



Administration  
de Pilotage  
de l'Atlantique

# **Atlantic Pilotage Authority**

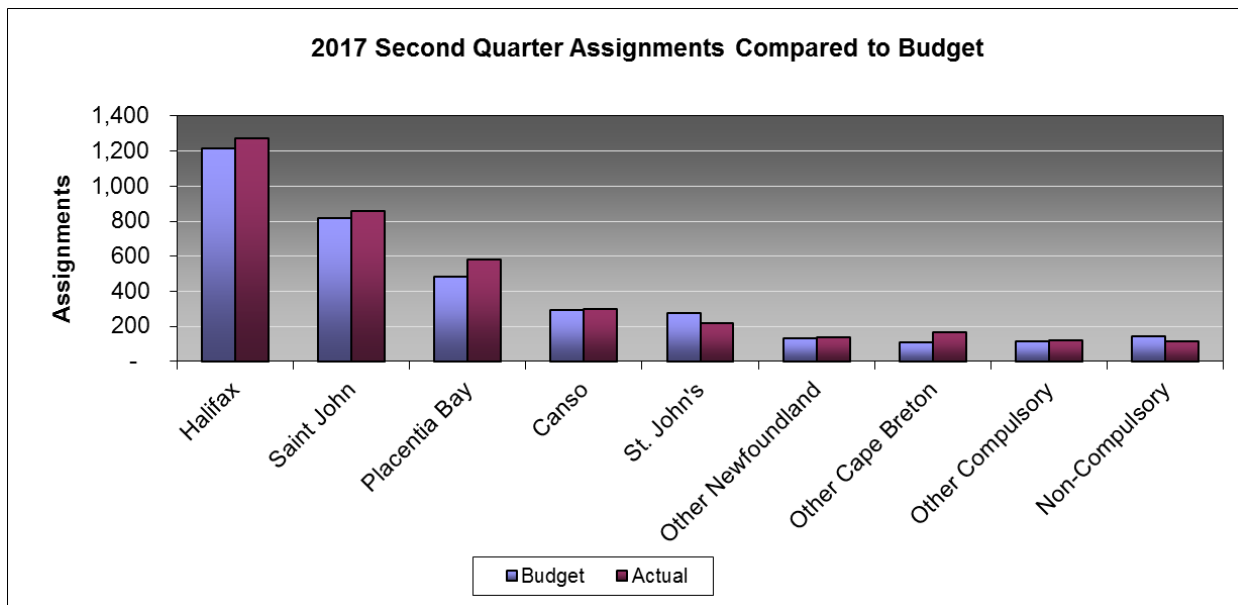
**Second Quarter 2017**

Management's Discussion and Analysis

**August 30, 2017**

## TRAFFIC REVIEW

Pilotage Area	Actual Traffic through 2nd Qtr 2016	Budget Traffic through 2nd Qtr 2017	Actual Traffic through 2nd Qtr 2017	Variance from 2016	Percentage Variance from 2016	Variance from Budget 2017	Percentage Variance from Budget 2017
Halifax	1,204	1,214	1,272	68	6%	58	5%
Saint John	826	820	855	29	4%	35	4%
Placentia Bay	501	486	584	83	17%	98	20%
Canso	291	291	301	10	3%	10	3%
St. John's	276	276	218	-58	-21%	-58	-21%
Other Newfoundland	128	135	138	10	8%	3	2%
Other Cape Breton	117	112	165	48	41%	53	47%
Other Compulsory	117	117	119	2	2%	2	2%
Non-Compulsory	141	143	114	-27	-19%	-29	-20%
<b>Total</b>	<b>3,601</b>	<b>3,594</b>	<b>3,766</b>	<b>165</b>	<b>5%</b>	<b>172</b>	<b>5%</b>



The following discussion regarding the amount of activity in individual ports is referring to pilotage assignments only, and not the level of cargo or vessel traffic experienced by a port. There are several factors that may result in a difference between the activity reported by the Authority and that reported by another body such as a port authority. These factors include ships not subject to compulsory pilotage, ships utilizing mariners who have pilotage certificates, and the amount of cargo carried on a ship. The Authority reports on pilotage assignments performed by its pilots, but does not track the amount of cargo being carried on a vessel.

