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Pilotage Act Review **- Areas for Reform -**

Preliminary Submission

October 31, 2017

Chamber of Marine Commerce

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EXECUTIVE SUMMARY & RECOMMENDATIONS

The Chamber of Marine Commerce (CMC) is a marine industry association that represents more than 130 marine industry stakeholders, including major Canadian and American shippers, ports, terminals and marine service providers, as well as domestic shipowners. CMC's shipowner members operate on the Great Lakes, St. Lawrence, East Coast and Arctic regions.

CMC seeks to promote an economic and competitive Canadian marine industry. Its shipowner members play a significant role in the Canadian economy. In the course of their operations, CMC shipowner members regularly use pilotage services provided under the *Pilotage Act*, and are, therefore, familiar with the Great Lakes, Laurentian and Atlantic Pilotage Authorities (GLPA, LPA and APA, respectively).

It is critical that significant changes be made to the *Pilotage Act* and its regulatory framework so that pilotage services delivered within a regime are consistent with a modern and competitive transportation network for Canada's future. In the face of ever-evolving technology and in light of very competitive global markets, it is essential that this change occur earlier rather than later.

One of Canada's challenges is to continue to modernize its marine transportation system to ensure it remains as safe, efficient and effective as it can be. The Chamber of Marine Commerce has identified the following recommendations for improvements to Canada's pilotage system and the *Pilotage Act* to achieve these objectives.

Recommendation #1 - Objectives of the Pilotage Act

While the *Pilotage Act* speaks of '*the interest of safety*' and of an '*efficient pilotage service*' in the context of the object of a pilotage authority, missing from the *Pilotage Act* are a set of objectives that underscore the purpose of the *Act*. The stated objectives of the *Pilotage Act* should be consistent with those found in other marine legislation in Canada and are essential to establish the guiding principles for governance, regulation and service delivery against which decisions, outcomes and performance can be measured.

A key objective should be that the delivery of pilotage services take into consideration the use of technology and sound risk management principles and processes being undertaken aboard a vessel, thus ensuring that any pilotage system continues to evolve in an efficient and cost effective manner.

Amendments to the *Pilotage Act* are required to set-out the policy objectives of the *Act* and to ensure that the provisions of the *Act* remain relevant and responsive to the needs of the marine industry. Accordingly, the *Pilotage Act* should include objectives in line with other legislation applying to the marine transportation system. Such objectives would require that the legislative framework provide for regulatory scheme and a pilotage service that:

- promotes safety in marine transportation
- encourages viable, effective and economical marine transportation and commerce;

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- promotes an efficient and competitive marine transportation system;
- meets the needs of users and are available at a reasonable cost to the users; and
- embraces the use of existing and emerging technology and sound risk management practices in the delivery of pilotage services.

Recommendation #2 - Review of the *Pilotage Act*

The *Pilotage Act* currently does not provide for a periodic review of the *Act* to ensure that key provisions of the *Act* remain relevant given today's rapidly changing markets and technologies. The legislative and regulatory environment for pilotage must be responsive to this ever-changing world.

The *Pilotage Act* should include a provision that a legislative review of the *Act* be undertaken on a regular basis within a fixed-timeframe (i.e., every five (5) years) in order to ensure that the *Act* continues to be responsive to the marine transportation system and its stakeholders.

Recommendation #3 - Creation of a National Pilotage Authority

There are four pilotage authorities in Canada. CMC member vessels operating in the Great Lakes, St. Lawrence and East Coast of Canada will often make voyages within multiple regions, and often involving all three of the pilotage authorities covering Eastern Canada (i.e., GLPA, LPA and APA) during a single voyage. It is frustrating and inefficient to deal with the differences between the various authorities, including how they are managed and operated, their policies, regulations, services and approaches to various operational issues.

A single National Pilotage Authority would create consistency in approach (regulations, tariffs, policies and procedures) while improving efficiency and cost savings. It would also allow for regional differences where needed.

Amendments to the *Pilotage Act* are required to allow for the governance and administration of pilotage services across Canada to be re-organized and consolidated under a single, national pilotage authority with two pilotage operations centres: an Eastern operations centre (i.e., APA, LPA and GLPA operations) and a Western operations centre (i.e., PPA operations).

The Federal government should be fully responsible for all costs associated with the modernization of the *Pilotage Act* as well as all costs resulting from the re-structuring of the pilotage governance and operating model. This would include costs related to the development of a new business plan, legal fees, severance, asset disposal / rationalization costs, recruitment fees, re-training, re-location costs, office lease termination costs and any other legacy costs that may arise (pension, benefits, etc.).

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Recommendation #4 - Composition of the Board of Directors

The *Pilotage Act* must be amended to provide clearer opportunities for stakeholders to have their input via the inclusion of experienced and knowledgeable waterway users on the pilotage authority board(s) of directors.

With respect to the structure and composition of the board of directors of a national pilotage authority, amendments to the *Pilotage Act* are required that would:

- (a) Clearly specify the composition of the boards of directors of the pilotage authority, with input from stakeholders to be obtained;
- (b) Provide for a greater representation of waterway users on the board of directors and, in particular, greater representation of the shipper community;
- (c) Provide for the continued representation of user groups on the board of directors and specifically require that ministerial appointments be made based upon recommendations from designated user groups; and
- (d)** Specify that a “knowledge and experience” clause, as recommended in the 2003 Canada Marine Act Review, be included similar to the requirement for Canada Port Authorities.

