversees the operation and management of the Authority in accordance with the Board's strategic direction. The Chief Financial Officer (CFO), reporting to the CEO, is responsible for finance and administration while also acting as the Corporate Secretary-Treasurer. The Director of Operations, also reporting to the CEO, is responsible for pilotage and dispatch operations as well as pilot boat maintenance. The Director of Finance, reporting to the CFO, prepares budgets and provides oversight and financial analysis. The Human Resources Manager, reporting to the CFO, oversees the human resources programs and benefits. The Dispatch Supervisor, reporting to the Director of Operations, is responsible for direct supervision of the dispatch centre. The Pilot Boat

Administrator and the Pilot Boat Engineer are responsible for the maintenance of Authority owned pilot vessels. Other management and staff are employed to administer the day to day operations of the Authority. The following chart indicates the organizational structure of the administration of the Authority for 2017.

2017 Organizational Chart



1.8. ENTERPRISE RISK MANAGEMENT FRAMEWORK

The Authority has established an Enterprise Risk Management framework to identify and mitigate risks to the corporation. Risks were initially identified with the assistance of external consultants through a thorough analysis of the enterprise's environment. Any existing mitigation to help reduce the likelihood or impact of the risk was considered, and additional mitigation was identified and where practicable, implemented for each risk. This analysis initially identified 29 risks, which were reduced to 25 risk categories through refining the definitions and combining like risks. The risks were ranked after a thorough review by the Board and Management of the Authority. It is understood that the risk categories are not static, and a regular review is required. The review may identify new risks, may determine that risks have decreased through sufficient mitigation to reduce their likelihood or impact, or may determine that the risk level has increased due to changes in circumstances. The Risk Committee of the Board has been tasked with monitoring Management's progress on implementing the mitigation plans for each risk.

Each of the risks is graded on two scales, likelihood that the event will occur and the impact if it does happen. The likelihood is graded from 1 – Rare to 5 – Almost Certain, while the impact goes from 1 – Inconsequential to 5 – Catastrophic.

The scoring is tabulated and the risk categories fall into one of four categories. High risk items are identified in red, medium risks are in orange, and low risks are in yellow and minor risk items in green.

RISK RANKING

	Impact				
Likelihood	**Inconsequential 1**	**Minor 2**	**Moderate 3**	**Major 4**	**Catastrophic 5**
Almost Certain 5					
Likely 4					
Possible 3					
Unlikely 2					
Rare 1					

Risk	Description
HIGH Red	Requires detailed research, planning and decision making at senior levels of management
MEDIUM Orange	Senior management attention and action needed
LOW Yellow	Management control responsibility must be specified
MINOR Green	Monitoring by Management required, further action optional

While it is important to be cognizant of all risk factors, the high risk categories demand the most priority, followed by the medium risk categories. The following risk categories were identified:

APA Risk Categories- 2016 Ranking

High

- Injury to pilot/crew member while transferring
- External Economic Risk

Medium

- Loss of Launch Services causing Major Interruption of Service
- Risk of Accident Caused by Human Error
- Operating costs exceeding amount budgeted when tariffs are determined

Low

- Risk of being unable to Attract and Retain Pilots to meet Demand
- Loss of Contracted Launch Services or Manning Contract
- Customer Satisfaction

Minor

- Risk that Employees are exposed to Injury or Illness in the Workplace
- Interruption of Service due to Breakdown in Labour Relations
- Governance/Organizational Structure/Succession Planning
- Safety Compromised due to Pilot Fatigue/Under the Influence
- Unable to Attract and Retain Adequate and Trained Relief Pool for Pilot Boat Crew
- Pilotage Service Cannot be Provided in Minor Ports due to Lack of Proficiency
- Pilot Vessels not meeting TC Inspections
- Safety Compromised due to Boat Crew Fatigue/Under the Influence
- Certificate Holders Evaluations
- Administration Staff Coverage
- APA Involvement in Non Comp Ports
- Safety Compromised due to Inappropriate Pilotage Area Designation
- Loss or Misuse of Information, Data, or Other Assets
- Management Information
- Fraud
- Business Continuity
- Safety/Service Compromised due to Interruption to the Dispatch Operation

The table below indicates the high and medium risks with current mitigation, and additional mitigation strategies being considered.

Risk	Description	Current and Additional Mitigations
		HIGH
Injury to pilot/crew member while transferring (Human Resources)	The risk that a pilot/crew member suffers an injury while transferring from or to a vessel. These transfers are done thousands of times annually in all types of weather conditions involving many types of vessels. It is this activity that exposes some of our employees to the greatest danger.	Ø If a pilot has concerns about the pilot ladders or equipment on a vessel being serviced, they are encouraged to bring it to the APA's attention immediately so it can be addressed with the ship's agent or owner. Ø The Authority has installed a man overboard retrieval scanner and beacon system in Halifax, Saint John, Placentia Bay, and have had the contractor install it in Canso. This includes each pilot wearing a personal locator beacon. (PLB) Ø The Authority has invested in new pilot boats in Saint John and Halifax that will provide a more stable platform for over 50% of the APA's assignments. Ø Pilot boats supplied by the Authority or the contractors are deemed suitable platforms for the areas serviced. The boats are also well maintained to assure proper operation and surfaces for transfer. Ø Safety procedures are in place for the transferring of pilots, including procedures required of APA employees and pilot ladder requirements for vessels. Ø Boats are equipped with man overboard equipment, crews are trained to utilize the equipment, and regular drills are conducted. Ø Launchmasters are skilled shiphandlers and highly trained with proper qualifications to handle the APA's pilot boats. If a pilot has concerns about a launchmaster or deckhand, they are encouraged to report to management so action can be taken. Ø Robust OHS system is in place with updated manuals and regular committee meetings. Standard Operating Procedures are constantly monitored and updated in support of pilot transfers. Man-overboard procedures are practiced periodically and safety equipment is inspected and replaced if necessary. OHS training for new hires and refreshers for employees will continue Ø Pilots are required to have medicals regularly to assure ability to do physical component of job Ø Pilots have the authority to suspend pilotage operations if it is deemed to be too severe to provide the service. Ø The Authority will investigate options for newer backup vessels that will add to the deployment of stable platforms for pilot transfers.

External Economic Risk (Financial Self-Sufficiency)	The risk is that economic conditions outside of the Authority's control will lead to actual traffic levels or mix and/or costs being materially different than that forecasted by the Authority.	Ø The fuel charge was implemented which removes the risk of changing fuel prices from pilot boat operating costs. Ø The Authority was able to implement a 1.5% surcharge in place for 36 months to recover the majority of previous losses. Ø The Line of Credit was increased to $2.5 million to protect against further decline. Ø The Authority consults with stakeholders regularly to determine future traffic changes. Forecasts from some stakeholders are sometimes seen as proprietary information which may cause some reluctance to provide it. Ø The APA monitors developments within industries serviced, both at the local level (shutdowns or production slowdowns) and at the global level (trends, for instance, in pulp and paper production). Ø Resources (ie. pilot levels) are planned to handle variations in traffic. Ø The Authority is targeting net current assets of twice current liabilities to provide financial flexibility during downturns. Ø Tariff structures were adjusted to increase basic charges and minimum charges to reflect more directly the costs incurred. This protects against changes in the traffic mix from what was expected. Ø The APA is targeting larger returns to allow for a variance from budgeted traffic before there would be a significant loss.
MEDIUM		
Loss of Launch Services causing Major Interruption of Service (Quality of Service)	The risk is that the APA loses launch service, severely disrupting operations.	Ø A Pilot Boat Manager Position was added to plan maintenance and manage the fleet of vessels and crew. Ø Additional spare equipment has been added to inventory to minimize down time. Ø Drawings of each boat are being updated to facilitate quicker and more efficient responses to equipment breakdowns. Ø An engineer has been added with a high level expertise to facilitate repairs more quickly and perform preventative maintenance. Ø New vessels have been deployed to add reliability in the ports of Saint John and Halifax while freeing up older boats to add redundancy. Ø The APA has backup vessels in most of the ports in which it uses pilot boats. The Authority also has arrangements with external contractors to provide service if required in some ports. Ø Maintenance is scheduled to allow for sufficient redundancies in ports to assure that operations are not disrupted. Ø Vessels are maintained constantly to reduce the amount of down time that will also reduce the risks of available boats. Ø The deployment of boats is discussed regularly and any changes are examined thoroughly to assure efficiency and reduce risks to service delivery. Ø Planning to add two more vessels to add additional availability.

Risk of Accident Caused by Human Error (Safety of Environment)	The risk that pilots and boat crews are not assessed for competence and quality of service leading to poor or unsafe service being provided.	Ø There are open lines of communication between employees, customers, and APA management that brings some areas of concern to the forefront. Ø Pilots are in a position to report if the performance of the boat crew is not satisfactory. Ø An incident management plan has been developed that would help mitigate the consequences should an accident occur. Ø An agreement was made with the pilots regarding a post incident protocol regarding the investigation of an incident and how a pilot involved can be treated. Ø An agreement was finalized with the pilots regarding a near miss protocol regarding the investigation of near misses and how a pilot involved can be treated. Ø The APA performs pilot evaluations on a three-year cycle. Ø The APA performs employee evaluations of its pilot boat crews and will continue to seek input from its pilots who work with these boat crews on a daily basis. Ø A training matrix assures pilots have the required training when needed. Ø Documentation will be acquired and tracked in pilot employee file regarding district pilots discussion and decisions regarding employees advancing in class. Ø SeaIQ PPU's will be deployed in areas where they will benefit in training and pilot decision making. Ø Halifax - the APA participated with the Port Authority in a study called iHeave to determine the under keel clearance in the shallowest part of the harbour during various weather scenarios and various vessels. Ø Miramichi - the Coast Guard provides annual soundings in the river to determine the allowable draft in the area.

Operating costs exceeding amount budgeted when tariffs are determined (Financial Self-Sufficiency)	The risk that tariffs will not cover operating costs due to: a) Operating costs exceeding the amount budgeted when tariffs are determined. b) Tariff amendments being delayed by the regulatory process.	Ø Adjusted tariff structure to increase basic charges and minimum charges to reflect more directly the costs incurred. Ø Monthly and Quarterly statements with comparisons to budget are presented to the Board. Ø The switch to IFRS has helped with some of this risk. The amortization methods under IFRS that include componentization lead to the smoothing of large pilot boat repair costs as the components, like engines, are amortized over a shorter period, but their replacement is also capitalized. These should reduce the chance of unexpected spikes in some years. Ø The removal of fuel costs from the basic charge in the tariff allows for more protection for the Authority of unexpected spikes in fuel prices. Ø Extensive consultations done with industry to lower the probability of objections being raised once proposed tariffs are posted. Ø Local travel charges applied to invoices to recover costs directly where they are incurred. Ø Multiple year tariff adjustments will be proposed to reduce lost revenue due to regulatory delays. Ø The Authority is targeting net current assets of twice current liabilities which will protect against the effect of unknown costs. Ø The APA is targeting larger returns which will also protect against additional expenditures.

The Authority has developed mitigation strategies for all twenty-five identified risks.

1.9. Pilotage Risk Management Methodology (PRMM)

When reviewing the possibility of designating a compulsory pilotage area, it is expected that such designation not be imposed indiscriminately. It must be the result of appropriate research and evaluation of all the facts and of meaningful consultation with the stakeholders. There must be clear justification that compulsory pilotage is warranted to enhance safety and protect the marine environment. A risk management approach for pilotage was developed that was compliant with the Canadian Standards Association CAN/CSA-Q850.

The APA has developed a two tier approach to the PRMM process. An initial high-level scan (referred to as a Phase I Review) of a broad geographic area is conducted to determine whether ports within the area require a full PRMM review. Upon completion of the Phase I Review, an evaluation is made whether ports require a full PRMM review and a priority list of ports requiring a full review is determined.

Between 2010 and 2015, the APA had preliminary scans (Phase 1) completed on 22 ports or areas-18 non-compulsory and 4 compulsory ports. The first Phase 1 review was completed on ports in Nova Scotia, followed by New Brunswick, and then Newfoundland. While four ports were identified for further review in Nova Scotia in 2010, shortly after the review commercial traffic

ceased or declined precipitously in two of these ports. Subsequent Phase 1 reviews in the other provinces identified ports with greater risk factors that took priority over the remaining two NS ports. The APA had a further review of the NS ports conducted in 2016, and is considering whether full PRMM studies will be implemented in those two ports.

The PRMM approach provides an interactive process consisting of easy to follow steps which, when taken in sequence, provide for a consistent, transparent and well-documented decision-making process. Risk control strategies or risk reducing strategies are evaluated in terms of needs, issues and concerns of all affected stakeholders. The PRMM stresses the importance of involving stakeholders from the outset and maintaining good documentation throughout all stages in the process. This process was recommended by the Minister of Transport and the development of the process was spearheaded by Transport Canada in cooperation with the pilotage authorities.

The APA has been proactive in conducting PRMM studies. The Authority has conducted eleven full study PRMM analyses in recent years on the following subjects:

- vessel size and types subject to compulsory pilotage;
- the Miramichi River Compulsory Pilotage Area to determine if it should remain compulsory;
- the approaches to Voisey's Bay to determine whether compulsory pilotage was required;
- the St. Croix River and Port of Bayside to determine whether compulsory pilotage was required;
- the Port of Belledune to determine whether compulsory pilotage was required;
- the Port of Argentia to determine whether this port should become part of the Placentia Bay Compulsory Pilotage Area;
- the Conception Bay area in Newfoundland to determine whether the compulsory area should extend to certain anchorages within the Bay;
- the port of Long Pond within Conception Bay to determine whether compulsory pilotage was required;
- the area of Loon Bay on the north coast of Newfoundland to determine whether compulsory pilotage was required;
- The port of Goose Bay in Labrador to determine whether compulsory pilotage was required;
- to determine whether it would be prudent to establish an inner pilot boarding station in the vicinity of Buffet Island in Placentia Bay, NL for ships in ballast.

The initial recommendation for the St. Croix River and Port of Bayside, Voisey's Bay, and the Port of Belledune was for these areas to become compulsory. Voisey's Bay did become compulsory; the St. Croix River and Port of Bayside underwent a further review and the recommendation was withdrawn as conditions in the area had changed; and the Port of Belledune was recommended to become compulsory and is currently in the regulatory process.

The Authority regularly monitors developments within its jurisdiction to identify areas in which circumstances have changed necessitating a PRMM review.

2. STRATEGIC ISSUES, ENVIRONMENT

2.1 KEY STRATEGIC ISSUES

The primary business activity of the Authority is to provide a safe and efficient pilotage service. The Authority charges the user, or customer, for the service.

(i) An ideal performance would be one in which the service provided was completely safe; i.e. without shipping incidents, and without injury or damage to individuals, vessels, port facilities, or the environment. Historically, the Authority has maintained a low level of shipping incidents; however, it is recognized the Authority has the inherent risks associated with the business, and the potential for an accident is always present.

(ii) The financial position of each port is closely monitored to avoid cross-subsidization wherever possible. Tariff increases are sought for areas that are indicating a decline in their return below acceptable levels or are no longer self-sufficient. All aspects of an area's operation are monitored to determine whether cost cutting measures are more appropriate to achieve a positive result before tariff increases are considered. For 2017, the Authority will target a rate of return on revenue of 3.5%. This rate of return is slightly higher than that targeted in 2016. The shipping industry in Atlantic Canada has been facing significant challenges competing in the worldwide shipping economy. This has been exacerbated by the challenges presented in the energy sector, and other commodity markets.

The price gap between overseas oil priced at the Brent Crude rate and the domestic North American oil at the West Texas Intermediate (WTI price) has a large impact on operations and impact the Authority. The movement to North American oil in recent years has resulted in smaller ships on average, as the Very Large Crude Carriers are not being utilized for crude delivery to the same extent. In some instances, oil may also be brought to refineries by rail, reducing the sea-borne demand. This had a large effect on 2015 financial results, but the difference in price between Brent Crude and WTI has been reduced. Oil sourced from overseas increased in 2016 which has led to a return to larger vessels with larger revenues for the Authority.

Bulk and dry cargo vessels have been affected by falling commodity prices. In Saint John, it was announced early in the year that PotashCorp would be suspending its potash operation in the area indefinitely. The Authority had been anticipating increased production from the new potash mine. A coal transshipment operation in the Strait of Canso decreased operations dramatically due to a reduced global demand for the commodity, and the low world market prices of coal. Early in 2016 it was announced that Little Narrows Gypsum would not do any shipping this year due to low world gypsum demand, which has a large effect on the pilotage area of Bras d'Or, NS.

The container business continues to have challenges because of the economic crisis in Europe, resulting in rationalization of trade amongst the various container lines. The business is highly competitive and cost sensitive. Significant increases in costs reduce what are already slim margins for operators. Because of these issues, the Authority has been very

careful not to impose more hardship on its customers by targeting them with higher tariff increases than what are absolutely necessary.

The following Table reflects the annual average percentage increase in revenue anticipated to be derived from increased tariffs during the following periods. The present estimates for 2018 – 2021 will be affected by any changes in traffic patterns.

Annual Tariff Increases

Year	**2016**	**2017**	**2018**
Average Percentage Increase in revenue.	2.95%	4.12%	3.33%

Due to the losses in 2014 and 2015, a surcharge of 1.5% was implemented for 36 months from March 11th, 2016 to March 10th, 2019 and will be subject to an annual review. This surcharge is currently estimated to provide $975,000 in additional revenue over the three years. Based on the Authority's performance to date, there is no change proposed to this surcharge at this time. Details of the proposed tariffs will be discussed further under section 3.3.