The Authority has four major compulsory ports (Halifax, NS; Strait of Canso, NS; Placentia Bay, NL; and Saint John, NB) that contribute almost 80% of its pilotage assignments each year. The first half activity in each of the major compulsory ports has increased over 2016 levels, and are ahead of budget.

The increase in traffic in Halifax, NS from 2016 is largely due to an increase in container assignments with the addition of a new weekly caller. Supply vessel traffic in the port has also increased due to trials being performed on new vessels and foreign navy vessels were in to celebrate Canada's 150<sup>th</sup> birthday. Total pilotage activity in the port is 5% over budget with revenues 3% over budget through June 2017. The discrepancy between the percentage increase in assignments versus that of revenues is because the increased traffic described above consists of smaller vessels on which the tariff is below the average tariff in the port.

The traffic in Placentia Bay, NL is generated primarily from two major oil industry customers-the oil refinery at Come-by-Chance, and the transshipment terminal at Whiffen Head. A bunker fuel service was launched late in 2016 on which pilotage services are required. Activity at Whiffen Head is also ahead of the 2016 pace and of budget. The increase in movements on this bunker tanker has offset a decline in activity from larger tankers at the refinery. Traffic has been 20% over budget and has increased by 17% over the previous year. Meanwhile, the revenue is 12% over the 2017 budget. This disparity between assignments and revenues is because the increased activity has been on smaller vessels with lower revenue than the average vessel.

Pilotage assignments in Saint John, NB, have increased by 4% from both the 2016 actual results and the 2017 budgeted activity. This increase is notwithstanding a reduction in container ship assignments due to a loss of a weekly caller at the beginning of the year. The loss of this caller was not anticipated when the 2017 budget was prepared. It is expected that a new weekly caller at the port will begin service by the end of August 2017, offsetting the earlier loss. The temporary decline in container activity has been offset by increases in tanker traffic and potash exports from the port. The tariff revenue in Saint John has increased by 11% from 2016 and is 4% over budget through June 2017.

In Canso, NS, tanker traffic had declined 18% from the same period of 2016. There was a short-term increase in larger tankers for the area last year that has not recurred 2017 to date. Bulk carrier traffic has increased by 30% from 2016 with an increase in coal shipment activity. The combination of these factors has left the area 3% over budget in activity, but 12% over budget on revenues through June 2017.

FINANCIAL AND STATISTICAL REVIEW

<b>COMPARATIVE REVIEW</b>		
<b>FINANCIAL AND STATISTICAL DATA</b>		
<b>As at June 30</b>		
	<b>2017</b>	<b>2016</b>
<b>FINANCIAL</b>		
(in thousands of Canadian dollars)		
<b>Total Revenue</b>	<b>\$ 12,174</b>	<b>\$ 11,157</b>
Operating Expenses		
Salaries, Fees and Benefits	7,180	6,972
Pilot Boats	3,116	2,831
Other	1,317	1,214
<b>Total Operating Expenses</b>	<b>11,613</b>	<b>11,017</b>
<b>Profit/(Loss)</b>	<b>\$ 561</b>	<b>\$ 140</b>
<b>STATISTICAL</b>		
Pilotage Assignments	3,766	3,601
Shipping Incidents	2	3
% of incident free assignments	99.95%	99.92%
Customer Complaints Filed	7	10
% of complaint free assignments	99.81%	99.72%

The revenue for the Authority has increased with the increase in activity and with the tariff increases that came into effect on March 23, 2017. Overall, traffic has increased by 5% from 2016 levels through June, with revenues increasing by 9%.

Salaries, fees, and benefits through June 2017 have increased from the same period in 2016 as one key position was not staffed until later in the year in 2016, and a second key position was only staffed in late February 2016. Pilot overtime costs have increased with the increase in activity and extended sick leave absences. Pilot boat costs have increased due to repair costs and expenditures on fuel. The Authority have five vessels in 2017 due for either their 4-year Transport Canada Inspection or their 5-year Lloyds Classification inspection. This leads to increased maintenance costs for the year and an increase in capital expenditures. “Other” expenses have increased from the 2016 levels with increased training costs. A large portion of 2017 training was conducted earlier in the year as compared to 2016.