Recommendation #5 - Pilotage Regulations, Standards and Certification

The *Pilotage Act* should also separate regulatory authority from the body that delivers services. At present, both functions are held by the pilotage authorities which creates challenges in relation to objectivity, oversight and enforcement.

In order to improve the objectivity, oversight and enforcement of pilotage regulations and standards, amendments to the *Pilotage Act* are required to:

- (a) Transfer the authority and responsibility for the setting and enforcement of pilotage regulations and standards from the pilotage authorities to an independent body, such as Transport Canada leaving the responsibility for the administration and delivery of pilotage services with the pilotage authorities;
- (b) Require that the program and process for issuing pilotage certificates that would allow qualified masters and navigation officers on Canadian domestic vessels to pilot their own vessels, be standardized under and overseen by Transport Canada;
- (c) Provide for the ability to issue Administrative Monetary Penalties for non-compliance under the *Pilotage Act* including against pilots who cause, through their conduct, vessels to be charged for statutory or regulatory offences for a more responsive and effective enforcement regime.

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Recommendation #6 – Improved Pilotage Certification Program

Many vessels, including Canadian domestic vessels, frequently make voyages through the same region or regions. The vessel masters and navigational officers often possess equivalent local knowledge and skills to that of a licenced pilot in relation to safe pilotage within a given area. Consequently, there should be greater opportunities to certify qualified vessel masters and navigating officers to pilot their own vessels. At the same time, shipowners should have greater flexibility to deploy their pilotage-certificated officers amongst the vessels of their fleet thereby providing greater opportunity for meeting pilotage requirements, training, maintaining qualifications, and promoting safety throughout their fleet.

In support of greater flexibility in managing pilotage requirements for vessels and in conjunction with advanced technology in navigational equipment, a standardized and improved certification program administered by Transport Canada should be implemented that facilitates and promotes the training and certification of a company's masters and navigational officers to pilot their vessels.

In order to achieve an improved and effective national Pilotage Certificate Program to provide the opportunity for shipowners to qualify its own masters and navigation officers as pilots for their vessels, amendments to the *Pilotage Act* are required that would:

- (a) Allow for the implementation of a standardized and improved pilotage certification program administered by Transport Canada which facilitates and promotes the training and certification of a ship company's masters and navigational officers to pilot their vessels;
- (b) Allow shipowners to manage and deploy their pilotage-certificated masters and navigation officers among their fleet as needed to meet pilotage requirements and to facilitate training and the maintenance of qualifications of the piloting masters and officers;
- (c) Require that a Pilotage Certification Program: (i) be based on demonstrating competencies, experience and training; (ii) be developed in conjunction with Transport Canada, the Pilotage Authority and the shipowners and be approved by Transport Canada; (iii) allow for the use of simulators for training and maintenance of certification; (iv) take into account advances in modern navigation technology in determining certification maintenance requirements; (v) be scalable according to the risk and complexity of the port or waterway; (vi) ensure costs and administrative burdens are minimized; and (vii) have a process that is reasonable and achievable, consistent with the need to ensure safety and proper environmental stewardship, so as to promote widespread adoption.

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Recommendation #7 - Language Requirements

The French language requirement imposed on otherwise fully qualified officers employed on Canadian-crewed vessel as a condition for eligibility for pilotage certificates in the Laurentian Pilotage Authority region is an artificial and prejudicial restriction which is inconsistent with the principles to which Canada has committed to internationally.

The language requirements for the issuance of pilotage certificates within all pilotage regions should allow for qualified Canadian officers who are unilingual-English.

Recommendation #8 – Assessment of Navigation Risk

In the eyes of industry stakeholders, the assessment of navigation risk by pilotage authorities potentially leads to unnecessary expansion of compulsory pilotage areas, even where no compelling safety issue exists. Reviews of pilotage areas should be undertaken only when compelling issues require it, and where changes or opportunities are identified by authorities or stakeholders, while at all times using established criteria. There also needs to be a consistent and objective level of what is acceptable risk and any differences should be explained and supported through a risk-based assessment.

With respect to the assessment of navigation risk and the establishment of compulsory pilotage requirements, amendments to the *Pilotage Act* are required to vest such responsibility with Transport Canada and further require that any risk-based assessment process:

- (a) Be based on an overall navigation risk assessment aimed at identifying, assessing and managing risk, using realistic risk scenarios, and consider any number of risk mitigation solutions i.e., technology, procedures, navigation services etc. as might be determined in a transparent, objective and recognized process; and not focus solely on determining pilotage requirements;
- (b) Result in regulatory and service outcomes that follow from the results of the assessment;
- (c) May, if required, include risk analysis programs for a quantitative approach to the risk assessment to support the decision-making process;
- (d) Be initiated when there is an identified need and not be based on an arbitrary 3 to 5-year ongoing review time schedule as recommended in the CTA Review;
- (e) Be initiated after following pre-established national criteria that identifies the need for the risk assessment, including when the assessment is to examine reducing an existing pilotage area; and
- (f) Consider the capabilities and implications of existing and emerging technologies with the aim of reducing unnecessary mandatory pilotage areas.