(iii) The Authority recognizes the following factors that are important in maintaining financial self-sufficiency:

a) *Maintaining sufficient reserves for an unfunded liability pertaining mainly to severance payments*

This liability was $1,547,000 at December 31, 2015. This liability will grow through 2021, and then begin to decline. The benefit has been removed from non-union employees' benefits, has been negotiated out of two collective agreements, and has been eliminated for new employees in the third collective agreement. Beginning in 2017, the Authority intends to put savings aside annually to fund this future liability.

b) *Maintaining the financial capacity to borrow or fund the cost of acquiring new pilot boats.*

During 2007, the Authority completed the first two boats in the pilot boat replacement program at a total cost of $6.725 million. These boats were designed for the harsh conditions of Placentia Bay, and are deployed in that area. Construction commenced in 2011 on a third and fourth vessel. The third vessel was delivered to Halifax midway through 2012. The fourth vessel was delivered for Saint John in January of 2013. The total cost for these two vessels was $5.8 million. The new boats have been designed for the conditions prevalent in Halifax and Saint John, and replaced older boats that have an average age of more than 30 years (see Appendix B for more pilot boat

information). The Authority is currently procuring two "late model" used vessels to be added to the fleet as replacements for older boats. Beginning in 2017, the Authority intends to target annual savings to build a fund for boat replacement.

c) *Maintaining a reserve fund to allow the Authority to remain financially sound during economic downturns.*

The Authority has set a target to maintain a current ratio of 2:1. Current assets will be maintained at a level that is twice the current liabilities. This will represent the reserve fund that will allow the Authority to remain financially sound during economic downturns.

By focusing on the above factors, it is felt that the Authority will continue to be self-sufficient while addressing the issue of cross-subsidization among ports. The Authority is committed to providing fair and reasonable tariffs, with minimal rate increases when necessary and rate reductions in ports in which profit is projected to be in excess of requirements for the foreseeable future.

iv) Assessment of Corporate Resources

The Authority strives to maintain a highly skilled and well trained work force of pilots, pilot boat crews, dispatchers and administrative staff. The licensed pilots are professionally qualified and the pilot boat crews are well trained to conduct a safe marine pilotage service. However, the Authority constantly monitors the requirements for each port and adjusts personnel resources as necessary.

Pilotage and the marine industry are undergoing rapid technological change regarding electronic equipment, propulsion systems and vessel design. The Authority continuously evaluates and modifies training programs to deal with the rapidly evolving technology. Technology is also providing cost effective tools that may assist a pilot in performing their duties more effectively and safely. The Authority is committed to providing the required technology to pilots and employees to increase their personal safety and the effectiveness of the operation.

The Authority has a number of vessels that are aging yet playing significant roles in a number of ports. These vessels will become less reliable over time and become more difficult to repair as sourcing equipment will become more challenging. Adding newer, more reliable platforms, to the fleet is a main priority of the Authority.

2.2 CORPORATE STRENGTHS AND WEAKNESSES

The following are the Authority's main strengths and weaknesses:

Strengths

- ⇨ A qualified, experienced team;
- ⇨ Provision of highly efficient and professional pilotage services;
- ⇨ Recognition of the compulsory pilotage principle by most industry stakeholders;
- ⇨ Good relations with bargaining units and unions;
- ⇨ Consensus throughout the organization on the need to continually improve client service and strive for excellence;
- ⇨ Competitive pilotage tariffs;
- ⇨ Organizational structure well suited to its mandate;
- ⇨ Equipment renewal and capital investment in recent years are positive factors in boosting productivity. These investments include the construction of new pilot boats for Placentia Bay, Saint John, and Halifax.
- ⇨ Taking advantage of new computer technology, including the following initiatives
  - implementation of an Automatic Identification System (AIS) for the dispatch centre in 2008;
  - a new website used by the public, customers, and employees in 2009;
  - dedicated Board website in 2010 to allow easier dissemination of complex reports to Board Members;
  - new financial software in 2011 allowing greater flexibility and capacity;
  - new scanning program to reduce paper copies of files in 2011;
  - design and implementation of an electronic source form submission through hand-held devices in 2012 - 2013.
  - new tablets for pilots to use as aids to pilotage on board vessels in 2014-2018.
- ⇨ The Authority's custom designed Dispatch and Billing System provides real time information to dispatchers, pilots, customers, and management. The Authority upgraded to a new version of this software in 2008, which allowed further productivity gains;
- ⇨ Pilots are highly skilled, which is reflected in a 99.95% incident-free assignment rate during the past five complete years (2011-2015 inclusive). The incident-free assignment rate for 2015 was also 99.95% with only 4 minor incidents in the 8,348 pilotage assignments. The Authority has implemented a comprehensive training program for all pilots, and firmly supports continuing education by providing refresher training to experienced pilots, and by providing training on new technologies as they are developed;
- ⇨ The Authority has developed a disaster recovery plan that allows continuity of service in an emergency. The plan is updated and tested annually. It was successfully implemented in the

autumn of 2003 when the Authority's head office had to be evacuated during a state of emergency after Hurricane Juan struck Halifax. The plan was also instrumental in allowing service to continue in February 2004 when a major snowstorm dumped unprecedented amounts of snow on Halifax, causing the paralysis of the city for several days.

- ⇨ The Authority has generated an Incident Management Plan to be deployed if there is a marine incident in the Authority's operational area.

- ⇨ The Authority has three large composite districts encompassing three compulsory areas in each. By using the same cross-licenced pilots for all ports, efficiencies are gained and pilot salary costs are shared, allowing each of the ports to be viable. If each were individual ports, the number of pilots required and tariff costs would be higher in the individual ports.

Weaknesses

- ⇨ Revenues are susceptible to changes in local and world economic conditions. The Authority has adjusted the tariff structures to reduce the exposure to these changes.

- ⇨ Expenses susceptible to fluctuations in commodity prices, such as fuel. The Authority has mitigated this weakness through a revision of tariff regulations to include a fuel charge that reflects market prices;

- ⇨ Some major ports are largely supported by one industry, which makes the Authority susceptible to unexpected local situations within the industry. For these ports, the Authority targets a larger return on revenue to compensate for the risk of traffic interruption;

- ⇨ Potential for objections to tariff regulation proposals that would substantially delay generating required revenues. The Authority mitigates this weakness through regular consultation with stakeholders. These consultation meetings provide an open forum for discussion which reduces the chances of objection.

- ⇨ Slow administrative process for implementing regulations, including tariff regulations. Management of the Authority works as closely as possible with the regulatory personnel in Transport Canada and Central Agencies to make the process as efficient as possible. Multi-year tariff proposals will mitigate the effect of late tariff regulation;

- ⇨ Specialized training required of a pilot means that the Authority may not be able to react quickly in the event of dramatic increases or decreases in traffic or an unexpected loss of manpower due to illness or injury. The Authority attempts to address this in some ports through composite districts with cross licensed pilots

- ⇨ Concurrent implementation of tariffs and pilotage contracts is difficult to achieve and maintain due to the process required to implement tariffs. An attempt is made to have the terms of contracts and agreements coincide with the time frame of effective tariffs expected to cover them;

- ⇨ Difficulty in forecasting marine traffic levels. The Authority consults regularly with industry while monitoring larger economic factors in order to make forecasting as accurate as possible. The actual assignments realized within the past five complete years has been within 98.4% of forecast overall.

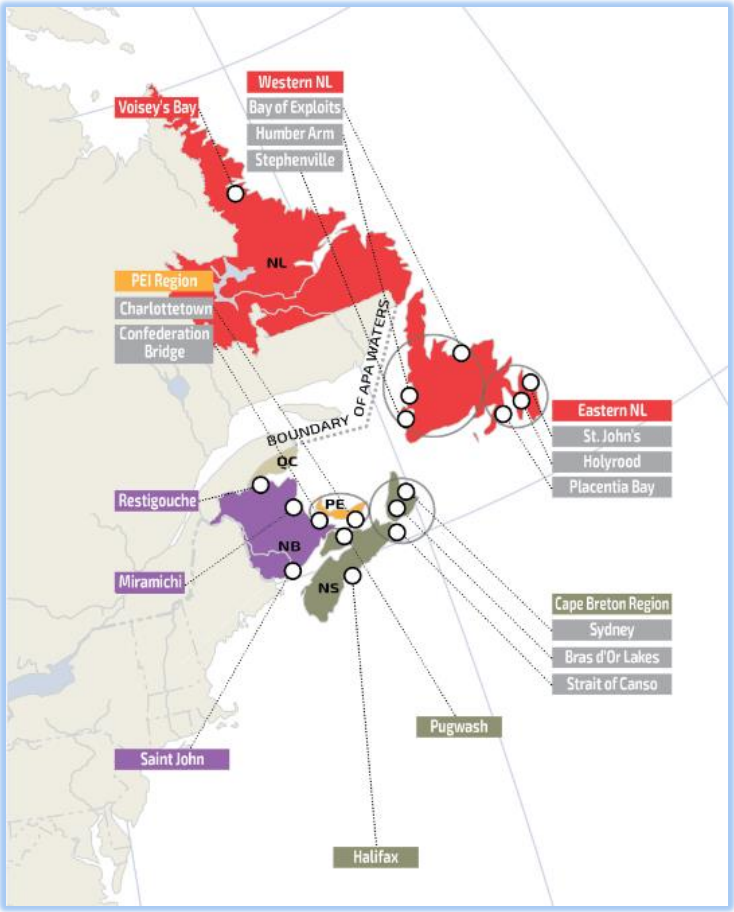
- ⇨ The PRMM process is costly with no guarantee or expectation that the costs can be recovered from the port or area in question. In an attempt to control the total cost of monitoring ports while maintaining due diligence, the Authority has been conducting a preliminary review for each province to determine the ports for which a full PRMM is necessary. This review limits the APA's exposure to full PRMM project costs by providing this preliminary screening.

2.3 Analysis of External Commercial Environment

Revenue and traffic Patterns

The Authority provides pilotage service in the seventeen compulsory ports indicated in the below map. Pilotage service is provided to non-compulsory ports upon demand. The Authority has pilots licensed for seventeen non-compulsory ports and did assignments in the majority of these areas in 2015.

Atlantic Pilotage Authority Compulsory Pilotage Areas

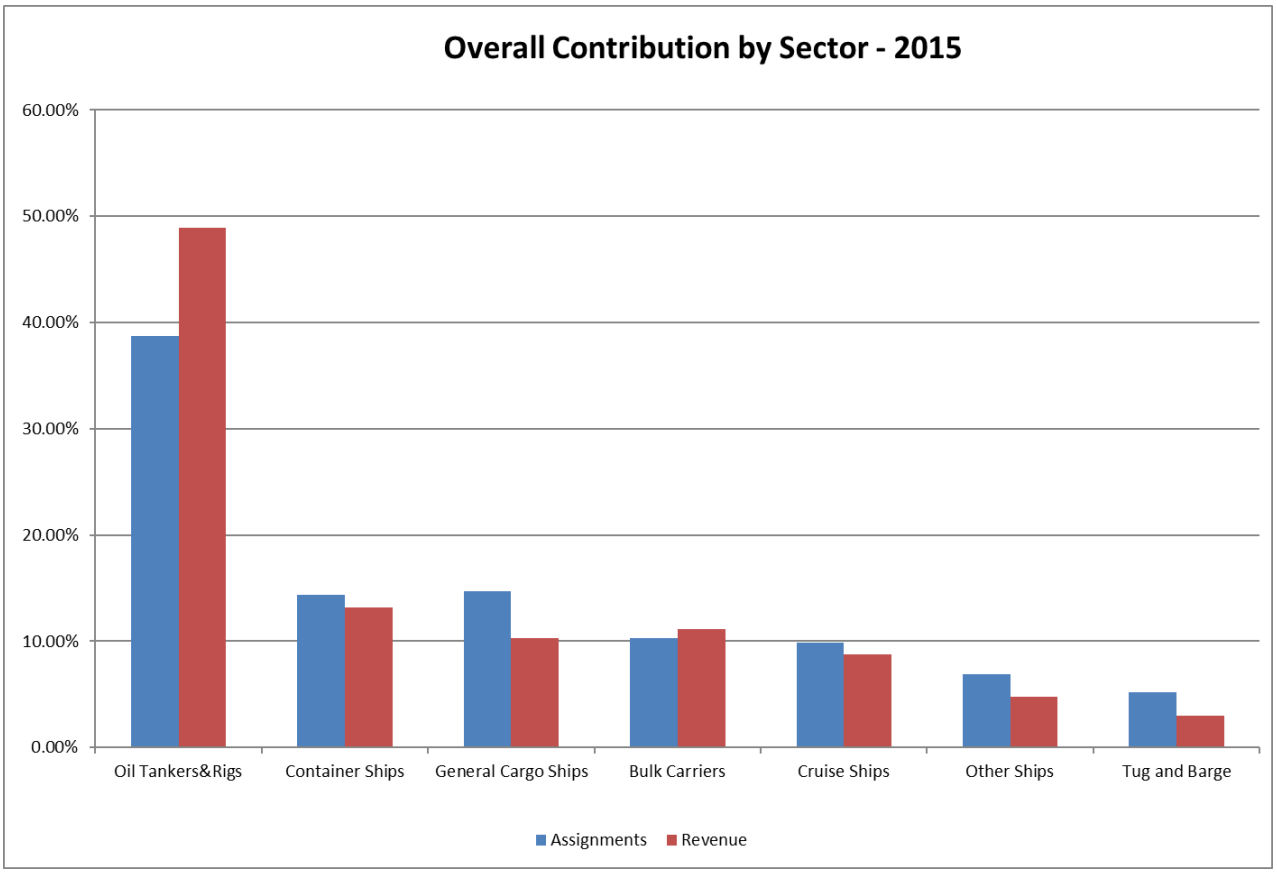


The total number of assignments for 2017 is estimated to be 8,119, increased from the projected 2016 activity levels of 8,040 assignments. The amount of activity in ports serviced by the APA can vary significantly due to factors that are beyond its control. Currently two major issues are on the horizon: the widening of the Panama Canal which will lead to a change in traffic patterns; and International Maritime Organization regulations on air pollution of ships operating near shore. The former issue may have a significant effect on container ship traffic, and the latter regulation may impact cruise ship traffic.

Of the 17 compulsory areas, there are four major ports that contribute approximately 75% of the Authority's assignments, and approximately 81% of revenues. These ports are Placentia Bay, NL, Halifax, NS, Strait of Canso, NS, and Saint John, NB. Much of the pilotage activity in the Atlantic Region is driven by the oil industry, with oil tankers being primary contributors in Saint John, Strait of Canso, and Placentia Bay. While tanker traffic is also important in Halifax, container ships are the primary contributor to that port which handles over 80% of the Authority's container ship traffic.

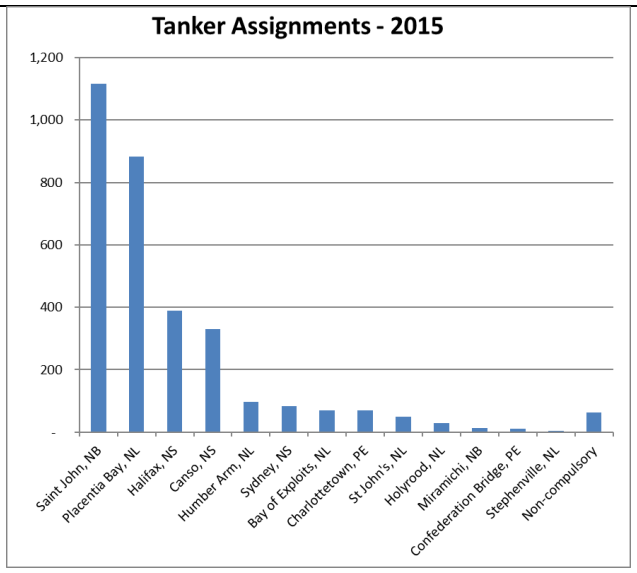
Foreign flagged vessels provide the great majority of the Authority's business. This fact has become even more pronounced after offshore supply vessels were exempted in 2006, as these vessels are predominately Canadian flagged ships. The current trend is for foreign vessels to represent approximately 78% of assignments, and approximately 79% of revenue.

The oil and gas industry accounts for approximately 39% of the Authority's overall assignments, and contributes 49% of the overall revenue, based on current trends. The following chart indicates the overall contribution by different sectors.

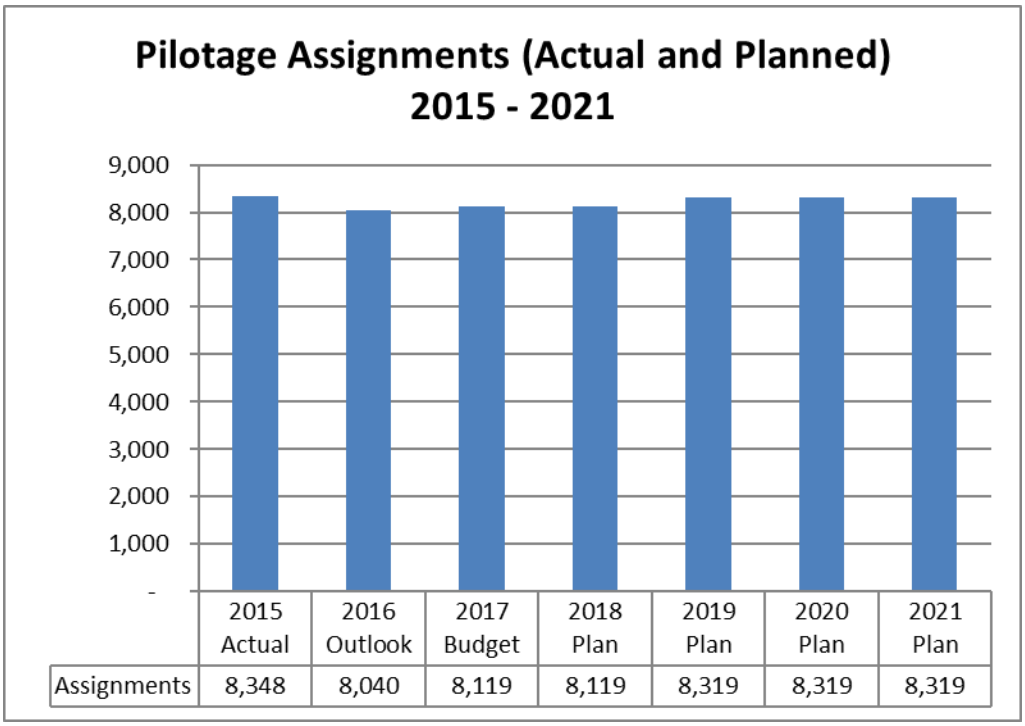


The Authority performed pilotage duties on tankers in thirteen of the seventeen compulsory areas. Assignments that occur in non-compulsory areas usually are in conjunction with a compulsory assignment.