The Authority had a profit at the end of June of \$561 thousand (\$140 – 2016). A loss of \$288

thousand was budgeted to this point in the year. The increased activity in a number of ports has increased revenues beyond budget. Much of this traffic is either temporary or its duration is currently unknown. The Authority had also budgeted to have two previously owned vessels purchased and in operation in Halifax for January 1<sup>st</sup>, 2017. These new vessels have been acquired, but did not enter service until late in July 2017.

#### CUSTOMER COMPLAINTS AND LEVEL OF SERVICE

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 is 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 7 complaints out of a total of 3,766 assignments through June 30, 2017. The remaining 99.81% of assignments were performed without a complaint from the customer. For the same period of 2016, there were 10 complaints received out of 3,601 assignments, meaning 99.72% of the assignments had been performed without complaint. All complaints received are included in the above totals, including those submitted that involved delays not caused by the Authority.

Through June 2017 the Authority has had two shipping incidents where a piloted vessel made contact with a pier or port equipment. There were three incidents of a similar nature reported at this point in 2016. There were no injuries or environmental contamination associated with any of these incidents.

#### RISK ANALYSIS

The major financial risk faced by the Authority is the variability of traffic in major ports. The Authority does not control or influence the activity in each port. Variations in the number of ships, or the average ship size, from the budget may result in a significant positive or negative result. The variation in ship size was a significant contributor to a poor financial result in 2015. In 2016, the average vessel size increased, and it has held steady through the first half of 2017.

Maintenance at facilities related to offshore oil extraction or oil refining can have a significant impact on the Authority. Extended periods of maintenance at oil refineries in Placentia Bay, NL and Saint John, NB has been detrimental to the Authority in previous years. Any maintenance planned for 2017 is not expected to be as prolonged as previously experienced. Early in 2016, announcements were made that activity at the potash mine in Saint John, and the gypsum mine in Bras d'Or, NS, were being stopped, leading to reductions in traffic in both areas. The port of Saint John is being used in 2017 to export potash from other mining operations, which will benefit the Authority in the area. Cruise traffic in several ports is expected to be very strong, which is expected to contribute to a strong financial performance for the Authority later in the year.

Ship masters who have the required experience and professional qualifications may apply to obtain a pilotage certificate, allowing them to pilot their own vessels in designated areas. These certificate holders must successfully challenge an examination and demonstrate knowledge equivalent to that of a licenced pilot. The issuance of pilotage certificates results in a decline in the number of pilotage assignments, particularly in the port of St. John's NL, with a lesser impact on the port of Halifax, NS. In total, there were 940 movements done by certificated masters through June 2017, an increase from 741 done during the same period in 2016.

The cost structures in ports are not easily adjusted in response to changes in activity. Due to the specialized nature and training required to be a marine pilot, reducing the work force in a port is not feasible to address short term declines in activity. For similar reasons, increasing the work force in response to growing activity requires significant planning and lead time in order to have effective pilots in place to handle the additional vessels. Certificates pose an additional challenge as these specific masters may leave at any point or be unavailable to their employer. This would result in a spike in traffic for which the area will need trained pilots. A shortage in the number of pilots can have significant consequences on the shipping industry with the potential for delays during peak periods, or if the port experiences an unexpected surge in activity. The Authority has also made a significant investment in pilotage vessels that have to be supported through tariff revenue in many ports, including Placentia Bay, Halifax, and Saint John. Variations in expected traffic in these areas pose an additional risk due to the fixed nature of these costs.

One major financial risk faced by the Authority has been mitigated by prior action. The cost of fuel, which has a significant impact on the cost of operating pilot boats, has been offset by a fuel recovery charge applied to assignments in Halifax, Saint John, Placentia Bay, Canso, Sydney, and Bras d'Or.

The Authority had an operating profit of \$1.197 million in 2016 after incurring losses in the previous two years. This is mainly due to the cooperation of our customers in agreeing to tariff adjustments, increased average vessel size and a marked reduction in operating expenses. The 2016 tariff included a surcharge that is meant to recover a large portion of the losses incurred in 2014 and 2015. It is in place for a three-year period and includes an agreement with industry to review it annually to determine its continued necessity and its effectiveness. An operating profit of \$881 thousand has been budgeted for 2017.