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Recommendation #9 - Hiring of Pilots

Currently, the *Pilotage Act* creates a conflict between the interests of the pilot corporations on the one hand and the pilotage authorities and users of the system on the other. Pilot corporations operate an effective monopoly which leads to higher costs and unnecessary restrictions on the delivery of pilotage services. Disbanding pilotage corporations and allowing pilotage authorities to hire their own employee pilots or contract with individual pilots would likely result in immediate cost savings. Should pilotage corporations be allowed to continue, it is essential that they be subject to greater oversight, transparency and accountability. Users should be entitled to know what they are getting for their money.

With respect to the hiring of pilots, amendments to the *Pilotage Act* should be made to eliminate (or phase-out as collective agreements expire) the ability of pilotage authorities to contract with pilotage corporations for pilotage services.

In the event this recommendation is not adopted:

- (a) Pilotage authorities should be permitted to hire their own employee pilots, or contract with individual pilots, regardless of whether a corporation exists in the area or not;
- (b) Pilotage authorities must have the appropriate oversight and authority to ensure the pilot corporations deliver services to the required standards and meet pilotage requirements. This would include setting mandatory practices and procedures for pilot corporations and their pilots to follow when providing pilotage services;
- (c) Pilotage authorities must be permitted to investigate pilot incidents and disputes with a view to determining the pilot's fitness for duty and what, if any, corrective action is needed (i.e., training). The results of the investigations should be provided to the relevant vessel operator;
- (d) Pilot corporations must be required to make public the corporations' financial statements, service contracts etc. and be subject to audits for greater transparency and accountability; and
- (e) Consideration should be given to limit, to the extent allowable by law, the ability of individual pilots to strike or undertake any form of industrial action.

Recommendation #10 - Scope of Rulemaking

Contract negotiations between pilot corporations and pilotage authorities should not be allowed to override regulatory requirements, thereby circumventing the regulatory process, including stakeholder consultations.

The *Pilotage Act* should be amended to ensure that terms and conditions negotiated under pilot corporation service contracts or terms and conditions of arbitration decisions, cannot include pilotage requirements related to safety of navigation or navigation restrictions that would be imposed on users and that are within the scope of the regulation-making authorities of the *Pilotage Act*.

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Recommendation #11 – Tariffs

Pilotage costs represent a significant cost to users and have a long history of increasing at rates that far exceed the rate of inflation. Based on data provided by CMC shipowner members, while transiting the compulsory pilotage zones in the St. Lawrence River, the cost of the pilot is equal to, and in certain cases, 1.5 times greater than the cost of the entire ship's crew. On a combined basis for the Great Lakes, Laurentian and Atlantic Pilotage Authorities, pilotage tariffs and fees have outpaced inflation by a rate of 2.7 times during the period of 2012 to 2016.

Tariffs have outpaced inflation and are linked directly to fees and wages paid to pilots, a major cost for the pilotage authorities representing over 70 percent of total expenditures in 2016. Pilotage authorities have little bargaining power in negotiations, as pilots benefit from an effective monopoly. This is compounded by the *Pilotage Act* requiring pilotage authorities to be "financially self-sufficient", thereby requiring these costs to be passed on to users, regardless of the reasonableness of such costs or the resulting competitive impact.

The tariff setting process therefore requires revision in order to clarify the notion of "self-sufficiency" and to establish important objectives in the setting of tariffs. A review of administrative and operational efficiency would also help lead to greater overall transparency of costs and efficiency of services.

With respect to the setting of pilotage tariffs, amendments to the *Pilotage Act* should include:

- (a) Clarifying the definition of "self-sufficiency" and the manner in which it is to be achieved;
- (b) Defining what the arbitrator should take into account in a contract renewal process i.e., government policy and the authorities' mandate, corporate plan, financial status and commercial competitive considerations;
- (c) The requirement for greater overall transparency and consistency in the reporting of costs and operational data (current and historical) across all pilotage authorities;
- (d) The requirement to conduct regular reviews of the effectiveness of administrative and operational practices that impact service delivery efficiency and costs; and
- (e) Permitting users the necessary standing to legally challenge any final decision within the arbitral process in the event such decisions have the effect of imposing conditions on the delivery of service by pilots that is inconsistent with governing regulations or tariffs.

Recommendation #12 - Technology

The incredible advances that have been made in navigation technology in recent years should have had a profound impact on the requirements for, and delivery of, pilotage services, yet little has changed since 1972 when most of the existing requirements came into effect.

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Modern technology provides mariners with considerably better training, significant support in voyage planning, execution and monitoring, and will play an increasingly important role in the piloting of vessels as technology continues to advance. This should lead to more masters and navigating officers qualifying for self-pilotage under pilotage certification programs.

Technology will also have an impact on reviewing the need and extent of mandatory pilotage areas. It is, therefore, essential that existing and emerging technologies be considered and taken into account at each step in the review of pilotage requirements and service delivery to ensure maximum advantage is taken of technology in reducing the costs and demands of pilotage on users while improving safety and efficiency to the greatest extent possible.