Area	Tanker Assignments
Saint John, NB	1,116
Placentia Bay, NL	882
Halifax, NS	390
Canso, NS	330
Humber Arm, NL	97
Sydney, NS	84
Bay of Exploits, NL	70
Charlottetown, PE	70
St John's, NL	48
Holyrood, NL	28
Miramichi, NB	13
Confederation Bridge, PE	11
Stephenville, NL	4
Non-compulsory	62
Total	**3,205**



The chart below illustrates the annual assignments for 2015, the outlook for 2016, and the forecast included in the Plan for 2017-2021. Even though the Authority has experienced declines in traffic recently, this plan conservatively projects activity levels to remain constant over the longer term. There are projects being considered by industry that may grow traffic within this planning period, but the Authority is taking a wait and see stance on possible growth.



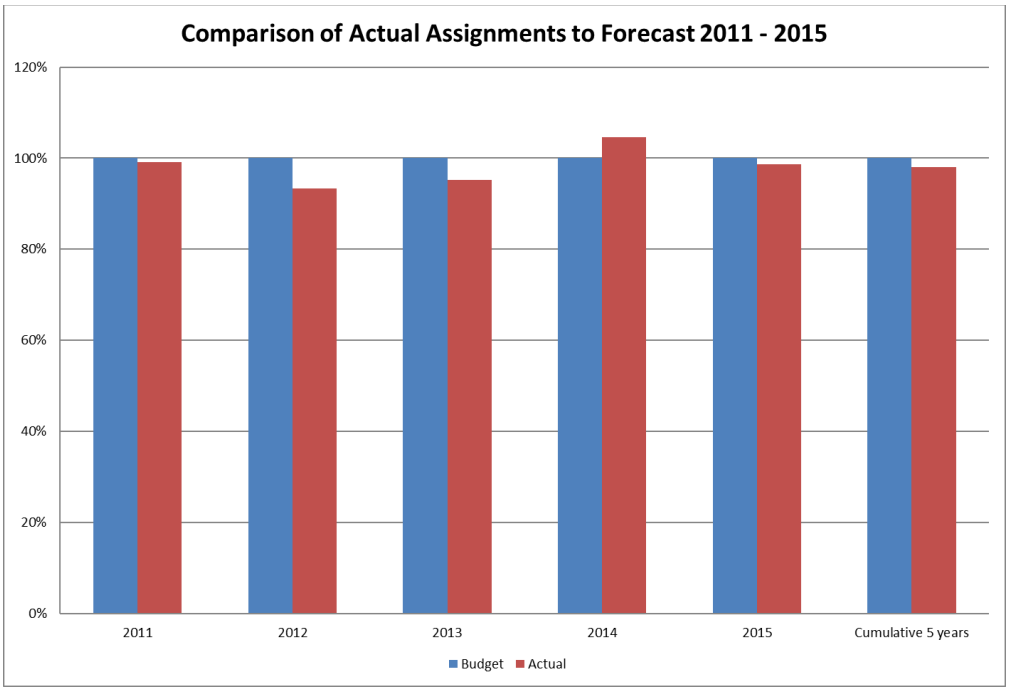
PILOTAGE CERTIFICATE USE

In accordance with the *Pilotage Act*, the Authority issues pilotage certificates to qualified masters upon successful completion of an examination, allowing these masters to pilot their own vessels. In 2014, there were 35 certificated masters who performed 1,063 assignments; in 2015, this number increased to 45 certificated masters completing 1,465 assignments. The Authority receives no revenue from these assignments, and the increase in certificate assignments contributes to a decline in pilotage assignments.

FORECASTING OF ANNUAL ASSIGNMENTS

The Authority's management conducts an annual forecasting exercise that is intended to enhance the accuracy of the financial statements and operational planning. These forecasts are compiled through management research, and after consultation with the shipping industry, port authorities, shipping agencies, and other business representatives. In many cases, the Authority may be aware that shipping activity is to commence, or to cease, but the precise timing may not be available. When forecasting for a calendar year, it is not possible to know how much of the upcoming activity will fall within the twelve-month period, so the Authority must take a longer view of activity and the resources required to meet the demand. During the five complete years prior to the submission of this plan, the Authority's forecast has been 98.4% accurate compared to the actual results

(assignments forecast were 43,179 while actual assignments were 42,502). The following chart indicates the results for each year, expressed in percentages, with the last columns representing the cumulative results. The forecast is charted as 100% each year in the blue column. The actual results are indicated by the red column.



2.4 SPECIAL EXAMINATION, 2016

The Office of the Auditor General of Canada presented its Independent Audit Report covering selected systems and practices that were in place between 1 October 2015 and 31 March 2016 to the Board of the Authority on 1 September 2016. The recommendations from the report, followed by the Authority's response and update on the implementation of each recommendation, are listed below.

Corporate Management Practices

Recommendation 1: The Board should ensure that its members comply with all provisions of the Corporation's conflict of interest code, including the requirement to provide written disclosure to the Chairperson of all business and commercial interests where such interests might be construed as being in actual or potential conflict with their duties as Board members, so that appropriate mitigations can be put in place.

The Corporation agreed with this recommendation. Since the period under examination, Board members and management have provided written disclosure of all business and commercial interests which might be construed as an actual, potential, or perceived conflict directly to the Chairperson as required by the Corporation's conflict of interest code. The Chairperson will put in place appropriate mitigations, as required, based on the topics or issues under consideration.

Recommendation 2: The Corporation should periodically review its mission, vision, and strategic objectives. The Corporation should ensure that its strategic objectives are easily measured and assign responsibility to specific managers for achieving them. The Corporation should also establish expected results for the strategic objectives and link them to management's performance objectives.

The Corporation agreed with this recommendation. At the time of the audit the Authority had a strategic session scheduled with a facilitator to update these items. This session was held in June 2016 and the mission, vision, and strategic objectives were updated and are contained in this plan. These items will be reviewed annually. The Corporation's updated strategic objectives are easily measured and have been assigned to specific managers to achieve them.

Recommendation 3: The Corporation should ensure that its tariff-setting processes take into account its legislated requirement to be financially self-sufficient.

The Corporation agreed with this recommendation. The Authority experienced operating losses in three of the past four fiscal years. The Authority was able to put a surcharge in place to recover three quarters of the cumulative loss over a three-year period with an agreement from the Authority and industry to review its success annually and evaluate its continued need. As part of the Authority's June 2016 strategic planning sessions, criteria were set to measure financial self-sufficiency based on annual targets to fund capital asset replacement and future severance payouts, while allowing for economic downturns. This Corporate Plan reflects tariffs that were set at a level intended to achieve the targeted criteria for savings for 2017 by reaching the lower range of the Board-specified profit target in 2017 (3.5%) and increasing profit through 2019, when the higher range of the Board-specified profit target is expected to be reached (5.0%). Currently, the projection for 2016 is for the Authority to meet its budgeted profit.

Recommendation 4: The Corporation should regularly monitor implementation of its risk mitigations and formalize its reporting on these mitigations to the Board.

The Corporation agreed with this recommendation. Risk mitigation activities had been reported to the Board on an ad hoc basis, but since the period under examination, a committee of the Board has been tasked with oversight of risk mitigations. The first meeting of this committee is expected to be held during the fourth quarter of 2016.

Management of Pilotage Services

Recommendation 5: The Corporation should implement information management that facilitates its ability to demonstrate the health and competence of its pilots and pilot boat crews.

The Corporation agreed with this recommendation. In its response to the recommendation, the Corporation committed to developing a more robust information management structure by the end of 2016. In August 2016, the Authority deployed a marine information management system that will be used to store the records associated with the health and competence of the pilots and pilot boat crews. This system will be fully populated and associated processes implemented by the end

of 2016. Further to these initial steps, an internal audit project is planned for 2016 to evaluate the current structure and status of the Authority's document management as a whole, and provide recommendations for further improvement. These recommendations will be implemented in 2017.

Recommendation 6: The Corporation should ensure that documented contracts are in place with entrepreneurial pilots to specify the terms and conditions of pilotage service delivery.

The Corporation agreed with this recommendation. The Corporation will act to formalize the service agreements with the Corporation's entrepreneurial pilots with a target date of the first quarter of 2017.

Recommendation 7: The Corporation should formalize its good practice of requiring consensus among its committees of senior pilots before advancing the licences of trainee pilots. The Corporation should maintain documentation of this consensus, along with the final recommendation letter issued by the committee chairperson.

The Corporation agreed with this recommendation. The requirement of obtaining consensus from the committees of senior pilots will be formalized. Effective immediately, the Corporation will also maintain documentation of this process along with the recommendation letter from the committee chairperson.

Recommendation 8: The Corporation should ensure that it fully implements and consistently applies a performance management process for all pilots and pilot boat crews. The Corporation should also assign responsibility for reviewing performance management information, with the aim of ensuring proper oversight and follow-up of actions.

The Corporation agreed with this recommendation. Since the period under examination, the first cycle of performance review of each fully licensed pilot has been completed. There are operational and logistical challenges that affect the planning and timing of these reviews. A second cycle of performance reviews has begun with every fully licensed pilot to be assessed by the end of 2018. As this will be the second cycle of performance reviews, lessons learned from the initial cycle will be implemented.

Since the period under examination, a clause to facilitate performance reviews with employee launchmasters has been negotiated in the most recent collective agreement. A similar clause was included in the collective agreement for the employee deckhands in 2015. The performance review process for employee pilot boat crews has been approved and all employees will be assessed by the end of the first quarter of 2017 and annually thereafter.

Recommendation 9: The Corporation should implement a cyclical review to demonstrate reconsideration of the designation of every compulsory pilotage area under its responsibility at least once every five years. The periodic review should also demonstrate reconsideration of the size and types of vessels subject to compulsory pilotage. The Corporation should also ensure that recommendations from preliminary risk analyses of non-compulsory pilotage areas are addressed promptly.

The Corporation agreed with this recommendation. A review was conducted in July 2016 by management and the Board. This review examined each compulsory pilotage area for changes in traffic volume and vessel types. The Board evaluated each area to determine if further examination was required at this time and the Risk Committee was tasked with proceeding on the recommendations. This process will be conducted annually by the Board as part of the strategic planning sessions.

Since the preliminary risk analysis of non-compulsory ports in Nova Scotia, the Corporation also performed similar analyses for New Brunswick and Newfoundland and Labrador. Since these scans began in 2010, the Corporation completed preliminary scans on 22 ports—18 non-compulsory and 4 compulsory areas. The findings of the preliminary risk analyses were weighted by the Board and PRMM reviews were prioritized as resources to conduct these reviews are limited. The preliminary risk analysis for Nova Scotia has been updated for any changes in risk factors and a decision will be made in 2016 whether to move forward with full PRMM reviews.

Recommendation 10: The Corporation should perform annual inspections on all pilot boats, owned and contracted.

The Corporation agreed with this recommendation. Since the period under examination, management developed an annual pilot boat inspection schedule and all inspections will be completed by the end of 2016 and annually thereafter.

3. OBJECTIVES, STRATEGIES, PERFOMANCE MEASURES AND OUTCOMES

3.1. EXPECTED OUTCOMES

A CLEAN ENVIRONMENT AND A STRONG ECONOMY

Clean Environment

The Authority contributes to the safe and efficient movement of goods and people for Canadians, while protecting the environment from harm. The economic benefits of the services provided are difficult to measure as the benefit derived by users is primarily preventative. Pilotage plays a key role in ensuring that there are no ship source environmental disasters in Canadian waters. The Authority's work is expected to benefit Canadians by protecting marine ecosystems, a sustainable fishing industry, a vibrant tourism industry, and local infrastructure. The Authority tracks and subsequently reports all shipping incidents as a means of measuring these outcomes. These indicators are discussed further in section 3.3.5.

Number of shipping incidents – Target 100% of assignments without incident.

Progress towards this goal is included in the quarterly financial statements and the annual report. Over the previous 5 years, the Authority has performed 42,501 assignments with 22 minor incidents reported. That is 99.95% of assignments performed without incident.

On rare occasions, the Authority responds to emergency situations as shown in two recent examples where tankers had to divert to Halifax due to mechanical failures. A tanker that was fully loaded with 775,000 barrels of crude oil as well as 3,000 m^3 of bunker fuel lost its rudder forty nautical miles off the coast of Nova Scotia in a gale in December 2014. Another tanker loaded with 845,000 barrels of crude oil plus bunker fuel suffered a mechanical failure in January 2016, reducing its maximum speed to only three knots. Using the data provided by the local weather buoy, APA pilots were able to determine the safe operating windows during which the vessels could be effectively controlled with escorting tugs and the vessels were brought safely into the harbour.

Strong Economy

Pilotage ensures the most prompt and efficient vessel transits possible. The skilled dispatchers coordinate with shipping agents, masters, pilot boats, and tug resources to assure pilots are available and vessels can be moved on a 24 hour, 365-day basis in 17 individual compulsory ports or areas. Pilot boat crews transport pilots quickly and safely between assignments to minimize wasted time and resources. The local knowledge and ship handling skills of the Authority pilots allow for vessels to transit congested and active ports effectively and efficiently.

Management and pilots are also made available to industry and stakeholders by the Authority to provide consultation on marine projects. These projects include terminal and dock designs, simulation of vessel passages, and evaluation of new operations. A list of recent consultation services is provided below in section 3.3.4.

The Authority tracks and subsequently reports on the number of complaints or "non-compliances" submitted by stakeholders and the number of assignments in which pilots were supplied within one hour of the firm order time. These measures are discussed in more detail in section 3.3.1.

Number of assignments without complaint – Target 100%.

Progress towards this goal is included in the quarterly financial statements and the annual report. In 2015, 99.8% of assignments were performed without complaint.

Number of assignments in which pilots were supplied within 1 hour of firm order time – Target 100%

Results of performance is included in the annual report. In 2015, 99.50% of assignments were deemed to have been performed on time.

3.2. OBJECTIVES

CORPORATE OBJECTIVES

The Authority's corporate objectives are the following

1. To deliver safe and effective marine pilotage services in Atlantic Canada.

2. To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

3. To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

4. To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

5. To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

3.3. STRATEGIC GOALS

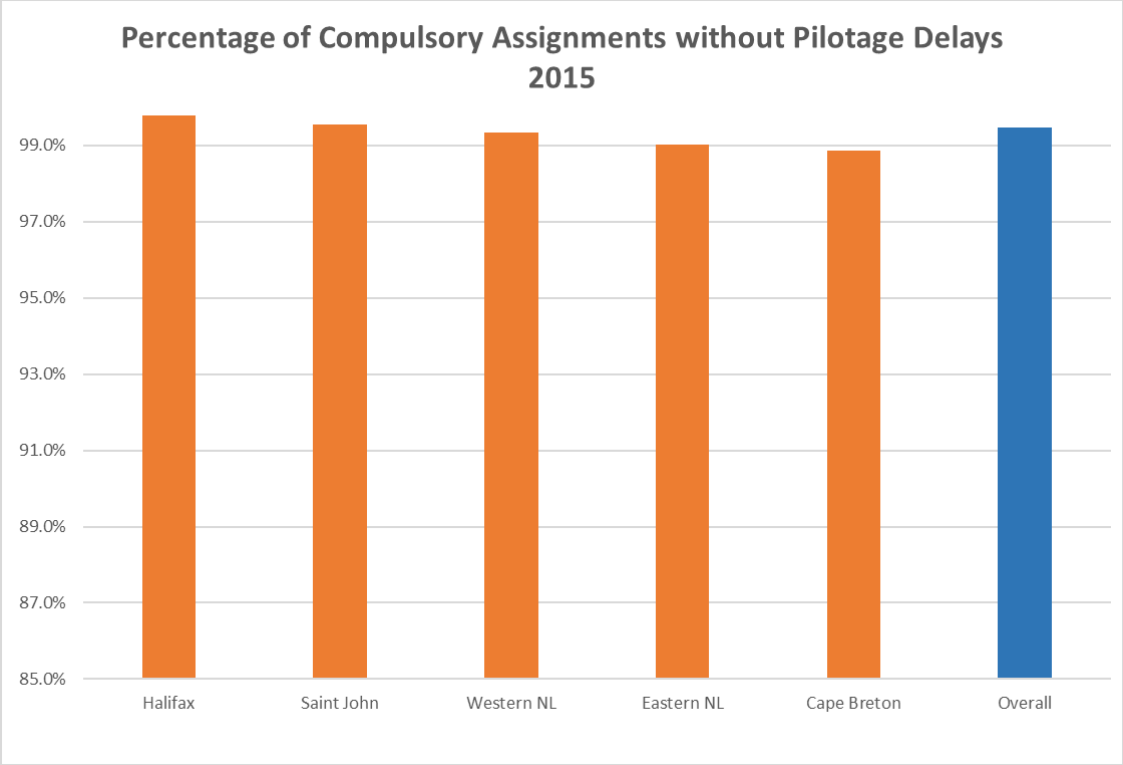
3.3.1 To deliver safe and effective marine pilotage services in Atlantic Canada.

The Authority determines the staffing levels for each compulsory pilotage area based on the customer requirements and the expected activity in each port. Occasionally, if traffic levels peak too high, delays may be incurred. Staffing for these rare peaks would be too costly for the customers of the port. The Authority works with individual ports constantly to deal with these peak periods.