#### TRAVEL, HOSPITALITY, AND CONFERENCE EXPENSES

The Atlantic Pilotage Authority's area of operation is defined as all the Canadian waters in and around the provinces of New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador, including the waters of Chaleur Bay in the Province of Quebec. Within this region, the Authority has designated 17 compulsory pilotage areas. Each one has its unique industries and are serviced by licenced pilots and the required infrastructure such as pilot boat services.

Conducting regular pilotage operations requires travel to be conducted by the Authority's pilots and boat crew. These costs are recovered directly from the customers for whom the services were delivered. Travel costs are also incurred for training of operational personnel as much of the training is done in Europe and Quebec City. These costs are included in the Authority's training budget. Included in the Pilot boats, operating costs category of the Authority's financial statements are travel costs associated with vessel maintenance personnel performing their regular duties.

Travel of pilotage authority board and management representatives is required to meet the needs of stakeholders in each area and manage the Authority's resources effectively. Periodic travel outside of the Authority's area of operation is also required to meet with Government representatives, industry associations, and the other pilotage authorities. Conferences include port specific marine business conferences and pilotage specific conferences. Board travel costs are captured with all other Board costs under Professional and special services in the Authority's financial statements.

The table below shows the travel, hospitality, and conference expenses for operations, and for administrative employees and the Board.

<b>Travel, Hospitality, and Conference Expenses</b>		
As at June 30		
(in thousands of Canadian dollars)		
	<b>2017</b>	<b>2016</b>
Operations	303	292
Training	47	30
Engineering	5	13
<b>Total Operational Travel</b>	<b>355</b>	<b>335</b>
Administration	45	57
Board	15	18
<b>Total Administration Travel</b>	<b>60</b>	<b>75</b>
Hospitality	4	4
Conference Fees	8	6
<b>Total Hospitality and Conference Expenses</b>	<b>12</b>	<b>10</b>
<b>Total Travel, Hospitality, and Conference Expenses</b>	<b>427</b>	<b>420</b>

**Second Quarter 2017**  
Interim Unaudited  
Condensed Financial Statements and Notes

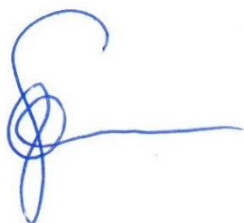


## Management's Responsibility for Financial Reporting

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Management is responsible for the preparation and fair presentation of these quarterly financial statements in accordance with the Treasury Board of Canada Standard on Quarterly Financial Reports for Crown Corporations, and for such internal controls as management determines is necessary to enable the preparation of quarterly financial statements that are free from material misstatement. Management is also responsible for ensuring all other information in this quarterly financial report is consistent, where appropriate, with the quarterly financial statements.

Based on our knowledge, these unaudited quarterly financial statements present fairly, in all material respects, the financial position, results of operations and cash flows of the corporation, as at the date of and for the periods presented in the quarterly financial statements.



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Sean Griffiths  
Chief Executive Officer



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Peter MacArthur, CPA, CMA  
Chief Financial Officer

Halifax, Canada  
August 30, 2017

# ATLANTIC PILOTAGE AUTHORITY

## Statement of Financial Position

### Unaudited

(in thousands of Canadian dollars)		<b>June 30,</b>	December 31,
		<b>2017</b>	2016
<b>Assets</b>			
Current			
	Cash	\$ 1,356	\$ 2,083
	Trade receivables	4,067	2,902
	Prepaid expenses	210	71
		<b>5,633</b>	5,056
Non-current			
	Intangible assets	170	184
	Pilot boats and equipment	12,798	9,455
		<b>12,968</b>	9,639
		<b>\$ 18,601</b>	\$ 14,695
<b>Liabilities</b>			
Current			
	Trade and other payables	\$ 2,285	\$ 1,695
	Bank loans	630	449
	Employee severance benefits	-	83
		<b>2,915</b>	2,227
Non-current			
	Bank loans	5,915	3,333
	Employee severance benefits	1,445	1,386
	Tenant Inducement Liability	16	-
		<b>7,376</b>	4,719
		<b>10,291</b>	6,946
<b>Equity</b>			
	Retained earnings	8,310	7,749
		<b>8,310</b>	7,749
		<b>\$ 18,601</b>	\$ 14,695