Amendments to the *Pilotage Act* must consider and allow for the use of existing and emerging technologies in: (i) the development of risk assessments; (ii) the determination of pilotage requirements and (iii) the ultimate delivery of pilotage services, to ensure the advantages and benefits offered by technology are fully realized by users through enhanced safety, improved efficiency and reduced costs of pilotages services.

Recommendation #13: Pilot Recruitment Practices

As the pilotage authorities primarily conduct their recruitment from within the ranks of industry users such as CMC's shipowner members, these companies have been losing numerous pilots to the pilotage authorities. The salary disparity between pilots and vessel crews make retention of masters and senior navigation officers an enormous challenge with pilots earning, on average, \$375,000 compared to masters, who are often piloting in the same waters, earning \$175,000.

As the training of these skilled navigators is done over many years and at considerable expense to CMC's members, these departures often lead to challenging staffing situations and critical shortages of skilled navigating officers. The Pilotage Review should evaluate the pilotage authorities' recruitment practices for pilots and consider how the impact of the loss of senior officers by shipowners to pilotage authorities can be minimized.

The recruitment practices of pilotage authorities must be reviewed (including consideration given for a mechanism for fair compensation to Canadian domestic shipowners) to minimize the financial and competitive impacts on domestic shipowners resulting from the loss of senior officers to pilotage authorities

INTRODUCTION

The Chamber of Marine Commerce (CMC) is a marine industry association that represents more than 130 marine industry stakeholders, including major Canadian and American shippers, ports, terminals and marine service providers, as well as domestic shipowners. CMC's shipowner members operate on the Great Lakes, St. Lawrence, East Coast and Arctic regions.

CMC seeks to promote an economic and competitive Canadian marine industry. Its shipowner members play a significant role in the Canadian economy. In the course of their operations, CMC shipowner members regularly use pilotage services provided under the *Pilotage Act*, and are, therefore, familiar with the Great Lakes, Laurentian and Atlantic Pilotage Authorities (GLPA, LPA and APA, respectively).

Pilotage plays an important role in Canada's marine system, helping to ensure safe navigation and maintaining a reliable commercial marine transportation system. Ensuring pilotage services are provided as effectively and efficiently as possible is key to a safe, competitive and reliable transportation system.

The *Pilotage Act* requires pilotage authorities to establish and operate an efficient pilotage service in their regions. Yet there is a wide consensus among the marine industry that today's pilotage system is overly costly, inflexible, out-of-date and in desperate need of modernization. An efficient pilotage system must take into account the commercial reality of marine transportation so as to ensure its activities do not detract from the overall competitiveness and efficiency of Canada's marine transportation system. It is not enough for pilotage authorities to deliver a safe, efficient and environmentally responsible pilotage service. Pilotage services must also be offered within a framework that is transparent, accountable and cost effective.

It is critical that significant changes be made to the *Pilotage Act* and its regulatory framework so that pilotage services delivered within a regime are consistent with a modern and competitive transportation network for Canada's future. In the face of ever-evolving technology and in light of very competitive global markets, it is essential that this change occur earlier rather than later.

GOVERNANCE AND TECHNOLOGY AS THE DRIVER IN THE MODERNIZATION OF THE PILOTAGE FRAMEWORK

Viable structures begin with proper governance. How we decide on issues such as composition of boards, board powers and jurisdiction, as well as principles and objectives will dictate how relevant and effective an organization will be in delivering its mandate. A modern pilotage framework, flexible enough to quickly adapt to the changing commercial and regulatory landscape, is vital to the development of an efficient and cost effective transportation network in line with Canada's National Transportation Policy.

Much of the *Pilotage Act* has remained unchanged since 1972. Yet in the last 45 years, innovations in technology have had the greatest impact on how ships are handled, maneuvered and operated. We can even see moving beyond enhanced navigation technology to an era of e-Navigation, with greater integrated and harmonized information allowing the bridge team members to have greater access to real-time information necessary for ensuring safe navigation through restricted waters. The IMO has developed an e-Navigation strategy and implementation plan. Countries are exploring advancements in navigation technology to provide enhanced shore support and better onboard situational awareness. In Canada, the use of electronic chart display and information systems (ECDIS) and automatic identification systems (AIS) is wide-spread and further developments are being explored.

The use of advanced navigational technologies is changing how vessels are being operated and piloted. This requires a shift in thinking on how we provide for the future delivery of pilotage services so that Canadian shipowners remain at the forefront of safety and efficiency within Canada's marine transportation sector.