The Authority developed a structured methodology for handling complaints several years ago in response to the Ministerial Review of Outstanding Pilotage Issues. The mechanism is designed to be as user friendly as possible, and the goal of the Authority is to ensure that timely feedback is provided to the complainant. The most common reason for a complaint to be submitted was due to a delay in an assignment. In some cases, the delay is caused by factors beyond the control of the Authority, such as weather or delays caused by the non-availability of port services such as tugs.

The Authority received 19 (71 in 2014) complaints out of a total of 8,348 (8,472 in 2014) assignments during 2015. The remaining 99.8% (99.2% in 2014) of assignments were performed without receiving a complaint from the customer. All complaints received are included in the above total, including those submitted that involved delays not caused by the Authority.

For 2015, the Authority provided service within one hour of the ordered time on 99.5% of assignments, compared to 98.6% in 2014 (excluding delays caused by factors beyond the Authority's control). It is expected that the service level in 2016 will be similar to 2015. The following chart provides the results for each port or district.



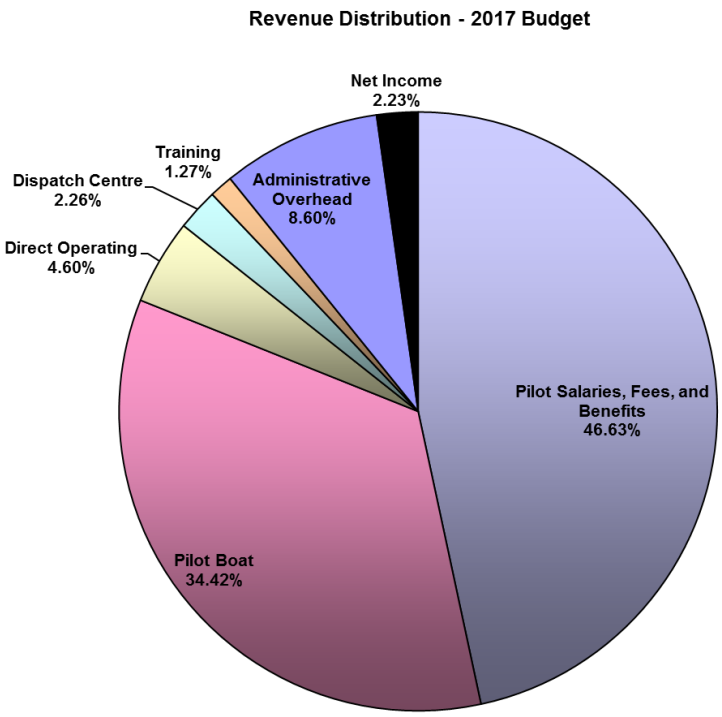
Due to previous actions taken, the service levels have improved dramatically in Eastern NL and Cape Breton. Each port also has additional challenges regarding geography, weather, and pilot boat availability. It was determined that the APA had not staffed enough pilots in these areas to withstand unexpected loss of manpower, and these losses are becoming more frequent as the workforce ages.

In Eastern NL the Authority has been very active in trying to address the problem. Pilots have been added to the area with the goal of carrying 14 in the district. The pilot boat manning contract was put to tender and a new manning company is now providing the service with fewer interruptions.

For Cape Breton, the Authority has determined that carrying only seven pilots in the area was not sufficient with the long term illness faced in the workforce. Two apprentice pilots were added late in 2014 with an additional pilot added in 2016 to replace the pilot who retired.

3.3.2 To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

Financial self-sufficiency can only be maintained by controlling expenses, and maintaining an adequate revenue base. The following graph indicates the budgeted percentage of revenue disbursed by major categories for the 2017 Budget year. This does not include revenue generated from the surcharge. It is expected a similar distribution will be in place in future years.



Pilot salaries are the largest cost category; therefore, the number of pilots employed has a significant impact on the Authority's finances. Potential retirements, future traffic levels, and the extended training period required are all factors to consider when planning apprentice pilot recruiting. Apprentice pilots create additional salary costs while not providing the productivity of more senior pilots. However, should apprentices not be hired, the Authority may be left without sufficient pilot strength for the level of activity in an area. Therefore, striking a balance is important.

A thorough analysis of each compulsory pilotage area is undertaken each year, with a primary goal of providing the required service at a minimal cost. If reductions in expenditures in an area can be achieved without affecting the safety or effectiveness of the service, then this course of action is followed. If tariff increases are necessary to avoid cross-subsidization, the minimal amount of increase necessary is proposed. These increases are targeted at each area, rather than as a general tariff increase. Planned tariff changes are discussed in section 3.4. Regulation Changes and Tariff Adjustments.

Operational Summary

	2013 Actual		2014 Actual		2015 Actual		2016 Outlook		2017 Budgeted	
	Revenue	% Change from 2012	Revenue	% Change from 2013	Revenue	% Change from 2014	Revenue	% Change from 2015	Revenue	% Change from 2016
Tanker	10,918	6.9%	11,620	6.4%	11,062	-4.8%	12,190	10.2%	12,616	3.5%
Cargo	4,018	1.7%	4,597	14.4%	4,849	5.5%	4,357	-10.1%	4,522	3.8%
Container Ship	2,681	6.4%	2,495	-6.9%	2,981	19.5%	3,583	20.2%	3,702	3.3%
Cruise Ship	1,833	10.4%	1,745	-4.8%	1,974	13.1%	1,736	-12.1%	2,252	29.7%
Other	2,052	6.1%	2,041	-0.5%	1,756	-14.0%	1,673	-4.7%	1,709	2.2%
Total Revenues	21,502	6.1%	22,498	4.6%	22,622	0.6%	23,539	4.1%	24,801	5.4%
	Expenses	% Change	Expenses	% Change	Expenses	% Change	Expenses	% Change	Expenses	% Change
Pilot Salaries and Benefits	9,842	2.5%	10,555	7.3%	11,091	5.1%	11,186	0.9%	11,565	3.4%
Pilot Boat and Facility Costs	7,878	10.5%	8,249	4.7%	7,763	-5.9%	7,762	0.0%	8,538	10.0%
Other Operating Costs	916	-6.6%	1,123	22.5%	1,111	-1.1%	1,135	2.2%	1,140	0.4%
Training Costs	111	-32.2%	320	189.5%	284	-11.3%	345	21.5%	315	-8.7%
Adminsitrative and Dispatching	2,645	4.1%	2,869	8.5%	2,924	1.9%	2,581	-11.7%	2,691	4.3%
	21,392	4.8%	23,116	8.1%	23,173	0.2%	23,009	-0.7%	24,249	5.4%
Profit (Loss) without Surcharge	**110**		**- 618**		**- 551**		**530**		**552**	
1.5% Surcharge (36 months)	**-**		**-**		**-**		**260**		**328**	
Assignments	8,338	1.0%	8,472	1.6%	8,348	-1.5%	8,040	-3.7%	8,119	1.0%
Pilots	42.0	-2.3%	47.0	11.9%	47.0	0.0%	47.0	0.0%	48.0	2.1%
Return On Revenue	0.5%		-2.7%		-2.4%		2.3%		2.2%	
Tariff Increase	3.80%		4.62%		5.28%		2.95%		4.12%	
Ave. Pilotage Rev per assign	2.579	3.76%	2.656	4.39%	2.710	2.04%	2.93	8.04%	3.05	4.34%

Overall, for the Authority, traffic has decreased in 2016 and is expected to increase to around 8,119 assignments for 2017. A growth in the number of assignments done with certificates has contributed to this decline. Cruise traffic is expected to be quite strong in 2017 and 2018. The Authority's investment in additional pilots has slowed with the compliment expected to grow by one in 2017. A significant investment is scheduled for 2017 in the launching of two additional pilot boats, which increases pilot boat and facility costs above. The remaining costs are budgeted to be similar to 2016. A tariff increase will be proposed to cover the increased pilot costs and the costs for the additional vessels.

The Authority targeted $220,000 in savings under Administrative and Dispatching for 2016 and the Authority is on pace to achieve this target.

Dispatch

The Authority provides dispatching services throughout its region from a dispatch centre located at its head office. The total cost of the dispatch operation in 2017 will be approximately $559,000 and this amount has been included in the budget. The dispatching service provides significant information and added value to pilots, customers, port authorities, and management through controlled access web pages established for each group. The web pages are continuously updated from the Authority's Dispatch and Billing System as the dispatcher enters data. Customers and pilots are able to contact dispatch by telephone, e-mail, facsimile, VHF radio, and telex. As the service evolves, it continues to increase the efficiency of the Authority's operations while adding value for customers and employees. The APA has developed the capability to monitor vessel movements in the major ports and their approaches through a computer program utilizing the AIS. The AIS is required on all commercial vessels, and the APA has also installed transmitters and receivers on its pilot boats.

Pilot boat costs

The APA has three models for pilot boat operations:

1. In the Strait of Canso, and all minor ports, a contractor provides both the boat and the crew.

   The Authority prefers that all pilot boat contracts be paid on a "per trip" basis. This avoids a situation where a guaranteed annual amount of money is paid that has no relation to the number of assignments and revenue in that port. This principle is followed with a few minor exceptions to address local issues in a port.

2. In two of the major ports, Halifax and Saint John, the Authority owns and operates pilot boats, with the crew being employees of the APA. The Authority attempts to use its own boats in the most efficient manner possible and to control costs where possible. The boat crews are APA employees and their costs do not fluctuate with activity in the port.

3. In Placentia Bay and Sydney, the Authority owns the vessels, with the manning contracted out to a local company.

   The Authority requires the contractor to use the APA boats efficiently while safeguarding the assets.

The APA prefers to have a variable cost in those ports in which a private contractor provides service. This is accomplished by having a "per trip" rate that will fluctuate with the volume of traffic.

Please see Appendix B for more information on APA owned pilot boats.

3.3.3. To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

Annually, the Authority determines required pilot strength for each port or district based on forecasted activity, service requirements, succession planning, and consultation with industry. Pilots are hired, trained, and licenced for specific ports or districts, and must remain current in those areas for which they are licenced. As an example, an experienced pilot licenced in Halifax, NS could not be utilized in Saint John, NB, without undergoing extensive further training and licencing in that port. This requirement that pilots have valid port-specific licences and current local knowledge of a port limits the utilization of pilots to cover assignments in another port.

The number of pilot boat crew and maintenance is based on the requirement to provide pilot transport twenty-four hours per day, 365 days per year in a safe and efficient manner. The dispatch center operates with the minimal amount of personnel required to have the center available around

the clock. The management and administrative personnel levels are required to manage the business of the Authority while preparing a succession plan.

The Authority has eighty full time employees, and one part-time employee. This complement includes 47 pilots, 18 pilot boat crew members (including maintenance), 6 dispatch personnel, and 9.5 management and administrative personnel. Please see Section 6 for a summary of the Human Resources budget and plan.

The Authority employs highly skilled and qualified pilots. Professional development is emphasized, and the Authority makes a significant financial commitment to ensure that the best available training is provided. The pilots are supported by competent pilot boat crews and dispatchers who work as a team to provide the best possible service to the customer. The Authority employs professional and proficient management and support staff to administer the operations.

The licensed pilots and the pilot boat crews are trained to conduct a safe marine pilotage service. The Authority monitors the requirements for each port and staffs accordingly, after consultation with stakeholders. Pilotage and the marine industry are undergoing rapid technological change. The Authority evaluates and modifies training programs to deal with the rapidly evolving technology.

3.3.4. To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

The Authority makes its pilots available to assist industry and communities with various marine projects. Recent projects on which the Authority provided consultation and assistance include the following:

Newfoundland

- Assisted North Atlantic Refinery with a new bunker supply operation. Initial project ideas included a mono buoy, dredging at the dock to allow vessels to berth and bunker, and a bunker delivery vessel (final decision). The refinery will now be able to capture vessels entering the emissions control zone requiring low sulphur diesel.
- Long Harbour simulations and risk assessments to reduce tug requirements for certain vessels – positive commercial impact for Vale (reduced cost and increased flexibility)
- Simulated a very large cruise vessel for St. John's harbour, providing confidence and identifying environmental criteria to pilot and berth the vessel – large economic impact for the city (3500 passengers).

Nova Scotia

- Sydney cruise terminal expansion and dock configuration. This will allow two cruise ships to berth simultaneously eliminating the need for an anchored vessel to tender passengers, ultimately making the port more marketable and attractive. The dock will also be used for commercial interests in the off season.
- Bear Head LNG support. From dock configuration, vessel approaches and berthings to emergency maneouvers and contingency planning – nearly 50 simulations conducted in Rhode Island with TC in attendance. Substantial TermPol support.
- Extensive support for the port of Halifax with regard to the MacDonald Bridge re-decking. North-bound traffic management, risk assessments, stakeholder relations and contingency planning.
- I-Heave project to determine the dynamic under keel clearance for the larger container vessels that have been, and will continue to call Halifax. This study is also meant to determine whether a change to operational procedures are required to accommodate container ships in excess of 8,700 TEU. These vessels are a component of the Port's strategy to maintain and enhance its competitive position in a rapidly changing global industry.

New Brunswick

- Simulations for larger cruise vessels into Saint John in order to maximize the tidal window. The result is increased duration in the port which equates to a positive economic impact for the community.
- Dock design, configuration and TermPol support for the Energy East project.

The Authority has also been testing and helping develop cost effective portable pilotage units (PPUs) that would be beneficial to the specific port pilotage done in the Atlantic region. The PPU's are brought onboard by the pilot and have to be setup before the pilot takes conduct of the vessel. The PPU is essentially a computer that receives digital information from the ship, other ships, the shore, cellular transmissions, and satellite. It is used by pilots to provide the specific information in real-time that is most valuable to assist with navigation and training.

Establishment of Weather Buoys in Atlantic Region

The APA has been a strong supporter of a joint initiative to establish weather buoys in key areas in the Atlantic region. This joint initiative, known as SmartATLANTIC, is spearheaded by the Canadian Marine Pilots Association and has had the support of the APA, the Halifax Port Authority, the Saint John Port Authority, Canaport LNG, and Irving Oil Limited. It has been endorsed by the Shipping Federation of Canada and the Canadian Shipowners' Association. The Authority does not make a financial contribution to the capital cost or launch of these buoys, but does share in the annual operating costs after deployment. The APA views this as contributing to its mandate of providing, in the interests of safety, an efficient pilotage service in its higher volume ports (*Pilotage Act Section 18*). The current weather information and weather forecasts provided

by these buoys provide both a margin of safety and a more efficient operation. Customers are able to see forecasts that allow them to determine whether they should make arrangements to bring a ship in, and pilots are able to more accurately judge safety margins.

In late 2013, a weather buoy was placed off Herring Cove in Halifax Harbour, and that buoy became operational in early 2014. This project was possible because of the financial support of the Governments of Canada and Nova Scotia; the research expertise of Dalhousie University; the $60,000 annual operational contributions of the APA and the Halifax Port Authority; and in-kind contributions of the Canadian Coast Guard.

In early 2015, the new weather buoy in Saint John, NB was deployed. The capital costs for this project was provided by Transport Canada ($185,000), the Province of New Brunswick ($91,000), Saint John Port Authority ($91,000), with in-kind contributions from AMEC Environmental & Infrastructure, the Canadian Marine Pilots' Association, and the Canadian Coast Guard. The buoy was built by AXYS Technologies Inc. of Sidney, British Columbia. The operating costs will be shared by the APA, the Saint John Port Authority, Canaport LNG, and Irving Oil. The annual portion of these costs for the APA is $30,000. This buoy is of great benefit to the shipping community in Saint John by providing real-time meteorological/oceanographic data to allow the production of high-resolution forecasts that are available to the public through the internet or smart phone. In addition to forecasting, the research community benefits greatly from real-time data that includes air temperature, humidity dew point, barometric pressure, wind speed, water temperature, salinity, current speed, current direction, wave height, wave direction, and wave period.

For the APA, the establishment of these buoys enhances safety and allows for more efficient use of manpower. It is estimated that, prior to the deployment of these buoys, weather-related delays cost the Halifax marine industry approximately $2.6 million annually, with the cost in Saint John in excess of $1 million. With more accurate and precise forecasts, the marine stakeholders will be able to have better operational planning with respect to ordering tugs, pilots, port labour, and ground transportation. It is expected that the improved planning provided by weather buoy information will allow the delay related costs to be substantially reduced.

This initiative benefits many public sector users such as Environment Canada, the Canadian Coast Guard, the Department of Fisheries and Oceans, Transport Canada, the Canadian Hydrographic Service, the Halifax Port Authority, the Saint John Port Authority, and the APA. It also benefits the private sector and the public at large through increasing the safety margin for aquaculture and fishers, recreational boaters, tourism operators, shipping lines, port terminal operators, and infrastructure and land use planners.

The APA has committed to providing funding of operating costs of a similar buoy for the Strait of Canso, NS, if other partners can be found for that area. The maximum amount that the Authority would provide would be a similar amount to the one in the Port of Saint John.

The APA believes that this initiative is vitally important in reducing risk to its customers and to the APA pilots and boat crews, and would be an essential factor in improving safety of the marine environment for all those who derive their living or pursue recreational interests in these

areas. The Authority commends Transport Canada for their support of the SmartATLANTIC Weather buoy initiative.

3.3.5. To contribute to the Federal Government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

A primary purpose of the Authority is to protect the environment and communities from marine incidents. During 2015, there were 4 shipping incidents reported that caused minor damage to equipment with no environmental consequences or injury. All incidents are categorized below:

Type of Incident		2015	2014
Damage to Equipment			
	Contact with wharf	3	2
	Contact with port equipment	1	1
	Contact with lock	0	1
	Contact with sea bed	0	1
Total incidents causing damage		4	5
Environmental Contamination		0	0
Indjury to People		0	0
Year end total		4	5

It is projected that there will be approximately 6 incidents in 2016, all of a minor nature.

The Authority is also committed to operating in a manner of governance that is consistent with the policies of the Federal Government. In 2016 the Authority put policies in place to assure the travel, hospitality, and event policy of the APA was consistent with Treasury Board Policy. The Authority has also met all reporting requirements consistent with openness and transparency to the public.