*The accompanying notes are an integral part of these financial statements.*

# ATLANTIC PILOTAGE AUTHORITY

## Statement of Comprehensive Income

**Unaudited**

	Three Months Ended		Six Months Ended	
	June 30		June 30	
(in thousands of Canadian dollars)	2017	2016	2017	2016
<b>Revenues</b>				
Pilotage charges	\$ 7,135	\$ 6,250	\$ 12,139	\$ 11,142
Other income	29	8	35	15
	<b>7,164</b>	6,258	<b>12,174</b>	11,157
<b>Expenses</b>				
Pilots' fees, salaries and benefits	2,790	2,783	5,372	5,293
Pilot boats, operating costs	1,373	1,121	2,505	2,188
Pilot boat crews' salaries and benefits	488	430	943	889
Staff salaries and benefits	403	382	865	790
Amortization and depreciation	323	333	645	667
Transportation and travel	199	193	347	361
Professional and special services	62	86	175	182
Utilities, materials and supplies	133	101	234	191
Rentals	76	72	150	138
Training	176	102	242	187
Communications	34	30	74	68
Finance costs	32	31	61	63
	<b>6,089</b>	5,664	<b>11,613</b>	11,017
Profit for the period	<b>1,075</b>	594	<b>561</b>	140
Other comprehensive loss	-	-	-	-
Actuarial loss on employee severance benefits	-	-	-	-
Other comprehensive loss	-	-	-	-
Comprehensive income	<b>\$ 1,075</b>	\$ 594	<b>\$ 561</b>	\$ 140

*The accompanying notes are an integral part of these financial statements.*

## ATLANTIC PILOTAGE AUTHORITY

### Statement of Changes in Equity

**Unaudited**

	Three Months Ended		Six Months Ended	
	June 30		June 30	
(in thousands of Canadian dollars)	2017	2016	2017	2016
Retained earnings, beginning of the period	\$ 7,235	\$ 6,101	\$ 7,749	\$ 6,555
Profit for the period	1,075	594	561	140
Other comprehensive loss	-	-	-	-
Total comprehensive income	1,075	594	561	140
Retained earnings, end of period	\$ 8,310	\$ 6,695	\$ 8,310	\$ 6,695

*The accompanying notes are an integral part of these financial statements.*

# ATLANTIC PILOTAGE AUTHORITY

## Statement of Cash Flows

**Unaudited**

		Three months ended June 30		Six months ended June 30	
		2017	2016	2017	2016
(in thousands of Canadian dollars)					
<b>Operating Activities</b>					
	Receipts from customers	\$ 5,757	\$ 5,726	\$ 10,974	\$ 11,026
	Payments to and on behalf of employees	(3,778)	(3,647)	(7,078)	(6,822)
	Payments to suppliers	(2,142)	(1,898)	(3,800)	(3,525)
	Finance costs paid	(33)	(31)	(61)	(63)
	Other income received	29	8	35	15
	Net cash provided by (used in) operating activities	(167)	158	70	631
<b>Investing Activities</b>					
	Purchases of intangible assets	(2)	(14)	(5)	(27)
	Purchases of pilot boats and equipment	(3,354)	(166)	(3,555)	(369)
	Net cash used in investing activities	(3,356)	(180)	(3,560)	(396)
<b>Financing Activities</b>					
	Proceeds from bank loan	3,000	-	3,000	-
	Repayment of bank loan	(126)	(108)	(237)	(215)
	Net cash provided by (used in) financing activities	2,874	(108)	2,763	(215)
	(Decrease) increase in cash	(649)	(130)	(727)	20
	Cash, beginning of the period	2,005	479	2,083	329
	Cash (debt), end of the period	\$ 1,356	\$ 349	\$ 1,356	\$ 349