The cost of pilotage services provided today through pilotage authorities is significant, with the salaries paid to pilots increasing substantially over the last several years. Pilotage fees paid by vessels in Canada reached \$218 million in 2016-17. In reviewing the financial reports of the pilotage authorities (for APA, LPA, GLPA and PPA), we note:

- Pilotage Authority total revenue has increase by more than 40% over the last 10-yrs.
- Revenue per pilotage assignment shows an average annual increase of 3.7% versus 1.4% average annual increase in CPI (i.e., 2.6 times CPI) over the last five years.
- Fees, salaries and benefits paid to licensed pilots averaged \$376,500 per pilot in 2016 which has increased 3.4 times more than CPI over last five years. By comparison:
 - The average cost of a licensed pilot (\$376,500) is more than double the cost of the salary and benefits earned by masters working on a typical Canadian-flag vessel (\$175,000);
 - The typical NAV Canada Air Traffic Controller salary is reported to be \$120,302. Air Traffic Controller salaries at NAV Canada can range from \$70,941-\$172,000. (Canadian Business, April 23, 2015);

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- The median salary for airline pilots, flying instructors and flight engineers was \$79,997 in 2015. Compensation for pilots and flight engineers is highly dependent on experience; those in their late career can make around \$140,000 a year, while entry-level employees only make about \$40,000 a year, according to PayScale Canada. (Canadian Business, April 21, 2016);
- The average gross clinical payment to family doctors in Canada is approximately \$275,000.
- Administration and operation expenses for the four (4) pilotage authorities totalled \$35.9 million in 2016 and have increased at an average annual rate of 4.9% since 2012 and now account for 16% of total expenditures (2012 = \$29.6 million).

These rapidly increasing costs are borne by users, such as the CMC's shipowner members, and ultimately, the cargo shipper. CMC shipowner members spend more than \$21 million each year in compulsory APA, LPA and GLPA pilotage charges which represents approximately 15% of total pilotage revenues for these three authorities.

Pilotage costs can have a significant impact on trade, competitiveness, the economy and jobs. Underscoring the impact that significant increases in pilotage costs have on the economy of an area, a recent study commissioned by the United States Coast Guard (USCG)¹ analyzing the increase in the cost of U.S. pilotage within the Great Lakes estimated that, with U.S. pilotage costs increasing as they did in 2015 and 2016, 585,890 tons of export grain was lost to the system and shipped through coastal ports due to the fact that the cargo could no longer move cost effectively via Great Lakes ports. This would be reflected in a loss of 307 direct, induced and indirect jobs, and \$25.4 million in business revenue. Ultimately, as found in the USCG report, the total bi-national regional job loss associated with the 2016 U.S. pilotage rate increase is about 4,400 jobs.

With improvements in governance and with the development of a risk-based approach to the delivery of pilotage service in conjunction with advances in technology, the goal must be to reach greater levels of efficiency corresponding to a decrease in the overall cost of pilotage services without compromising safety, for the benefit of marine stakeholders at large.

¹ *Analysis of Great Lakes Pilotage Costs on Great Lakes Shipping and the Potential Impact of Increases in U.S. Pilotage Charges*, Martin Associates, June 28, 2017

AREAS FOR REFORM & RECOMMENDATIONS

1. Governance

1.1 Establishing *Pilotage Act* Objectives (Guiding Principles)

While the *Pilotage Act* speaks of ‘*the interest of safety*’ and of an ‘*efficient pilotage service*’ in the context of the object of a pilotage authority, missing from the *Pilotage Act* are a set of objectives that underscore the purpose of the *Act*. Modern legislation often includes a set of objectives which establish policy goals and a focus on the outcomes to be achieved. These are essential to establish the guiding principles for governance, regulation and service delivery against which decisions, outcomes and performance can be measured.

The stated objectives of the *Pilotage Act* should be consistent with those found in other marine legislation in Canada. We recommend the addition of stated objectives such as ensuring an efficient transportation system and encouraging viable, effective, and economical marine transportation and commerce, similar to what can be found in the *Canada Shipping Act, 2001*, and consistent with the National Transportation Policy declared in the *Canada Transportation Act*.

The stated purpose of the *Canada Marine Act* includes “promot[ing] and safeguard[ing] Canada’s competitiveness and trade objectives”, “for the purpose of contributing to the competitiveness, growth and prosperity of the Canadian economy”, “ensur[ing] that marine transportation services are organized to satisfy the needs of users and are available at a reasonable cost to the users” and “provid[ing] for a high level of safety and environmental protection”.

Another key objective should be that the delivery of services take into consideration the use of technology and sound risk management principles and processes being undertaken aboard a vessel, thus ensuring that any pilotage system continues to evolve in an efficient and cost effective manner.

There is widespread marine industry consensus that today’s pilotage system is archaic, overly costly and inflexible, as well as resistant to change and modernization, and lacks flexibility in how pilotage services are delivered, which has a profound impact on the competitiveness and efficiency of Canada’s marine transportation system. It is essential that all those involved in the delivery of that system (shipowners, shippers and service providers, including pilots and ports) conduct themselves in a manner consistent with those objectives, in particular as regards the controlling of costs and enhancements in efficiency. A pilotage system that is not operating on the basis of the same objectives detracts from the overall efforts made by all.

Recommendation #1 – Objectives of the Pilotage Act

Amendments to the *Pilotage Act* are required to set-out the policy objectives of the *Act* and to ensure that the provisions of the *Act* remain relevant and responsive to the needs of the marine industry. Accordingly, the *Pilotage Act* should include objectives in line with other

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legislation applying to the marine transportation system. Such objectives would require that the legislative framework provide for regulatory scheme and a pilotage service that:

- promotes safety in marine transportation
- encourages viable, effective and economical marine transportation and commerce;
- promotes an efficient and competitive marine transportation system;
- meets the needs of users and are available at a reasonable cost to the users; and
- embraces the use of existing and emerging technology and sound risk management practices in the delivery of pilotage services.