3.4. Regulation Changes and Tariff Adjustments

Tariffs

The Authority will submit tariff adjustments for two years, one set effective upon registration for 2017, and a second set of increases effective for January 1st, 2018. After analyzing projections for coming years, and consulting with industry, the Authority has determined that thirteen of the seventeen compulsory ports would require tariff adjustments in 2017 to remain financially self-sufficient on a port-by-port basis and provide the service levels required by industry, without cross-subsidization. The rates for non-compulsory assignments are also being adjusted. Users are not required to use a pilot in these areas, but the rates have to be at a level to attract contract pilots to be available when desired by the customers. The regular tariff adjustments are as follows:

Effective January 1, 2017, or if it is later, on the day on which they are registered:

Saint John	8.00%
Bay of Exploits	6.00%

Stephenville	6.00%
Bras d'Or Lake	5.00%
Halifax	5.00%
Strait of Canso	5.00%
Placentia Bay	4.00%
St. John's	4.00%
Holyrood	4.00%
Sydney	3.00%

The Authority will be increasing the basic charge in Humber Arm to $1,000 per assignment and the minimum will also be increased to $2,200. The tariffs in the Miramichi and for Confederation Bridge will also be adjusted. A minimum charge will be established for the Miramichi of $2,000 per assignment. The flat charges for the Confederation bridge will be increased by $100 per assignment. The compulsory ports in which tariffs are not being adjusted are: Pugwash, Restigouche, Voisey's Bay, and Charlottetown.

Due to pilot boats being added to the port of Sydney, a fuel charge will also be added for the area to cover the increased cost of fuel.

The Authority is projecting that eleven of the seventeen compulsory ports require tariff adjustments in 2018 to remain financially self-sufficient on a port-by-port basis and provide the service levels required by industry, without cross-subsidization.

Effective January 1, 2018:

Bay of Exploits	6.00%
Stephenville	6.00%
Bras d'Or Lake	5.00%
Strait of Canso	5.00%
Saint John	4.00%
Halifax	3.00%
Sydney	3.00%
Placentia Bay	3.00%
St. John's	3.00%
Holyrood	3.00%

The Authority will be increasing the basic charge in Humber Arm to $1,200 per assignment and the minimum will also be increased to $2,400.

The Authority absorbed losses throughout the region in 2014 and 2015 which decreased the cash reserves of the Authority. A thirty-six-month surcharge was implemented to recover these losses and is subject to an annual review. The 2016 financial projections are close to budget; thus the surcharge is still deemed to be required as planned.

The Authority conducts extensive consultation with local and national shipping interests. Committees have been formed for each of the major pilotage areas and with the Shipping Federation of Canada.

The Authority has established a Joint Committee with the Shipping Federation of Canada (SFC). The SFC/APA Committee is made up of the Chair of the Federation's pilotage committee, other members of the Federation, and the Executive Officers of the Authority. The Committee's objective is to provide a forum in which users can have constructive discussions with the Authority on operational, financial, or administrative issues, with the view to enhance the partnership between the Authority and its users. In addition to this Joint Committee, the Authority has established pilotage committees comprised of industry representatives, agents, and other stakeholders in individual ports. The Authority hosts meetings with these port committees at least twice each year, and discusses the operational and financial aspects of the individual port. These discussions contribute greatly to the Authority's efforts to maintain financial self-sufficiency by providing valuable information about prospects for changes in business in each port, and by allowing the Authority to match resources with the requested service levels. The Authority's operating plans and capital investment were discussed with these groups, as well as the tariff proposal for 2017 and 2018. The consensus of the people in attendance is that the proposal is fair and reasonable and there is support for the investments being made.

3.5 KEY PERFORMANCE MEASURES

Corporate Objectives Key Measures:

In order to achieve our identified outcomes of making positive contributions to ensuring a clean environment and strong economy, as well as, achieve our strategic goals related to safety, efficiency and financial self-sufficiency, we intend to measure progress using the following indicators:

1. To deliver safe and effective marine pilotage services in Atlantic Canada.
    a. Number of shipping incidents – Target 100% of assignments without incident.
    b. Number of assignments without complaint – Target 100%.
    c. Number of assignments in which pilots were supplied within 1 hour of firm order time – Target 100%
2. To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.
    a. Admin overhead target of no greater than 9% of revenues.
    b. Maintain an adequate contingency fund – Target - Net Current Assets will be a minimum of 2 times current liabilities at year-end.
    c. Contribute to savings for future unfunded liabilities (severance) – Target a minimum of $200,000 annually, less scheduled payouts made during the year, to be placed in dedicated bank or investment account. (Updated annually based on fund projections)

3. To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.
    a. Number of days/hours of case management time associated with a work related injury - Target 0.
    b. Unscheduled launch downtime – Targets i) Total downtime days causing operational delays/total days = 0% ii) Total downtime days not causing delays/total days = 1%
    c. Maintain a minimum of a 1:1 ratio between the number of people on the eligibility lists for each port or district, and the applicable notices of pending retirements received.
    d. Contribute to savings for future boat replacement – Target a minimum of $200,000 annually to be placed in dedicated bank or investment account.
4. To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.
    a. Provide required employee training – Target 100% of training set by training matrix and plan.
    b. Perform pilot assessments – Target is that every fully licenced employee pilot will be assessed at least once every three years.
5. To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.
    a. Pollution reports from pilot launches – Target 0%.
    b. Provide all reporting to Ottawa or published on the APA website by the required dates – Target 100%

4. COMPENSATION AND LABOUR RELATIONS INFORMATION

4.1. DESCRIPTION OF WORKFORCE

Statement of Human Resources
2013-2021

	ACTUAL 2013	ACTUAL 2014	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	PLAN 2018	PLAN 2019	PLAN 2020	PLAN 2021
ADMINISTRATION									
EXECUTIVE OFFICERS	2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
MANAGERS	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
SUPPORT	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	8.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
OPERATIONS									
PILOTS	42.0	47.0	47.0	47.0	48.0	49.0	48.0	48.0	48.0
PILOT BOAT CREWS	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
DISPATCHERS	6.0	6.0	6.0	5.0	5.5	5.5	5.5	5.5	5.5
	66.0	71.0	71.0	70.0	71.5	72.5	71.5	71.5	71.5
TOTAL EMPLOYEES	**74.5**	**80.5**	**80.5**	**79.5**	**81.0**	**82.0**	**81.0**	**81.0**	**81.0**
ENTREPRENEURIAL PILOTS	10.0	9.0	10.0	11.0	11.0	11.0	11.0	11.0	11.0
TOTAL HUMAN RESOURCES	**84.5**	**89.5**	**90.5**	**90.5**	**92.0**	**93.0**	**92.0**	**92.0**	**92.0**

ADMINISTRATION

The Executive Officers for 2016 include the CEO and CFO positions. Due to organizational changes, the COO was replaced with a Director of Operations position in an attempt to reduce costs in administration. The Director of Operations role is essential to the longer-term operation of the Authority and with respect to continuity planning as it adds to the marine knowledge and experience within the entity. The Managers of the Authority will be the Director of Operations, the Director of Finance, and the HR Manager. Support staff includes executive and administrative assistant positions.

The CEO position is appointed by the Board with remuneration approved by PCO. The salary ranges for the CFO and two Directors have been set by the Board as a specified percentage of the CEO range.

OPERATIONS

Under Operations, “Pilots” and “Pilot Boat Crews” refer to employees of the APA.

Pilots

The Authority recruits primarily Master Mariners to be pilots. There have been challenges in specific regions or ports to find suitable candidates. Regulations have been changed recently to allow mariners who have not been to a port to apply to a familiarization program. This allows them to gain knowledge of a port and of pilotage before interviewing for an eligibility competition. The Authority competes with private industry for this skilled labour and wages and benefit packages have to be comparable. The Authority stresses the work/life balance it can offer, the retirement benefits, and that being a pilot is seen by many as the pinnacle of a mariner's career. These factors can be attractive to a number of mariners and offset some shortages in wages. The corporation uses other pilotage authorities with salaried pilots as a benchmark for determining wages and benefits.

Currently, the Authority has been dealing with an older employee group that is nearing retirement. The Authority has also been experiencing more time lost due to injury, which has had a negative effect on service levels in Eastern NL and in Cape Breton. In 2013, the Authority reached an Memorandum of Agreement with the CMSG in which there is an incentive form pilots to provide notice of retirement. This agreement provides the Authority with an opportunity to properly plan pilot strength by pro-actively hiring new apprentices. Subsequent to this agreement, the Authority has received notice from several pilots' regarding their plans to retire. Pilots are being added as replacements so that they can have two years of training before each pilot retires. Having a pilot retire without a suitable replacement able to compensate can have a negative effect for users. Due to the need to meet the users' service requirements, while compensating for an older workforce with pending retirements, the Authority is increasing pilot numbers with a goal of having 48 Class A pilots over the longer term.

The licence structure is outline below as below:

Licence	Gross Tonnage	Note
Apprentice Licence	Training capacity	At the end of this phase, the apprentice must receive a passing mark on an extensive written and oral exam for their district.
Class C Licence	Does not exceed 10,000 GT	
Class B Licence	Does not exceed 40,000	Class B Limited
		Class B Unlimited
Class A Licence	Over 40,000 GT	Class A Limited
		Class A Unlimited

An Apprentice Licence, strictly restricts the holder to training trips under the supervision of a senior Class A Unlimited pilot within his/her district. Training is conducted on various types and sizes of ships. At no point during the Apprentice phase, does the holder complete pilotage assignments without supervision.

As licence progression continues, he/she will perform pilotage assignments independently within their corresponding gross tonnage limitation. During this time, he/she performs training trips with senior district pilots on assignments above their current licence level. This process continues until the pilot receives a full Class 'A' Unlimited licence, allowing them to take all assignments within their district.

Historically, pilot progression takes 3-4 months for an apprentice phase and thereafter between 24 – 36 months to reach a full Class A Unlimited Licence. This is subject to prescribed minimum training trips unique to the pilotage in each district and the level of prior experience of the pilot.

The following outlines the general application of training courses as related to the pilot progression through their increasing level of pilotage licence.

Mandatory Training Course	**Location**	**Pilotage Licence Level Required**
SeaIQ/PPU	Quebec	Apprentice
H2S Alive	Local Area	Apprentice
H2S Refresher	Local Area	Class C, B or A as required
Basic Manned Model	United Kingdom	Class B
Advanced Bridge Resource Management (BRM-P)	Quebec	Class C or Class B
Radar Errors	Quebec	Class C or Class B
Tug Escort	PEI	Class C, B or A
Z-Drive Tug	Quebec	Class B or Class A
Azipod	Quebec	Class B or A
Advanced Manned Model	France	Class A
Advanced Manned Model refresher	France	Class A (7 years after Advanced Manned Model)

The average cost to the Authority to train a pilot to an unlimited Class A licence over the initial two to three years is $250,000. The Authority has budgeted $315,000 for training courses for 2017.

The pilots are members of the Canadian Merchant Service Guild-Pilots. The collective agreement expired early in 2016, and the Authority is negotiating a new four-year agreement to expire at the end of 2019.

Pilot Boat Crews

The pilot boat crews encompass three groups of employees that are considered operational.

Vessel Maintenance

The Authority employs two people that manage and maintain the APA vessels. There is a Pilot Boat Manager and an Engineer. These positions allow for increased preventative maintenance which helps avoid catastrophic repairs.

Launchmasters

There are eight launchmasters who are employees of the Authority, four in Saint John and four in Halifax. The Launchmasters are members of the Canadian Merchant Service Guild-

Launchmasters. A five-year collective agreement was negotiated in 2016 to remain in effect until the end of 2020.

Deckhands

There are eight deckhands who are employees of the Authority, four in Saint John and four in Halifax. The Deckhands are members of the Public Service Alliance of Canada-Deckhands and Office Staff. A four-year collective agreement was negotiated in 2015. The agreement expires on December 31, 2018.

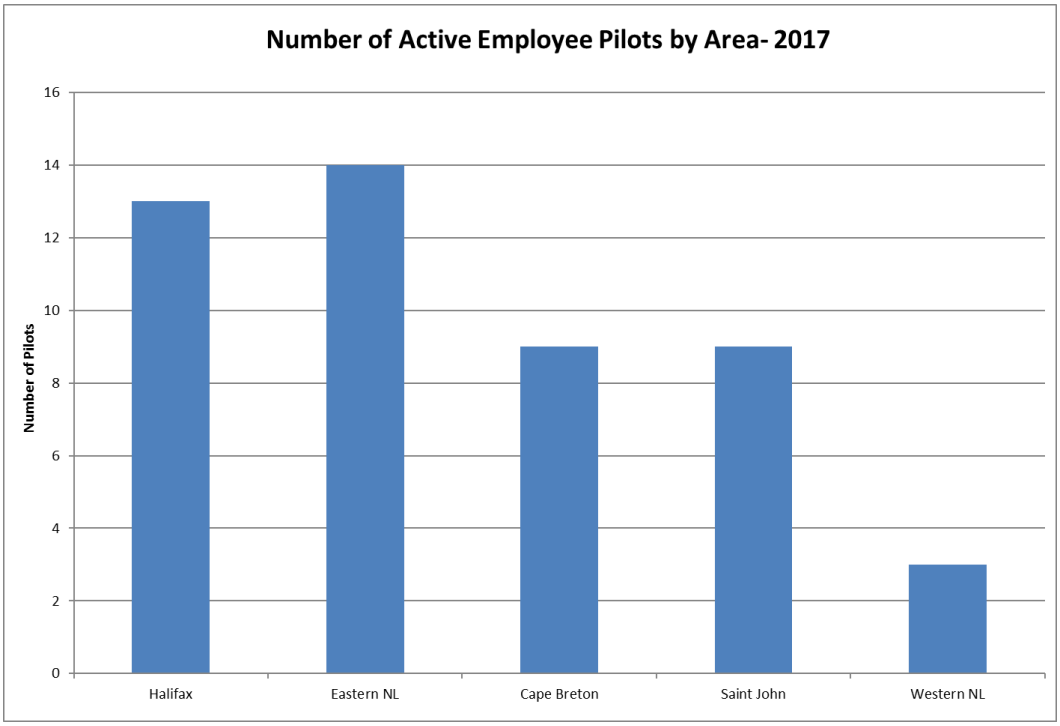
Dispatchers

Included in the dispatchers' category is the Dispatch Supervisor position, who supervises the dispatch centre, four full-time dispatchers, and one part-time dispatcher. The dispatchers are employees of the Authority who work out of the Dispatch Centre located in the Authority's head office. They are members of the Public Service Alliance of Canada-Deckhands and Office Staff. As noted above, a new four-year collective agreement was negotiated in 2015. The agreement expires on December 31, 2018.

ENTREPRENEURIAL PILOTS

Entrepreneurial (or Contract) Pilots are not employees of the APA, and derive their income from receiving a share of the tariff levied for an assignment. Contract pilots are used in areas where there is very little traffic, no investment in assets by the Authority, or potential for large fluctuations in assignments. They do not provide service in the same districts as employee pilots. A Contract Pilot is paid a percentage of the tariff rate for each pilotage assignment, thus assumes the financial risk. Some employee pilots perform Contract Pilotage in non-compulsory assignments during their off duty time. Because these pilots are included above as employee pilots, they are excluded from Entrepreneurial pilot totals.

The following graph illustrates planned employee pilot allocation by the end of 2017.



4.2. VOLUNTARY SEVERANCE

The post-employment severance benefit was provided to all employees under various collective agreements and employment contracts. As of 2012, this benefit is no longer offered to employees recruited by the Authority, but liabilities remain for employees who did not choose to have the benefit curtailed immediately.

5. GOVERNMENT DIRECTION

5.1. DIRECTIVE ON PENSIONS

Section 16 of the *Pilotage Act* specifies that the Authority is deemed to be a Public Service corporation for the purposes of section 37 of the *Public Service Superannuation Act*. Employees of the Authority are members of the Public Service Superannuation Plan and contributions are made by the employees and the Authority to fund their future annuity. This plan aligns with the Government priorities and is moving to an employee/employer cost sharing ratio of 50:50.

The average retirement age of the employees of the Authority is approximately 62 years of age. The average age of pilots employed with the Authority is 51.4 years.

5.2. DIRECTIVE ON TRAVEL, HOSPITALITY, CONFERENCE AND EVENT EXPENDITURES

The Authority has established travel, hospitality, conference and event expenditure policies, guidelines and practices that are in alignment with Treasury Board policies and directives. The policies were implemented in June 2016.

From the period that covers 2014 through 2016, the average annual cost for administrative travel is $158,000. Hospitality costs averaged $9,000 annually over this period, and conference costs averaged $8,000 per year. Due to the numerous ports and areas serviced by the Authority, the vast majority of these costs are incurred to meet with customers and employees in each of the areas.

	ACTUAL	ACTUAL	BUDGET	OUTLOOK	BUDGET	PLAN			
	2014	2015	2016	2016	2017	2018	2019	2020	2021
Admininistrative Expenses									
Travel	177	154	153	142	135	138	142	146	150
Hospitality	8	13	13	6	7	7	7	7	7
Conferences	14	3	7	8	10	10	10	10	10
Total Expenses	**199**	**170**	**173**	**156**	**152**	**155**	**159**	**163**	**167**

6. SUPPORT OF GOVERNMENT POLICIES

6.1 Cost Containment

The Authority is a “non-appropriated” or self- financing Crown Corporation. A primary objective of the Authority is to maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable. The costs of the Authority are charged to the users of the service in form of a tariff on each assignment for with pilotage services are provided. The Authority controls its administration costs while assuring any increased operating costs are offset by fair and reasonable tariffs.

The administration spending budgets for the APA are deemed to be the Dispatch budget, the Administration budget, and a portion of the Training budget related to administrative staff. The items in these budgets were separated into discretionary and non-discretionary items. The 2017 discretionary expenses, which make up the majority of the total items, are budgeted at 2016 levels.