*The accompanying notes are an integral part of these financial statements.*

# ATLANTIC PILOTAGE AUTHORITY

## Notes to the Unaudited Financial Statements

June 30, 2017

(in thousands of Canadian dollars)

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### 1. GENERAL INFORMATION AND BASIS OF PRESENTATION

The Atlantic Pilotage Authority (the Authority) was established in 1972 pursuant to the *Pilotage Act*. The principal registered address of the Authority is 2000 Barrington Street, Halifax, Nova Scotia. The objects of the Authority are to establish, operate, maintain, and administer a safe and efficient pilotage service within designated Canadian waters. The *Pilotage Act* provides that pilotage tariffs shall be fair, reasonable, and sufficient, to permit the Authority to operate on a self-sustaining financial basis. Under the *Pilotage Act*, no payment to the Authority may be made under an appropriation by Parliament to discharge an obligation or liability.

The Authority is a Crown corporation listed in Schedule III, Part I of the *Financial Administration Act* and is not subject to the provisions of the *Income Tax Act*.

In July 2015, the Authority was issued a Directive (PC 2015-1114) pursuant to section 89 of the *Financial Administration Act* to align its travel, hospitality, conference and event expenditure policies, guidelines and practices with the Treasury Board policies, directives and related instruments on travel, hospitality, conference and event expenditures in a manner that is consistent with its legal obligations, and to report on the implementation of this directive in the Authority's next corporate plan. The Authority is revising its policy on travel, hospitality, conference and events as it works towards full compliance with the directive.

The Atlantic Pilotage Authority is classified as a Government Businesses Enterprise (GBE). As a GBE, the Authority prepares its statements in accordance with International Financial Reporting Standards (IFRS), as issued by the Accounting Standards Board (AcSB).

These financial statements have been prepared in accordance with the Treasury Board of Canada Standard on Quarterly Financial Reports for Crown Corporations. In accordance with the Treasury Board of Canada Standard, these financial statements do not include all of the financial statement disclosures required for annual financial statements and should be read in conjunction with the Authority's Canadian GAAP annual consolidated financial statements for the year ended December 31, 2016. In management's opinion, the financial statements reflect all adjustments that are necessary for a fair presentation of the results for the interim period presented.

## 2. SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies are as follows:

(a) Cash

Cash represents cash on hand and Canadian dollar deposits held at Canadian chartered banks.

(b) Financial instruments

Trade and other receivables and trade and other payables, classified as other financial liabilities, are measured at amortized cost using the effective interest method. Due to their short-term nature, the cost of these financial instruments approximates their fair value.

Bank loans are classified as other financial liabilities and are initially measured at fair value. After initial recognition, bank loans are measured at amortized cost using the effective interest method.

The Authority is not party to any derivative financial instruments or hedges.

(c) Intangible assets

The Authority's intangible assets are comprised of purchased software. When the software does not form an integral part of the machinery or computer hardware to which it relates, it is separately accounted as an intangible asset. Intangibles are carried at cost less accumulated amortization and impairment losses.

Any impairment is recognized as an expense in comprehensive income and is measured as the amount by which the carrying amount exceeds its recoverable amount.

(d) Pilot boats and equipment

Pilot boats and equipment are recorded at cost. The cost of pilot boats under construction includes design, project management, legal, material, direct labour, and interest on construction loans. Amounts included in pilot boats under construction are transferred to the appropriate pilot boat classifications upon completion, and depreciation commences.

Any impairment is measured as the amount by which the carrying amount exceeds its recoverable amount and is recognized as a loss for the year. Gains or losses arising on the disposal of pilot boats and equipment are determined as the difference between the disposal proceeds and the carrying amount of the assets and are recognized in profit or loss. Gains are recognized in other income, while

losses are recognized as a loss for the year in pilot boats, operating costs, or utilities, materials and supplies depending on the assets that were disposed.

(e) Employee severance benefits

Employees are entitled to specified severance benefits as provided for under collective agreements or employment contracts, based on their years of service and final salary. The liability for these payments is estimated and recorded in the accounts as the benefits accrue to the employees.

The costs and the benefit obligation are actuarially determined using the projected unit credit method prorated on service that incorporates management's best estimate of the rate of employee turnover, retirement age, future salary and benefit levels, and other actuarial factors.