1.2 Periodic Review of the *Pilotage Act*

It has become common practice that federal legislation in Canada specifically indicates a timeframe for the legislation to undergo a legislative review with a requisite report back to Parliament. The *Pilotage Act* currently does not provide for a periodic review of the *Act* to ensure that key provisions of the *Act* remain relevant given today's rapidly changing markets and technologies. The legislative and regulatory environment for pilotage must be responsive to this ever-changing world.

Recommendation #2 – Review of the *Pilotage Act*

The *Pilotage Act* should include a provision that a legislative review of the *Act* be undertaken on a regular basis within a fixed-timeframe (i.e., every five (5) years) in order to ensure that the *Act* continues to be responsive to the marine transportation system and its stakeholders.

1.3 Creating a National Pilotage Authority

There are four pilotage authorities in Canada. CMC member vessels operating in the Great Lakes, St. Lawrence and East Coast of Canada will often make voyages within multiple jurisdictions, and often within all three of the pilotage authorities covering Eastern Canada (i.e., GLPA, LPA and APA). There exists considerable frustration within our membership with the differences in dealing with the different authorities, including how they are managed and operated, their policies, regulations, services and approaches to various operational issues.

A single, national pilotage authority would create consistency in approach, while still allowing for regional differences where needed.

A national pilotage authority would standardize and harmonize financial and statistical reporting. The current reporting of individual pilotage authorities makes it very difficult to make comparisons between regions. As an example, in comparing pure administrative costs for each authority, it is challenging to properly understand what savings might be achieved by consolidating authorities. Each authority should be obliged to report on a

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consistent basis and include a 10-year historical summary for financial and operational results (only the LPA and GLPA currently do so, however with different formats and data).

A national pilotage authority would assist in standardizing regulations, tariffs, policies and procedures. For example, the various authorities have a large variation in ship sizes that are subject to mandatory pilotage. Pilotage certificate requirements vary between the GLPA, LPA and APA, and with the Pacific Pilotage Authority that uses a waiver system for vessels under 10,000 gross tons. Other requirements that differ from one region to another include differences in the hours of work and the applicable notice period required for the ordering of pilotage services.

A single, national pilotage authority would also allow for the development of best practices across the country. For example, as a matter of policy, pilotage passage plans should in all cases be made publicly available and shared with vessels in advance of transiting an area. At present, only the GLPA posts its passage plans. A ship must prepare a voyage plan. However, where the ship is mandated to take a pilot (for their “local” knowledge), and to whom the master must give the conduct of the ship, then it only makes sense that the pilot should be obligated to provide their intended passage plan to the ship well in advance. This issue has already been raised by the Transportation Safety Board when it noted that “the absence of a detailed, mutually agreed-upon passage plan deprives bridge team members of the means to effectively monitor a vessel’s progress, compromising the principles of Bridge Resource Management” (TSB Investigation Report No. M09W1093). Sharing the passage plan would allow the bridge team to better monitor the pilot’s action and thus enhance Bridge Resource Management, and in particular, situation awareness amongst the bridge team. Providing passage plans would enhance safety for vessel transits and assist in pilotage training. There is no justifiable reason for pilot passage plans not to be readily available.

Licensed pilots are now using portable pilot units (PPUs) to assist them in their pilotage duties. PPU’s are handheld devices that provide the pilot with various navigational data, including chart information. This same information, plus more, is available on all of the navigation bridge equipment fitted on the ships and used by the masters and navigating officers. However, while the navigational equipment on the bridge of a ship is regulated, type-approved to international standards, subject to statutory and Port State Control inspections and the officers have undergone formal training in their use, the same cannot be said of PPU’s. Similarly, the ship’s electronic charts are maintained and updated in accordance with the ship’s Safety Management System procedures and subject to verification by flag and Port State Control inspections. PPU’s are not type approved to international performance standards, are unregulated, uninspected, use a variety of proprietary software and vary in design and functionality. Since these devices are small, portable and designed for single person use with customized displays, they do not lend themselves to promoting bridge team management. Sound bridge team management is a principle component of navigation safety. A national pilotage authority could develop the necessary standardized policies and procedures concerning PPU’s and their use to ensure safety and to promote bridge team management.

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The recent *Canada Transportation Act* (CTA) Review recommended that the Government of Canada “immediately integrate the four pilotage authorities within one national pilotage authority to enable a strategic and holistic approach to pilotage for better alignment and harmonization in the way regions contract for and provide services. The CTA review also noted that “Improved communications and information technology also undercut the arguments for maintaining four distinct Crown Corporations to oversee pilotage in different geographic regions of the country. While pilotage by its nature is a local service that relies on expertise and responsiveness to local circumstances, effective local operations do not require separate regional authorities.”