For the Administration budgets in total, including both discretionary and non-discretionary spending, budgeted expenses have decreased by 1.5% for 2017 from 2016 budget levels. These expenses have fallen from prior years due to targeted planned savings in several areas.

	Administration Budget - 2017			
		2016 Budget	2017 Budget	2017 Change over 2016 Budget
Discretionary Items				
	Salaries & Benefits	1,639	1,628	(11)
	Travel	153	147	(6)
	Communication	47	46	(1)
	Utilities, Materials, Supplies	274	314	40
	Rentals	26	25	(1)
	Professional & Special Services	71	59	(12)
	Training	7	7	-
	Amortization	87	76	(11)
	Total Admin Discretionary Expenses	2,304	2,302	(2)
	Discretionary Budget Decrease			**-0.1%**
Non Discretionary Items				
	Board Fees & Allowances	151	123	(28)
	Bad Debt Expense	20	20	-
	Headquarters Office Space	157	158	1
	Property and Business Taxes	4	4	-
	Legal Fees	48	21	(27)
	Internal Audit Fees	15	20	5
	Transport Canada Fees	30	30	-
	Canada Gazette Costs	9	10	1
	Payroll Processing	15	13	(2)
	Translation Services	8	8	-
	Pilot Warrant Charges	5	7	2
	Pilot Review Costs	4	7	3
	Total Admin Non Discretionary Expenses	466	421	(45)
	Non-discretionary Budget Decrease			**-9.7%**
	Total Admin Expenses	2,770	2,723	(47)
	Investment and Sundry Income	(33)	(26)	7
	Total Net Administration	2,737	2,697	(40)
	Total Administration Budget Decrease			**-1.5%**

The individual operating budgets for each port were deemed to be operating expenses. Amortization has been excluded as capital investment is required as the Authority continues to invest in pilot vessels and modern equipment. Increases in operating have been offset with equal or greater increases in budgeted revenues. The net operating Income is budgeted to increase in

2017, as is the final net profit. The Authority is targeting a net income for 2017 that satisfies its needs regarding being financially self-sufficient.

		2016 Budget	2017 Budget	Budget Difference 2017 over 2016 Budget
Revenues				
Operating Budgets				
	Pilotage charges	23,981	24,801	**820**
	Surcharge	269	329	**60**
	Total Revenues	**24,250**	**25,130**	**880**
Expenses				
	Pilots' fees, salaries and benefits	11,256	11,565	309
	Pilot boats, operating costs	5,016	5,083	67
	Pilot boat crews' salaries and benefits	1,826	1,827	1
	Transportation and travel	603	595	(8)
	Training	308	308	-
	Professional and special services	139	139	-
	Utilities, materials and supplies	58	62	4
	Rentals	108	111	3
	Communications	84	108	24
	Financing Costs	123	156	33
	Total Expenses	**19,521**	**19,954**	433
Net Operating Income		**4,729**	**5,176**	**447**
Less:	**Amortization**	**1,229**	**1,597**	**368**
	Discretionary Admin Costs	2,304	2,303	(1)
	Non-Discretionary Admin Costs	466	420	(46)
	Miscellaneous Income	(33)	(27)	6
	Total Admin Costs	**2,737**	**2,697**	(40)
Profit		**763**	**881**	**118**

Pilotage charges are $820,000 higher due to larger vessels than captured in the previous budget, and the 2017 tariff increase.

Operating Expenses are budgeted to increase $433,000 as the Authority has increased pilot strength to resolve service concerns and prepare for imminent retirements. Pilot boat operating costs have increased with contracted crewing and rental costs due to activity as well as an increase in pilot boat repair costs. Communications increases with additional deployment of PPU units. Financing costs increase with the newly purchased pilot boats.

7. CAPITAL BUDGET

7.1 CAPITAL BUDGET (000'S)

	ACTUAL	OUTLOOK	BUDGET	PLAN			
	2015	2016	2017	2018	2019	2020	2021
PILOT BOATS							
CONSTRUCTION OR PURCHASE OF BOAT	-	2,200	800	-	-	-	-
PILOT BOAT REFIT AND EQUIPMENT	558	649	1,080	750	650	700	700
WHARVES AND STRUCTURES	9	43	165	275	50	30	30
MAINTENANCE AND OTHER VEHICLES	-	-	-	35	-	-	-
LEASEHOLD IMPROVEMENTS	-	-	65	35	-	-	-
COMPUTER AND OFFICE EQUIPMENT	31	107	125	145	85	45	45
COMPUTER SOFTWARE	39	39	45	25	25	15	15
TOTAL	**$ 637**	**$ 3,038**	**$ 2,280**	**$ 1,265**	**$ 810**	**$ 790**	**$ 790**

The Authority planned to purchase two previously owned pilot boats to replace aging vessels currently in use. Pilot boats are specialized equipment for which there is a very shallow market. In Canada, the only entities that would have suitable vessels for sale would be other Pilotage Authorities or their contractors, and there were none available from these sources. A worldwide search was conducted in-house and through vessel brokers. The purchase of two used vessels was included in the plan for 2016 with the costs expected to straddle 2016-2017. The Authority examined several vessel design options to determine if there were superior vessels that would provide a stable and robust platform for the pilots while reducing maintenance costs and down time. A decision was made to search for used vessels that are under ten years old that could serve Halifax and Saint John and would be at a lesser cost than new builds. These boats replace vessels that are 40 to 42 years old. Customers in both ports have expressed the desire to have reliable pilot boat service, and there is a legitimate need to replace these older vessels.

Pilot boat refits and equipment are expected to increase as there are five vessels due for Transport Canada and Lloyd's Register inspections in 2017. The fleet of vessels will be larger and aging, thus the increase in refit costs moving forward.

The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. The Authority is also investigating the purchase of a trailer to pull boats of in Placentia Bay to do some maintenance. It is costly to take the vessels to ship yards to do minor work due to the distances from the port. It is believed that repair savings could be achieved with a trailer that would offset the cost over reasonable period of time. 2018 includes an estimate for an alternative location in Placentia Bay for the pilot office and crew accommodations.

The lease for Head Office expires at the end of May 2017. An amount for Leasehold improvements is budgeted for the coming year. The budget includes Portable Pilot Units (PPU) being provided to the remaining pilots who have not received them to date. The other capital items are expected to remain fairly consistent with previous years.

7.2 CAPITAL EXPENDITURE COMPARISON (000's)

	2015 BUDGET	2015 ACTUAL	2015 VARIANCE	2016 BUDGET	2016 OUTLOOK	2016 VARIANCE	2017 BUDGET	2017 CHANGE
PILOT BOATS								
CONSTRUCTION OR PURCHASE OF NEW BOAT	1,500	-	(1,500)	1,500	2,200	700	800	(1,400)
PILOT BOAT REFIT AND EQIPMENT	725	1,050	325	745	649	(96)	1,080	431
WHARVES AND STRUCTURES	240	37	(203)	385	43	(342)	165	122
MAINTENANCE AND OTHER VEHICLES	-	-	-	-	-	-	-	-
LEASEHOLD IMPROVEMENTS	5	-	(5)	-	-	-	65	65
			-			-		-
COMPUTER AND OFFICE EQUIPMENT	22	50	28	77	107	30	125	18
SOFTWARE FOR COMPUTER						-		-
PROGRAMS	35	15	(20)	24	39	15	45	6
TOTAL	**$2,527**	**$1,152**	**($1,375)**	**$2,731**	**$3,038**	**$307**	**$2,280**	**(758)**

Capital Expenditure Comparison Explanation

Explanation of Variance between 2015 Budget and Actual

The Authority began a new project to source two additional vessels as it continues to replace the older Breau boats. In 2015 members of the Authority continued the search for alternatives and no capital amounts were accumulated. This project has now slipped into 2016 and 2017, but will be a multi-year endeavour that will cross financial periods.

There were extensive upgrades budgeted to be made on the Placentia Bay vessels as the transmissions were failing. This work was anticipated to fall into 2016, but it was completed in 2015. The other vessels were dry docked in 2015 with various amounts of work done on each vessel. Under IFRS, much of this work was capitalized.

A solution to the pilot office and pilot boat docks for Halifax is still being sought. It was anticipated that a move may occur in 2015 with the capital costs incurred under Wharves and Structures. The location targeted by the Authority has not been made available to date and other alternatives are being discussed.

Explanation of Variance between 2016 Budget and Outlook

The Authority is adding two vessels as it continues to replace the older Breau boats. The project was budgeted over multiple years, with the current projection of the bulk in 2016 and the remainder in 2017.

Again, there was a retrofit budgeted to slip into 2016 on the second Placentia Bay vessel that was actually completed in 2015. Other vessels continue to be dry docked in 2016 with various amounts of work done on each vessel with much of this work being capitalized.

Improvements are being made by the landlord in Halifax where the pilot office and pilot boat docks are currently and the need to move is not as acute. The Authority continues to seek improved facilities for Placentia Bay. Repair work and investment has not been required to date at the Herring Cove breakwater outside Halifax as the Authority awaits a recommendation from an

engineering firm who did a survey in the summer. The Authority is expanding the use of tablets for its pilots and added more units than planned. Tablets were budgeted at $50,000 and $65,000 is projected to be spent. A server was required for the office in 2016 with SQL licensing and IT setup costs more expensive than expected. The server was budgeted at $12,000 and cost $22,000. Other software upgrades were made at the same time for an additional $8,000.

Explanation of Variance between 2017 Budget and 2016 Outlook

The Authority continues the project to source two additional vessels as it continues to replace the older Breau boats. The exact timing is not known at this point. The current focus, as mentioned earlier, is to find two used vessels of under 10 years of age to act as backup vessels.

Pilot boat refits and equipment are expected to increase as there are five vessels due for Transport Canada and Lloyd's Register inspections in 2017.

The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. The Authority is also investigating the purchase of a trailer to pull boats of in Placentia Bay to do some maintenance.

The lease for Head Office expires at the end of May 2017. An amount for Leasehold improvements is budgeted for the coming year. The budget includes Portable Pilot Units (PPU) being provided to the remaining pilots who have not received them to date. Software upgrades have $35,000 for leave tracking software development.

8. 2017 OPERATING BUDGET

8.1 SIGNIFICANT ITEMS AFFECTING THE 2017 BUDGET

8.1.1. Planning Assumptions

The 2017 Forecast of Pilotage Requirements in Compulsory Pilotage Areas is the basis for the planning assumptions of the Authority. A summary of the forecast follows as Appendix "A".

During the planning period, it is expected that the overall number of assignments in 2017 will be similar to 2016. This is based on shipping announcements and information provided to the Authority.

The Authority reviews each port to arrive at a projected traffic level for the port, and rolls these numbers into the overall forecast as presented in Appendix "A".

8.1.2. Components of the Tariff Formula

The tariffs in each of the 17 compulsory pilotage areas is based on the expected number and size of ships for the area, matched against the cost of operating the area. It follows, therefore, that the cost structure varies between pilotage areas because the size and number of ships varies between pilotage areas.

The pilotage tariff charged to a ship depends upon the size of the vessel. Vessel size is measured in pilotage units which are calculated by a formula that uses vessel length, breadth and moulded depth. A significant decrease in assignments may not necessarily result in a significant decrease in pilotage units if the average vessel size increases. Similarly, a significant increase in assignments may not necessarily result in a significant increase in pilotage units if the average vessel size decreases. This has been the case in recent years.

The following example will illustrate a typical tariff charge in the compulsory pilotage area of Halifax. The container ship *Atlantic Compass* is a regular caller at Halifax. The vessel is 57,255 gross tonnes, and has a unit measurement of 676.16 pilotage units. The cost to this vessel for a pilotage trip inward to Halifax in 2016 is $2,589.02 calculated as follows:

		2016 Tariff
Variable Charge- Greater of Unit charge or Gross Tonnage charge		
Unit Charge, 2.60 x 676.16	$ 1,758.02	1,758.02
Gross Tonnage Charge 57,255 x .0175	1,001.96	
Basic Charge		666.00
Fuel Charge		130.00
Travel Expense Recovery		35.00
Total Charge		2,589.02

The variable charge is intended to cover the cost to the Authority of the pilot and a portion of indirect overhead expenses, or administration. These costs vary between 60% and 65% of the cost of providing the service. The variable charge is calculated as the greater of the unit charge or the gross tonnage charge. In the above example, the unit charge is greater, so that charge prevails.

The basic charge is intended to cover the cost to the Authority of the pilot boat and a proportionate amount of direct overhead expenses, such as training, communication, and dispatching. These costs vary between 35% and 40% of the cost of providing the service.

The fuel charge is based on the budgeted fuel consumption (as included in the *Atlantic Pilotage Authority Tariff Regulations, 1996, Schedule 2, Column 6)* and the market price of fuel. The price of fuel is reviewed monthly and adjusted as required. For the purpose of this illustration, a fuel cost of $1.00 per litre has been assumed.

There are employee pilots in most compulsory pilotage areas. However, in the compulsory pilotage areas of Miramichi, Pugwash, Confederation Bridge, Charlottetown, and Voisey's Bay there are corporate or entrepreneur pilots who receive 85% of the tariff. The remaining 15% contributes to the Authority's dispatch, training, and administration costs.

8.1.3. Sensitivity of Forecast to Changes

Small variances in the number of pilotage assignments forecast do not generally affect the overall performance of the Authority. Changes in operating expenses begin to develop when the activity reaches a level, for example, where an additional pilot should be hired or laid off. This level would depend on the area being considered.

Contracts for pilot boats are generally related to the volume of assignments. Most contracts are for one year with automatic renewal clauses if no notice to terminate or amend the contract is given by either party within a specified period. For vessels owned by the Authority, there is exposure to significant fluctuations in costs, especially the price of fuel and costs related to repairs and maintenance.

Administrative expenses are generally fixed for a year, at least, and are not related to volume of activity during the year.

For illustrative purposes, the area of Placentia Bay is having a very strong year in 2016 after a down year in 2015. The budget for 2017 includes an average year in the area. The effect on the 2017 budgeted profit (including the surcharge) for the Authority if an extended facility maintenance shutdown occurs in the area, or if none occurs at all, is presented below. This assumes a consistent average vessel size.

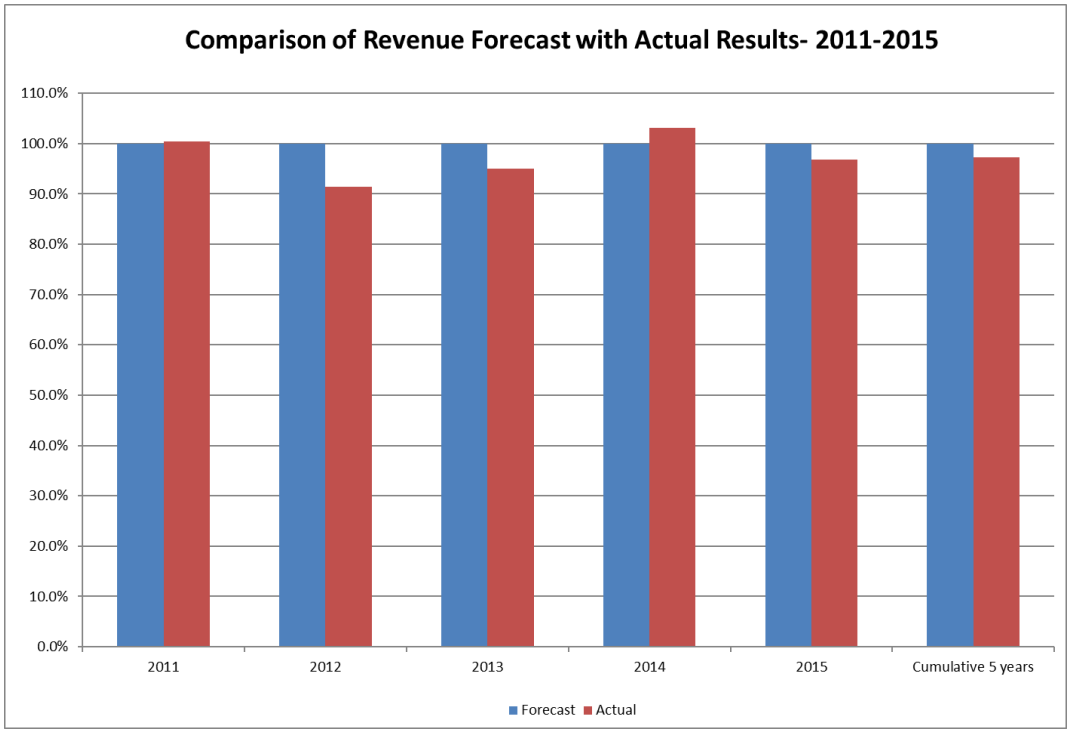
1) Forecast volume-expected net profit of $881,000.

2) Volume decline of 38 assignments from average -expected net profit of $671,000.

3) Volume growth of 38 assignments from average -expected net profit of $1,097,000.

The assumptions for Revenue figures in the planning period are based on future proposed tariff increases and forecasted levels of activity.

Based on the level of activity forecast, the Authority determines its expenditure and revenue expectations. Over the last five years, the cumulative revenue has been within 1.5% of the budgeted revenue. Please note the following chart:



8.1.4. Operating Expense Commitments

I. *Pilots*

Eastern NL - there will be a total of fourteen pilots by the end of 2017. The timing of the hiring of the additional pilots will depend on the progress of the training. 13 of the pilots will be at Class A Unlimited by year end, while the most recent hire will be Class B Limited. These pilots provide service in Placentia Bay, Holyrood, and St. John's compulsory pilotage areas.

Halifax - by the end of 2017 there will be thirteen pilots. Eleven of these pilots will be Class A Unlimited with one pilot a Class B Unlimited and one pilot at a Class C level by year end.

Cape Breton - there will be a total of nine pilots by the end of 2017. By year end there will be eight Class A Unlimited pilots in the district and one Class A Limited. The Cape Breton District includes the Sydney, Strait of Canso, and Bras d'Or compulsory pilotage areas.
Saint John – expected retirements means that a pilot is tentatively scheduled to be added in 2018. For 2017, there will be eight full Class A Unlimited pilots and one pilot will be at a Class A limited licence by the end of the year.