Actuarial gains and losses are recognized in other comprehensive income in the period in which they occur and flow into retained earnings.

(f) Pension plan

Substantially all of the employees of the Authority are covered by the Public Service Pension Plan (the "Plan"), a defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the Authority to cover current service cost. Pursuant to legislation currently in place, the Authority has no legal or constructive obligation to pay further contributions with respect to any past service or funding deficiencies of the Plan. Consequently, contributions are recognized as an expense in the year when employees have rendered service and represent the total pension obligation of the Authority.

(g) Revenue recognition

Revenues from pilotage charges are recognized when pilotage services are provided.

(h) Accounting standards issued but not yet effective

Accounting standards and amendments issued but not yet effective which are expected to be relevant to the Authority include:

In July 2014, the International Accounting Standards Board (IASB) issued the complete version of IFRS 9, "Financial Instruments", first issued in November 2009, which brings together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 introduces a principles-based approach to the classification of financial assets based on an entity's business model and the nature of the cash flows of the asset. The mandatory



effective date of IFRS 9 is January 1, 2018.

In May 2014, the IASB issued IFRS 15, “Revenue from Contracts with Customers”, which establishes principles for reporting about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity’s contracts with customers. The mandatory effective date of IFRS 15 is January 1, 2018.

In January 2016, the IASB issued IFRS 16, “Leases”, which sets out the principles that both parties to a contract apply in order to provide relevant information about leases in a manner that faithfully represents those transactions. IFRS 16 requires all leases to be reported on the lessee's balance sheet. There are also changes in accounting over the life of the lease. In particular, the lessee will recognize a front-loaded pattern of expense for most leases, even when it pays constant annual rentals. Leases that are less than 12 months in duration, or that are for a low dollar value items, are not required to be capitalized. Lessors’ accounting treatment remains similar to current practice. They continue to classify leases as finance and operating leases. The mandatory effective date of IFRS 16 is January 1, 2019.

The Authority has not early adopted any of these new standards and amendments and is currently assessing the impact that these standards will have on its financial statements. Therefore, the impact is not known at this time.

### 3. USE OF ESTIMATES AND JUDGMENTS

The preparation of financial statements requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, and revenue and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised.

#### (a) Critical accounting estimates

Critical accounting estimates are estimates and assumptions made by management that may result in material adjustments to the carrying amount of assets and liabilities within the next year. Management has made the following critical accounting estimates or assumptions in preparation of these financial statements:

### *Amortization and depreciation rates*

All the intangible assets are finite. Amortization of intangible assets is charged on a straight-line basis over the estimated useful lives of the assets. The useful lives used in the calculation of amortization for purchased software is 5 to 10 years.

Depreciation of pilot boats and equipment is calculated on a straight-line basis and is based on the estimated useful life of the assets as follows:

Pilot boat hulls and structures	10 to 25 years
Pilot boat equipment	5 to 10 years
Pilot boat generators	5 years
Pilot boat engines	5 to 10 years
Pilot boat inspections	4 to 5 years
Furniture and equipment	2 to 10 years
Leasehold improvements	10 years

Useful lives are based on management's estimates of the periods of service provided by the intangible assets and the pilot boats and equipment. The useful lives of these assets are reviewed annually for continued appropriateness. Changes to the useful life estimates would affect future amortization or depreciation expense and the future carrying value of the assets.

### *Employee severance benefits*

The Authority engages an external actuary to assess the fair value of its employee severance benefits. The Authority assesses this obligation at December 31 each year. The plan is sensitive to significant actuarial assumptions, the discount rate, the estimate of salary rate increases, and the assumed age at retirement.

### (b) Critical accounting judgments

Critical accounting judgments are accounting policies that have been identified as being complex or involving subjective judgments or assessments.

### *Impairment test for non-financial assets*

The non-financial assets with finite useful lives are required to be tested for impairment only when indication of impairment exists. Management is required to make a judgment with respect to the existence of impairment indicators at the end of each reporting period. Some indicators of impairment that management may consider include changes in the current and expected future use of the asset, external valuations of the assets, and obsolescence or physical damage to the asset.