CMC supports the recommendation to merge the four existing pilotage authorities in order to create a national authority. This would lead to streamlined and harmonized requirements and practices which should lead to greater efficiencies and consistency of services. To allow for regional operational considerations, an Eastern and a Western operations centre should be established under the national pilotage authority. An Eastern operations centre would allow for an “eastern corridor” approach to managing pilotage services for the entire Great Lakes-St. Lawrence-Atlantic waterway, leading to better integration of services, improved coordination, elimination of duplication and improved oversight and governance. The streamlining of administrative functions would also reduce operational costs. Given the regional disparities in fees across the pilotage regions, the integration of the pilotage authorities must not result in any fee increase in any region.

Recommendation #3 - Creation of a National Pilotage Authority

Amendments to the *Pilotage Act* are required to allow for the governance and administration of pilotage services across Canada to be re-organized and consolidated under a single, national pilotage authority with two pilotage operations centres: an Eastern operations centre (i.e., APA, LPA and GLPA operations) and a Western operations centre (i.e., PPA operations).

The Federal government should be fully responsible for all costs associated with the modernization of the *Pilotage Act* as well as all costs resulting from the re-structuring of the pilotage governance and operating model. This would include costs related to the development of a new business plan, legal fees, severance, asset disposal and rationalization costs, recruitment fees, re-training, re-location costs, office lease termination costs and any other legacy costs that may arise (pension, benefits, etc.).

1.4 Creating Effective Stewardship (Board of Directors)

CMC generally supports the 2003 *Canada Marine Act* Review recommendation to formalize the structure of the boards of directors to help ensure fairness and a more commercial approach to decision making. This approach should be brought to the *Pilotage Act* as well in order to clarify and confirm the composition of the boards of directors of the given authorities.

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The *Pilotage Act* provides that authorities will have a chairman and not more than six other members. However, this is the extent of the legislation's direction on pilotage authority governance. There is no provision in the legislation itself for certain members of the board being drawn from user communities or other marine stakeholders. This differs greatly from other, more modern, transportation legislation which do provide for the composition of the board and how members are appointed.

By convention only, pilotage authority boards include two representatives from the pilot community, two from ship operators (one domestic, one international), and two community representatives. Compared to other transportation legislation, this is a restrictive list which fails to provide access to important stakeholder communities. Chief among these is the shipper community that is directly and significantly affected by the levels of efficiency, capability and cost of pilotage services.

Also, with one third of the board of directors being representatives of the pilots, this gives an disproportional amount of representation from the service providers who are direct employees of the authority or employees of pilotage corporations with a monopoly position for providing pilots to the authority.

The direct representation of a limited number of interests on authority boards is not conducive to objective decision-making, in particular as regards the establishment of more efficient and cost effective policies and directives which necessarily impact the daily functioning of pilots.

In contrast, the NAV CANADA board of directors has a more diverse mix of directors. Directors are appointed by specific stakeholder groups – the largest number from the user community but also including government, unions and independent directors. Only two of the fifteen directors are reserved for employee union representatives.

The *Canada Marine Act*, in the formation of Canada Port Authorities (CMA, Part 1, Section 8), sets out specifically the number of directors and their manner of appointment, including that several are to be nominated after consultation with user communities. With respect to the St. Lawrence Seaway, the number of board members, their appointment process and other issues such as number to constitute quorum are also stipulated directly in that *Act*.

Recommendation #4 - Composition of the Board of Directors

With respect to the structure and composition of the board of directors of a national pilotage authority, amendments to the *Pilotage Act* are required that would:

- (a) Clearly specify the composition of the boards of directors of the pilotage authority, with input from stakeholders to be obtained;
- (b) Provide for a greater representation of waterway users on the board of directors and, in particular, greater representation of the shipper community;
- (c) Provide for the continued representation of user groups on the board of directors and specifically require that ministerial appointments be made based upon recommendations from designated user groups; and

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(d) Specify that a “knowledge and experience” clause, as recommended in the 2003 Canada Marine Act Review, be included similar to the requirement for Canada Port Authorities.

1.5 Separation of Regulatory Authority and the Delivery of Services

The *Pilotage Act* gives the responsibility and regulatory authority for the establishment, operation, maintenance and administration of safe and efficient pilotage services to pilotage authorities in each region. Having both the regulatory authority as well as responsibility for the service delivery can create conflicts in relation to objectivity, oversight and enforcement.

The proper balance of regulation and standard setting on the one hand and operational delivery on the other must be part of the comprehensive review.

The CMC notes that in the case of air traffic control and other air services, Transport Canada is responsible for setting and enforcing regulations and standards while NAV CANADA is responsible for efficient, commercial operations. This process ensures that the assessment and measurement of safety standards and efficiency is being done by an independent regulator.

A similar approach to pilotage services would ensure that the provider of the services is not the one mandating the services and that an independent agency is overseeing safety standards while pilotage authorities focus on delivery of service by licensed pilots.

Ideally, the regulatory framework and requirements should fall under an independent body such as, Transport Canada, to ensure the system operates safely and efficiently, in line with its legislative mandate. This would ensure the regulatory framework is developed, regardless of who provides the services. The regulatory authority would be responsible for regulation, monitoring, auditing, compliance and enforcement of the *Pilotage Act*, pilotage authorities and pilots. The Minister could delegate compliance and enforcement to Marine Safety and Security, and its marine safety inspectors. To take on such a role, it is recognized that Transport Canada would need to bolster its departmental capacity.