Western NL - three Class A pilots will provide service in the district, covering the ports of Bay of Exploits (Lewisporte and Botwood), Humber Arm (Corner Brook), and Stephenville.

II. Pilot Boat Operations

The Authority currently has thirteen pilot boat contractors that provide service ranging from the provision of the complete boat and crewing in a port, to manning of Authority owned vessels, or to providing reserve boats to augment service in a port. The amount earned by the contractor in a year can vary greatly, depending on the volume of traffic and the type of boat required for a particular area. Most contractors are paid on a fee for service basis, with a guarantee of a minimum number of assignments paid.

The Authority will have eleven boats that it owns and operates. In operating its own fleet, the APA has encountered a significant increase in operating expenses in recent years due to increased fuel costs. Repair costs have also been increasing as the newer vessels have more sophisticated electronics and systems that can be costlier to maintain. With respect to the older vessels in the fleet, the primary issue is sourcing parts for spares or for rebuilds of equipment such as engines. This can mean increased downtime that can cause service issues. In the five-year period beginning in 2012, for example, the Authority spent over $3.28 million on pilot boat repairs. As the Authority replaces older vessels with newer vessels, amortization costs and financing costs also increase. There has been a significant increase in these operating costs as newer vessels enter service.

III. Dispatching Services

The Authority provides dispatching services throughout its region from the dispatch centre located at head office. There is a total of 4.5 dispatchers, under the supervision of the Dispatch Supervisor. The total cost of the dispatch operation in 2017 will be approximately $559,000, including salaries, rentals, office supplies, communications, travel, and professional services. The dispatch software has been integrated into the billing system in the APA's financial software, and all invoicing to customers is done by dispatchers. The dispatch system also provides a myriad of statistical and financial reports for management, and allows the review of information on a real-time basis.

IV. Rentals

The annual rental for the Head Office in 2017 will be $158,000, while facilities rented throughout the region for operational purposes will cost $111,000. Rental of office equipment and other items will be approximately $26,000. The Authority negotiated a favourable head office lease in 2007 that runs until mid- 2017. The Authority will be evaluating alternatives regarding office space before committing to another renewal.

V. Professional and Special Services

This category includes legal fees, IT support, PRMM facilitation, internal audit, Board Members Fees and Allowances, Transport Canada Cost Recovery fees, Gazette publishing fees, translation costs and other professional service fees.

VI. Cost Increases

The assumptions for cost increases vary according to expense item and level of activity. The inflationary factor used for operating expenditures varies depending upon contractual commitments in place, but generally ranges between two and three percent, depending upon category.

VII. Pilot Training

(i) New pilot hires

On entry to the pilotage system, pilots are granted an apprentice permit. This allows them to undertake pilotage training duties on all classes and sizes of vessels under the supervision of a licensed pilot. This is hands on training with experienced pilots acting as mentors, during which the new pilot becomes intimately familiar with the geographic area of operation, the idiosyncrasies of different berths and types of vessels, and the personnel involved in piloting, tug operations, Marine Communications and Traffic Services, etc. There are operating costs associated with this as the Apprentice Pilot receives 60% of the Class A salary for the particular district, and does not create revenue. After completion of the Apprentice period, the new entry pilot must pass an examination demonstrating knowledge of the pilotage district in order to advance to a Class C license, allowing the pilot to perform pilotage assignments on ships up to 10,000 gross tonnes. At this level, the pilot receives 75% of a Class A salary. Depending upon the area, this license will allow him to perform pilotage assignments on anywhere from 4% of traffic in an area like Placentia Bay to 85% of the available traffic in an area like St. John's. For the rest of the time, the Class C pilot will train on larger ships with senior pilots. After further experience, the pilot will progress to a Class B, and eventually to an unlimited Class A license. This training process takes a minimum of two years, with most pilots requiring about three years to reach the unlimited license.

During this initial period, the new pilot is sent on training provided by external institutions for a basic Manned Model course, a Pilot Bridge Resource Management session, AZIPOD propulsion systems training, and practical training with Escort Tugs and Z-Drive Tugs. Other courses may be utilized depending upon the qualifications the individual has upon becoming an APA pilot.

As mentioned earlier, the total cost of the initial 2-3-year training program is approximately $250,000 when salary is factored in.

(ii) *Maintaining and upgrading skills and knowledge*

The Authority sets a training budget each year after consultation with pilot representatives from each of the pilotage areas. The training requirements for

individual pilots are examined, taking into account operational requirements and course availability. The need for training can be triggered by experience levels achieved by pilots in training, by new technology for which pilots have to be prepared, by new marine certification requirements, or refresher courses on technology and procedures. Based on the 2017 requirements, the budget has been kept at $315,000. The Authority has a number of new pilots and pilots working their way through the classes. Future budgets will be set based on the training requirements and may vary significantly from year to year.

8.2 OPERATING BUDGET

OPERATING BUDGET COMPARISONS
(000's)

	2015 BUDGET	2015 ACTUAL	2015 VARIANCE	2016 BUDGET	2016 OUTLOOK	2016 VARIANCE	2017 BUDGET	2017 CHANGE
REVENUE								
PILOTAGE CHARGES	23,399	22,622	(777)	23,981	23,540	(441)	24,801	1,261
INTEREST&OTHER	37	51	14	33	23	(10)	26	3
	$23,436	$22,673	($763)	$24,014	$23,563	($451)	$24,827	$1,264
EXPENSES								
PILOT SALARIES, ETC	10,591	11,091	500	11,256	11,187	(69)	11,565	378
PILOT BOATS	5,183	4,667	(516)	5,016	4,611	(405)	5,082	471
STAFF SALARIES	1,616	1,725	109	1,639	1,537	(102)	1,630	93
PILOT BOAT CREWS' SALARIES. ETC	1,763	1,781	18	1,826	1,831	5	1,827	(4)
OPERATIONS TRANSPORTATION	567	661	94	603	609	6	607	(2)
ADMINISTRATIVE TRAVEL	161	154	(7)	153	142	(11)	135	(7)
HOSPITALITY	10	13	3	13	6	(7)	7	1
PROFESSIONAL & SPECIAL SERVICES	586	494	(92)	405	423	18	346	(77)
RENTALS	285	287	2	295	286	(9)	298	12
UTILITIES, MATERIALS, SUPPLIES	419	464	45	429	419	(10)	480	61
TRAINING	315	284	(31)	315	345	30	315	(30)
AMORTIZATION	1,330	1,328	(2)	1,316	1,337	21	1,673	336
COMMUNICATION	130	133	3	130	141	11	153	12
FINANCING COSTS	136	142	6	123	158	35	156	(2)
	$23,092	$23,224	$132	23,519	$23,032	($487)	$24,274	$1,242
NET PROFIT FROM OPERATIONS	**$344**	**($551)**	**($895)**	**$495**	**$531**	**$36**	**$553**	**$22**
SURCHARGE REVENUE	-	-	-	269	260	(9)	328	68
PROFIT (LOSS) FOR THE YEAR	**$344**	**($551)**	**($895)**	**$764**	**$791**	**$27**	**$881**	**$90**
TARGETED RATE OF RETURN	**0.9%**	**-2.4%**		**3.2%**	**3.4%**		**3.5%**	
ASSIGNMENTS	**8,316**	**8,348**	**32**	**8,464**	**8,040**	**(424)**	**8,119**	**79**

Operating Budget Comparison
Explanation Variance between 2015 Budget and Actual

(a) Pilotage Charges- Variation of ($777,000)

As already discussed, the negative trend that has affected the Authority recently is that the average vessel size in a number of ports has decreased. The Authority has had declines in oil transshipment in Placentia Bay. The vessels required for these activities are larger than the average for the area and represented a major decline in expected revenues. Placentia Bay revenues were $755,000 under budget.

(b) Expenses- Variation of $132,000

Pilot costs are over projected to be over budget due primarily to recall costs incurred as pilots came back on overtime to cover increased assignments in Saint John and Halifax. Pilot shares are also over budget as there has been more income earned in ports manned by contract pilots. The Authority has had savings for fuel due to lower diesel prices. Fuel is recovered through a gas surcharge and thus has not meant a net benefit to the Authority, but has benefited the users. Staff salaries are over budget with the organizational transition to a new CEO and new structure. This is temporary and will decline in the future. Transportation costs are over budget due to trips taken to evaluate new pilot boat designs and travel done by pilots who are still in training.

Operating Budget Comparison
Explanation Variance between 2016 Budget and Outlook

(a) Pilotage Charges- Variation of ($441,000)

As already discussed, the Authority lost activity in Saint John due to the potash mine closing, activity in Bras d'Or due to Little Narrows stopping their gypsum mining activities, and activity due to increased certificate use. There have been gains in tanker traffic in Placentia Bay, but the net effect of these variances is projected to be a decline in revenues from budget.

(b) Expenses- Variation of ($487,000)

The Authority will have savings in pilot salaries and administration salaries due to the timing of planned hiring. Pilot additions were planned for Eastern Newfoundland and Saint John which have not taken place to date and will be pushed to 2017 and 2018. A Dispatch Supervisor was budgeted to be added early in 2017, but was added in September 2017.

Pilot boat operating costs are below budget for fuel and in repairs. The cost per litre for diesel is lower than forecasted. The Authority invested in upgraded transmissions and generators for the Placentia Bay vessels which has led to savings in repairs.

Operating Budget Comparison
Explanation Variance between 2017 Budget and 2016 Outlook

(a) Pilotage Charges - Variation of $1.261 million

The level of activity (pilotage assignments) for 2017 is expected to grow by 1% with added cruise activity in the area. The changes in traffic are budgeted to add $280,000 to total revenues while the change in permanent tariff proposed is projected to add $981,000.

(b) Expenses- Variation of $1.242 million

Pilot Salaries are expected to increase with a new collective agreement in place and as the newer pilots move through their licences and move higher in the pay scale.

Pilot Boat costs are increasing with the addition of two additional vessels. Repairs and amortization costs are also expected to increase as there are five vessels due for Transport Canada or Lloyd's inspections in 2017. These investments in pilot boats increase several categories including pilot boats, amortization, and financing costs. Savings are planned in professional and special services as legal fees and other services are monitored closely for reductions. The Authority is budgeting for in an increase in utilities, materials, and supplies as the head office lease expires in 2017 and a move is possible.

9. BORROWING PLAN

9.1 Borrowing Approvals

APA's funding activities are governed by section 36 of the *Pilotage Act* and section 127 of the *Financial Administration Act*.

As outlined by Order in Council, the APA is subject to a statutory borrowing approval constraint which limits total amount outstanding at any time at $10 million.

In accordance with section 36 of the *Pilotage Act* and 127(3) of the *Financial Administration Act*, the APA requires the approval of the Minister of Finance to enter into any particular transaction to borrow money, including the time and the terms and conditions of the transaction. The following outlines the corporation's borrowing plan:

9.2 Short-Term Borrowings to be Undertaken/Maintained in 2017

The Authority wishes to maintain its line of credit at $2.5 million and is currently in the form of overdraft protection.

Commercial Line of Credit
Proposed Terms and Conditions

Amount:	$2.5 million - Fluctuating by Way of Overdraft
Rate of Interest:	The Lender's Prime Commercial Lending Rate
Term:	Advances to be made as overdraft situations occur and balances will not exceed one year
Lender:	Bank of Montreal

The five-year summary of short-term borrowing usage is below:

Year	Highest Amount	Days in Overdraft
2012	$0	0
2013	$0	0
2014	$0	0
2015	$291,000	11
2016 (YTD)	$236,000	6

9.3 Long-Term Borrowings to be Undertaken/Maintained in 2017

Capital Loan (Existing Borrowing)

The Authority negotiated Capital Loans in the amount of $4.5 million to finance two new pilot boats for Placentia Bay in 2007. The boats cost a total of $6.7 million. The principal balance remaining on this loan as at December 31, 2016 will be $2.099 million.

The Authority launched two new pilot vessels for the ports of Halifax and Saint John. The total cost of these vessels was $5.8 million, and approval for financing up to $4.0 million was provided by the Minister of Finance pursuant to the Authority's 2011-2015 Corporate Plan. Draws on this loan facility totaled $2.0 million, and the remainder of the facility was not required for the build. The Authority was able to self-finance a larger portion of the construction costs than originally anticipated. The principal balance remaining on this loan as at December 31, 2016 will be $1.683 million.

9.4 Total Borrowings – New and Outstanding

Table 1: Borrowings undertaken during the year (in millions of dollars)

	2015 Actual	2016 Estimated	2017 Forecasted	2018 Forecasted	2019 Forecasted	2020 Forecasted	2021 Forecasted
Bank Overdraft /Line of Credit*	$0.291	$0.236	$0	$0	$0	$0	$0
Long-term Borrowings	$0	$3.000	$0	$0	$0	$0	$0
Total	$0.291	$3.236	$0	$0	$0	$0	$0

* Maximum (or peak) amount at any point during the year.

The aggregate principal amount outstanding of borrowings will not at any time exceed $10 million, which is below the maximum limit of $10 million.

Table 1: Borrowings outstanding, as at December 31(in millions of dollars)							
	2015 Actual	2016 Estimated	2017 Forecasted	2018 Forecasted	2019 Forecasted	2020 Forecasted	2021 Forecasted
Bank Overdraft	At each year end, there was no short-term borrowing outstanding.						
Line of Credit							
Short-term Borrowings							
Long-term Borrowings	$4.217	$6.756	$6.146	$5.517	$4.868	$4.199	$3.509
Total	$4.217	$6.756	$6.146	$5.517	$4.868	$4.199	$3.509

10. FINANCIAL STATEMENTS (ACTUAL 2015 DATA, 2016 OUTLOOK AND 2017-2021 FINANCIAL PLAN)

The Authority implements its strategies to accomplish its objectives. The financial implications are summarized below in Sections 8.1 through 8.6. The column headings in these tables represent the following:

- Actual 2015 - the audited financial results for the year
- Outlook 2016 - based on seven months of actual results and a forecast for the remainder of the year.
- Budget 2017 – based on operating budgets and forecasted activity summarized in Section 8 of this report.
- Plan 2018 – 2021 – based on forecasted activity and costs with extrapolations where specific information is not known.

10.1 STATEMENT OF INCOME
FOR THE YEARS ENDED DECEMBER 31
(000's)

	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	2018	PLAN 2019	2020	2021
INCOME							
PILOTAGE CHARGES	$ 22,622	$ 23,540	$ 24,801	$ 25,805	$ 27,705	$ 28,127	$ 28,555
INTEREST & OTHERS	51	23	26	27	27	28	29
TOTAL INCOME	22,673	23,563	24,827	25,832	27,732	28,155	28,584
EXPENSES							
PILOTS FEES, SALARIES, AND BENEFITS	11,091	11,187	11,565	12,150	12,562	12,876	13,198
PILOT BOATS	4,667	4,611	5,082	5,073	5,843	5,960	6,079
STAFF SALARIES AND BENEFITS	1,725	1,537	1,630	1,685	1,741	1,785	1,829
PILOT BOAT CREWS' SALARIES AND BENEFITS	1,781	1,831	1,827	1,864	1,929	1,968	2,007
OPERATIONS TRANSPORTATION	661	609	607	628	690	707	724
ADMINISTRATIVE TRAVEL	154	142	135	138	142	146	150
HOSPITALITY	13	6	7	7	7	7	7
PROFESSIONAL AND SPECIAL SERVICES	494	423	346	351	357	364	371
TRAINING	284	345	315	315	315	321	328
RENTALS	287	286	298	301	307	313	319
COMMUNICATION	133	141	153	156	158	161	164
UTILITIES, MATERIALS, AND SUPPLIES	464	419	480	479	480	490	500
AMORTIZATION	1,328	1,337	1,673	1,667	1,668	1,585	1,505
FINANCING COSTS	142	158	156	139	123	109	92
TOTAL EXPENSES	23,224	23,032	24,274	24,953	26,322	26,792	27,273
NET INCOME BEFORE SURCHARGE	$ (551)	$ 531	$ 553	$ 879	$ 1,410	$ 1,363	$ 1,311
SURCHARGE REVENUE	-	260	328	342	45	-	-
PROFIT (LOSS) FOR THE YEAR	$ (551)	$ 791	$ 881	$ 1,221	$ 1,455	$ 1,363	$ 1,311
RATE OF RETURN	-2.4%	3.4%	3.5%	4.7%	5.2%	4.8%	4.6%

10.2 STATEMENT OF FINANCIAL POSITION
YEARS ENDED DECEMBER 31
(000'S)

	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	PLAN 2018	2019	2020	2021
ASSETS							
CURRENT							
CASH	$ 329	$ 2,636	$ 2,056	$ 2,402	$ 2,606	$ 2,830	$ 3,110
CASH - SEVERANCE FUND		-	142	382	1,073	1,673	1,882
CASH - BOAT REPLACEMENT FUND		-	200	600	1,400	2,200	3,000
ACCOUNTS RECEIVABLE	3,181	2,523	2,573	2,625	2,677	2,731	2,786
PREPAID EXPENSES	84	79	95	97	99	101	101
INVENTORY	12	-	-	-	-	-	-
	3,606	5,238	5,066	6,106	7,855	9,535	10,879
FIXED							
CAPITAL AT COST	19,175	21,819	23,995	25,190	25,945	26,685	27,425
LESS ACCUMULATED AMORTIZATION	8,801	9,800	11,473	13,140	14,808	16,393	17,898
	10,374	12,019	12,522	12,050	11,137	10,292	9,527
	$ 13,980	**$ 17,257**	**$ 17,588**	**$ 18,156**	**$ 18,992**	**$ 19,827**	**$ 20,406**
LIABILITIES							
CURRENT							
ACCOUNTS PAYABLE	$ 1,661	$ 1,668	$ 1,675	$ 1,700	$ 1,725	$ 1,750	$ 1,775
CURRENT PORTION OF BANK LOANS	435	624	642	660	678	697	716
TERMINATION BENEFITS	128	58	160	109	-	191	90
	2,224	2,350	2,477	2,469	2,403	2,638	2,581
LONG TERM							
BANK LOANS	3,782	6,132	5,490	4,830	4,152	3,455	2,739
TERMINATION BENEFITS	1,419	1,429	1,394	1,409	1,534	1,468	1,509
	5,201	7,561	6,884	6,239	5,686	4,923	4,248
TOTAL LIABILITIES	7,425	9,911	9,361	8,708	8,089	7,561	6,829
CONTRIBUTED CAPITAL AND EQUITY							
EQUITY	6,555	7,346	8,227	9,448	10,903	12,266	13,577
	6,555	7,346	8,227	9,448	10,903	12,266	13,577
	$ 13,980	**$ 17,257**	**$ 17,588**	**$ 18,156**	**$ 18,992**	**$ 19,827**	**$ 20,406**

10.3 STATEMENT OF CHANGES IN EQUITY
YEARS ENDED DECEMBER 31
(000'S)

	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	PLAN 2018	2019	2020	2021
RETAINED EARNINGS, BEGINNING OF YEAR	$ 7,142	$ 6,555	$ 7,346	$ 8,227	$ 9,448	$ 10,903	$ 12,266
(LOSS) GAIN FOR THE YEAR	(551)	791	881	1,221	1,455	1,363	1,311
OTHER COMPREHENSIVE (LOSS)	(36)	-	-	-	-	-	-
TOTAL COMPREHENSIVE INCOME (LOSS)	(587)	791	881	1,221	1,455	1,363	1,311
RETAINED EARNINGS, END OF THE YEAR	$ 6,555	$ 7,346	$ 8,227	$ 9,448	$ 10,903	$ 12,266	$ 13,577

10.4 STATEMENT OF CHANGES IN FINANCIAL POSITION
YEARS ENDED DECEMBER 31
(000'S)

	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	PLAN 2018	2019	2020	2021
OPERATING ACTIVITIES							
CASH PROVIDED BY (USED FOR) OPERATIONS							
NET PROFIT (LOSS) FOR YEAR	$ (551)	$ 791	$ 881	$ 1,221	$ 1,455	$ 1,363	$ 1,311
ITEMS NOT REQUIRING CASH							
AMORTIZATION	1,328	1,337	1,673	1,667	1,668	1,585	1,505
ASSET WRITE OFF	80	23	104	70	55	50	50
INCREASE (DECREASE) IN EMPLOYEE TERMINATION BENEFITS- SEVERANCE	134	120	125	124	125	125	131
	991	2,271	2,783	3,082	3,303	3,123	2,997
CASH PROVIDED BY (USED FOR) NON-CASH WORKING CAPITAL	(155)	715	(59)	(28)	(29)	(31)	(30)
EMPLOYEE TERMINATION BENEFIT PAYMENTS	(161)	(180)	(58)	(160)	(109)	-	(191)
CASH PROVIDED BY OPERATING ACTIVITIES	$ 675	$ 2,806	$ 2,666	$ 2,894	$ 3,165	$ 3,092	$ 2,776
FINANCING ACTIVITIES							
CASH PROVIDED BY FINANCING							
LOAN RECEIVED ACTIVITIES	-	3,000	-	-	-	-	-
LOAN PAYMENTS	(417)	(461)	(624)	(642)	(660)	(678)	(697)
	(417)	2,539	(624)	(642)	(660)	(678)	(697)
INVESTING ACTIVITIES							
(INCREASE) DECREASE IN INVESTMENTS	-	-	-				-
ADDITIONS TO CAPITAL ASSETS	(1,078)	(3,038)	(2,280)	(1,265)	(810)	(790)	(790)
DISPOSAL OF CAPITAL ASSETS	-	-	-	-	-	-	-
CASH USED FOR INVESTING ACTIVITIES	(1,078)	(3,038)	(2,280)	(1,265)	(810)	(790)	(790)
INCREASE IN CASH AND SHORT TERM INVESTMENT DURING THE YEAR	$ (820)	$ 2,307	$ (238)	$ 987	$ 1,695	$ 1,624	$ 1,289
CASH, BEGINNING OF YEAR	**1,149**	**329**	**2,636**	**2,398**	**3,384**	**5,079**	**6,703**
CASH, END OF YEAR	**$ 329**	**$ 2,636**	**$ 2,398**	**$ 3,384**	**$ 5,079**	**$ 6,703**	**$ 7,992**

10.5 KEY FINANCIAL RATIOS
YEARS ENDED DECEMBER 31

	ACTUAL 2015	OUTLOOK 2016	BUDGET 2017	2018	PLAN 2019	2020	2021
PROFIT MARGIN	-2.4%	3.4%	3.6%	4.7%	5.3%	4.8%	4.5%
DAYS COVERAGE	54	80	74	87	106	125	140
CURRENT RATIO (W/O DEDICATED FUNDS)	1.62	2.23	1.91	2.08	2.24	2.15	2.32
RETURN ON TOTAL ASSETS	-3.6%	5.1%	5.1%	6.8%	7.8%	7.0%	6.5%
DEBT TO EQUITY	1.13	1.35	1.14	0.92	0.74	0.62	0.50

Profit Margin- As discussed previously, 2015 was below budget financially for the Authority for various reasons. The Authority is projecting making a profit in 2016 that is close to what was targeted. In 2017, the profit margin is expected to increase slightly with increased revenues offsetting the increased costs due mainly to the additional pilot boats.

Days Coverage- The days coverage shows the number of days of expenditures the Authority would be able to cover with its current assets. This is expected to grow over the planning period.

Current Ratio (Without Dedicated Funds) - The targeted current ratio is 2:1 (without dedicated savings) as a means of having a contingency fund on hand. The Authority has decided to dedicate savings to future pilot boat replacement and to funding the future severance payout entitlement. The Authority is planning to be close to target by the end of 2017 and meet it in 2018.

Return on Assets- The return on assets is expected to improve. The goal is to earn a higher return on assets than what could otherwise be earned if the money were invested elsewhere.

Debt to Equity Ratio- The debt to equity ratio is expected to decline over the planning period. The new borrowing will not have a significant effect on the debt to equity ratio as the equity is also expected to grow.

10.6 Summary of Revenue and Expense Commitments 2014-2021

A summary of the items listed in Section 8 is presented below by expense category. Capital reimbursement represents the principal payments required on the outstanding loans required for pilot vessel replacement.

	ACTUAL	ACTUAL	BUDGET	OUTLOOK	BUDGET		PLAN		
	2014	2015	2016	2016	2017	2018	2019	2020	2021
Income									
Pilotage Tariffs	22,483	22,622	23,981	23,540	24,801	25,805	27,705	28,127	28,555
Pilotage Surcharges	-	-	269	260	328	342	45	-	-
Other	79	51	33	23	26	27	27	28	29
Total Revenue	**22,562**	**22,673**	**24,283**	**23,823**	**25,155**	**26,174**	**27,777**	**28,155**	**28,584**
Direct Pilotage Costs									
Pilot Costs									
Contract Pilot Fees	887	1,054	873	976	965	971	978	1,002	1,027
Pilot Salaries and Benefits	9,668	10,037	10,385	10,211	10,600	11,179	11,584	11,874	12,171
Total Pilot Costs	**10,555**	**11,091**	**11,258**	**11,187**	**11,565**	**12,150**	**12,562**	**12,876**	**13,198**
Pilot Boat & Pilot Travel									
Pilot Boat Crew Costs	1,698	1,781	1,826	1,831	1,827	1,864	1,929	1,968	2,007
Pilot Boat Operating Costs	2,255	1,788	2,021	1,652	1,980	1,897	1,994	2,035	2,071
Pilot Boat Ownership Costs (Deprec.)	1,455	1,338	1,331	1,290	1,639	1,595	1,597	1,517	1,442
Pilot Boat Fees (Contract)	2,634	2,653	2,752	2,772	2,872	2,942	3,611	3,685	3,759
Pilot Travel Expenses	670	658	600	599	593	615	677	694	711
Other Related Costs	63	62	60	58	64	67	67	68	70
Total Pilot Boat & Pilot Travel	**8,775**	**8,280**	**8,590**	**8,202**	**8,975**	**8,980**	**9,875**	**9,967**	**10,060**
Other Pilot Expenses									
Pilotage Portable Units	3	5	18	21	45	69	70	73	75
Pilotage Training	320	284	315	345	315	315	315	321	328
Dispatch Center	606	591	643	528	559	570	586	597	609
Other Pilot Costs	450	448	452	515	500	519	519	529	540
Total Other Pilot Expenses	**1,379**	**1,328**	**1,428**	**1,409**	**1,419**	**1,473**	**1,490**	**1,520**	**1,552**
Total Direct Pilotage Costs	**20,709**	**20,699**	**21,276**	**20,798**	**21,959**	**22,603**	**23,927**	**24,363**	**24,810**
Indirect Pilotage Costs									
Admininistrative Expenses									
Administration Salaries	1,124	1,247	1,107	1,127	1,180	1,221	1,264	1,295	1,328
Professional Services	398	328	321	276	265	268	275	280	286
Regulatory Fees	108	111	30	45	30	30	31	32	32
Rent /Utilities /Supplies /Computers	445	475	446	429	493	497	502	511	521
Travel	177	154	153	142	135	138	142	146	150
Hospitality	8	13	13	6	7	7	7	7	7
Conferences	14	3	7	8	10	10	10	10	10
Other Amortization	52	52	43	43	39	40	41	39	37
Total Administrative Expenses	**2,326**	**2,383**	**2,120**	**2,076**	**2,159**	**2,211**	**2,272**	**2,320**	**2,371**
Financing Costs	**145**	**142**	**123**	**158**	**156**	**139**	**123**	**109**	**92**
Total Direct Pilotage Costs	**2,471**	**2,525**	**2,243**	**2,234**	**2,315**	**2,350**	**2,395**	**2,429**	**2,463**
Total Expenses	**23,180**	**23,224**	**23,519**	**23,032**	**24,274**	**24,953**	**26,322**	**26,792**	**27,273**
Net Profit (Loss)	**(618)**	**(551)**	**764**	**791**	**881**	**1,221**	**1,455**	**1,363**	**1,311**
Capital Reimbursement	**400**	**417**	**435**	**461**	**624**	**642**	**660**	**678**	**697**
Number of Contract Pilots	9	10	11	11	11	11	11	11	11
Number of Employee Pilots	47	47	49	47	48	49	48	48	48
Number of Assignments	8,472	8,348	8,464	8,040	8,119	8,119	8,319	8,319	8,319
Average Assignment per Pilot	151	146	141	139	138	135	141	141	141
Revenue over Assignments ratio ('000's)	2.66	2.72	2.87	2.96	3.10	3.22	3.34	3.38	3.44

11. COMPARISON WITH OTHER PILOTAGE AUTHORITIES

Comparisons with the three other pilotage authorities are hard to establish, as each authority has its own rate structure, pilot remuneration policies, and services. In addition, administrative expenses depend on the number of pilots on staff, the number of pilots on contract, the clientele, the volume of service, the region served, equipment managed, and other lesser factors.

Here is a brief description of the four authorities, describing the principal characteristics of each:

- The Laurentian Pilotage Authority provides primarily long-distance pilotage services. It is also responsible for local vessel movements in the various ports. The pilots are all members of a body corporate. There are three compulsory pilotage zones; the Port of Montreal, the St. Lawrence River between Montreal and Quebec, and the St. Lawrence River between Quebec and Les Escoumins, including the Saguenay River.

- The Great Lakes Pilotage Authority (GLPA) provides long-distance pilotage services and also must cope with locks and international waters (shared with the United States). In addition, the Seaway is closed for about 3 months per year. All pilots are employees. The GLPA has six districts; Cornwall District, International District No. 1, Lake Ontario, International District No. 2 (including the Welland Canal), International District No. 3 (including Lakes Huron, Michigan, and Superior), and the Port of Churchill, Manitoba.

- The Atlantic Pilotage Authority provides pilotage service to many diverse ports throughout the Atlantic Provinces. Almost all of the pilotage performed by the APA is harbour pilotage. The APA serves 17 compulsory ports as illustrated on the map on page 25. It also provides service on request for many other areas that do not require compulsory pilotage. The APA's employee pilots perform over 90% of the assignments each year, with the remaining assignments performed by contract pilots. The Authority owns and operates nine pilot boats, as described in Appendix B, to provide pilot transport in several of the ports with most activity or longest pilotage distances. The APA also contracts for pilot boat service with 15 separate contractors. In some ports, separate contractors are used for summer and winter operation. The requirement for pilot boats in Atlantic Canada absorbs a greater proportion of the operating and capital budgets for the APA than for the other pilotage authorities.

- The Pacific Pilotage Authority (PPA) provides services with employee pilots on the Fraser River that is similar to those provided by the Atlantic Pilotage Authority. However, the great majority of their pilots are contract pilots who provide coastal pilotage service over long distances. These pilots must often use helicopters to board vessels. The PPA have four key traffic areas; Vancouver, Vancouver Island, Northern, and Fraser River.

2015 Actual Results				
	Great Lakes Pilotage	Laurentian Pilotage	Atlantic Pilotage	Pacific Pilotage
Annual Revenue (000's)	$ 25,554	$ 86,229	**$22,673**	$ 72,770
No. of Assignments	7,166	21,468	**8,348**	12,892
Employee Pilots	53	0	**47**	8
FTE Contract Pilots	4	184	**11**	98

APPENDICES

Appendix "A"

ATLANTIC PILOTAGE AUTHORITY

FORECAST OF PILOTAGE ASSIGNMENTS FOR 2017

AREA	TRIPS	MOVES	CANCELLATIONS	TOTAL
Halifax	2,524	173	21	2,718
Sydney	332	11	4	347
Bras d'Or	8	-	-	8
Canso	607	65	13	685
Pugwash	59	-	-	59
Saint John	1,626	63	61	1,750
Miramichi	10	-	-	10
Restigouche	10	-	-	10
St. John's	467	122	17	606
Holyrood	31	1	2	34
Placentia Bay	711	178	49	938
Humber Arm	155	9	2	166
Stephenville	17	-	2	19
Bay of Exploits	102	7	3	112
				-
Voisey's Bay	12	-	-	12
Charlottetown	247	1	4	252
Confederation Bridge	105	-	-	105
Non-Compulsory	258	3	27	288
TOTAL	**7,281**	**633**	**205**	**8,119**

ATLANTIC PILOTAGE AUTHORITY PILOT BOATS

The APA maintains a fleet of pilot boats to transfer pilots in certain ports within the Atlantic region. The boats represent a substantial financial investment for the Authority.

Chebucto Class- Chebucto Pilot and Captain A. G. Soppit

The Chebucto Pilot was deployed in Halifax, NS in 2012, and the Captain A. G. Soppitt was deployed in Saint John, NB in 2013. The boats were built at ABCO Industries Limited in Lunenburg, NS. The vessels were built to Lloyds Class, which means that Lloyds must approve all plans and drawings for the boats, must approve all equipment and machinery used in the boats, and a Lloyds representative must make periodic inspections of the shipyard to ensure that proper construction procedures are being followed. These are 56 foot, twin screw, aluminum hull vessels with a service speed of 18 knots. The current plan is to move the Chebucto Pilot to Saint John, NB, to team with its sister vessel for the foreseeable future upon the acquisition of the Milford Haven vessels (see page 91).

Avalon Pilot Class – Atlantic Pilot and Avalon Pilot

The Atlantic Pilot and the Avalon Pilot are 62-foot aluminum boats that were put in service in 2007 in Placentia Bay, NL. The boats were constructed at the A.F. Theriault shipyard in Meteghan River, NS. The vessels were also built to Lloyds Class, and employ a Camarc hull design. This design results in very good sea boats.

These vessels have a service speed of approximately 20 knots and a maximum speed of approximately 24 knots.

Fundy Pilot

The Fundy Pilot is a 51 foot Raymond Hunt designed aluminum pilot boat built at Gladding-Hearn Shipbuilding in Massachusetts, USA. The boat was built in 1983 and the original owners were the Virginia Pilots. In the early 1990's the vessel was sold to the Boston Pilots, and in 2005 the APA purchased the boat. It entered service in Saint John in 2005. The Fundy Pilot operates at approximately 16 knots. The Fundy Pilot continues to provide reliable service as a secondary boat for the port of Saint John, but will become an additional back-up vessel when additional vessels are purchased.

Breaux Boats - APA #1, APA#18, and APA#20

The workhorses of the APA fleet over the years have been the Breaux boats. The APA owns three of these 65-foot aluminum boats that have provided service in Halifax, Cape Breton, Saint John, Placentia Bay, and other ports for 40 years. The vessels are sister ships, although some modifications have been made in wheelhouse design, equipment, and running gear. They were built in a shipyard in Port Hawkesbury, NS. The picture below of APA #1 illustrates this design.

These boats are rugged and dependable, but each is reaching the end of its useful life and cannot be depended upon as a primary boat for major areas. They may operate for several more years as secondary vessels in a major port or as primary vessels in minor ports with fewer assignments and less challenging conditions. As of September 2016, two of these vessels are operating as back-up vessels as they provide coverage in Halifax and Placentia Bay. The third vessel is acting as the primary vessel in Sydney. The plan is to have one of the vessels currently providing back-up services to move to Sydney to team with its sister vessel in covering the port. The Breaux boats were originally designed to work at 20 knots, but have slowed with age and increased weight to now work at approximately 13 knots.

APA #2

The APA #2 is a steel hulled single screw (one engine and one propeller) boat. This 47-foot boat was built in Port Hawkesbury, NS, in 1986, and has performed in St. John's (her original port), Placentia Bay, Confederation Bridge, Halifax, Saint John, Sydney, and Humber Arm (Corner Brook) NL, where she is currently stationed. The vessel is a good sea boat, but is only capable of operating at about 9 knots, which limits its suitability for major ports.