Apart from licensed pilots, the program and process for issuing pilotage certificates that would allow qualified masters and navigation officers on Canadian domestic vessels to pilot their own vessels, should be standardized under and overseen by Transport Canada (see also s.2.1).

Similarly, the assessment and decision to designate compulsory pilotage areas should not be left up to the pilotage authority but should be vested in an independent body such as Transport Canada. (see also s.2.3).

Recommendation #5 - Pilotage Regulations, Standards and Certification

In order to improve the objectivity, oversight and enforcement of pilotage regulations and standards, amendments to the *Pilotage Act* are required to:

(a) Transfer the authority and responsibility for the setting and enforcement of pilotage regulations and standards from the pilotage authorities to an independent body, such as

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Transport Canada leaving the responsibility for the administration and delivery of pilotage services with the pilotage authorities;

- (b) Require that the program and process for issuing pilotage certificates that would allow qualified masters and navigation officers on Canadian domestic vessels to pilot their own vessels, be standardized under and overseen by Transport Canada;
- (c) Provide for the ability to issue Administrative Monetary Penalties for non-compliance under the *Pilotage Act* including against pilots who cause, through their conduct, vessels to be charged for statutory or regulatory offences for a more responsive and effective enforcement regime.

2. Safety

2.1 An Improved and Effective National Pilotage Certificate Program

Pilots provide an important service to vessels in order to ensure safe navigation in restricted waters, ports and harbours when the vessel's master and officers are unfamiliar with local laws, procedures, and navigational conditions, and where the pilot's ship handling experience in those waters may be required.

However, a vessel's master and navigational officers may also possess the necessary local knowledge and skills to conduct safe pilotage within a given area. Under such circumstances, an equivalent level of safety can be achieved by allowing qualified vessel masters and navigating officers to pilot their own vessels.

When a vessel's master or navigating officer is piloting his or her own company's vessel, they are readily integrated as part of the bridge management team and are more familiar with the vessel's characteristics and equipment, having been thoroughly vetted through the company's training and assessment program.

A shipping company has the greatest interest in ensuring the safety of its own vessels. An accident can have significant consequences to an owner, not just in the cost of the damage, lost time, liability and insurance premiums, but also in a loss of customers, reputation and public image. Shipowners who have undertaken enhanced personnel selection and training programs should have the benefit of such an investment reflected in the manner in which they meet pilotage requirements.

It must be kept in mind that a licensed pilot is not exposed to the same consequences in the event of a casualty, in particular on account of his or her limit of liability of \$1,000. The presence of a licensed pilot onboard does not reduce the shipowner's exposure to risk or loss. While the master must give the conduct of their vessel to the licensed pilot, the master maintains overall responsibility for the safety of the vessel.

Canadian vessel masters and navigational officers of domestic vessels have acquired local knowledge and skills since their vessels make frequent voyages through the same region or regions. Qualified Canadian vessel masters and navigational officers on the Great Lakes and

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St. Lawrence Seaway have been piloting their own vessels throughout the GLPA region (i.e., Great Lakes, St. Mary's River, St. Clair and Detroit Rivers, Welland Canal and upper St. Lawrence River west of Montreal) for over 40 years. These waters include narrow rivers, waterways and canals with restricted depths and dense vessel traffic. On an almost daily basis, these masters are navigating in and out of ports and locks, in Canada and the U.S. They are familiar with local rules, procedures, and are adept in analyzing, anticipating and compensating for strong currents, weather and ice.

Canadian vessel masters and navigating officers have been doing self-piloting, previously under a GLPA pilotage exemption and, more recently, under the GLPA "pilotage certification" program which came into force in 2012. This pilotage certification program provides a far more commercially efficient service with an excellent safety record that is equivalent to that provided by the GLPA's licensed pilots piloting foreign vessels through the same waters.

This pilotage certification program was initiated and developed by Canadian domestic shipowners in close collaboration with the GLPA. Candidates follow a GLPA-approved training and evaluation program, which tests the officers piloting skills. Upon successful completion, they are issued a pilotage certificate by the GLPA.

In contrast, in the APA and LPA regions, obtaining a pilotage certificate for vessel masters and navigation officers remains a challenge. Though provided for in regulations, few masters and officers apply for or succeed in obtaining a pilotage certificate in these two regions. Today, there are only approximately forty (40) APA and only four (4) LPA pilotage certificate holders, in contrast to about 350 GLPA pilotage certificate holders.

The process for obtaining pilotage certificates within the LPA and APA regions is unnecessarily cumbersome and archaic. The approach emphasized by the LPA and APA in their examination process does not take into account the significant improvements and advances that have been made in ship navigation technology, training and procedures. Current examination processes pre-date the vastly improved and sophisticated navigation equipment fitted on vessels today, including real-time electronic position-fixing systems, electronic charts, advanced radars with automatic target tracking, automatic identification systems etc. This technology has greatly enhanced voyage planning, execution and monitoring. Comprehensive training programs with simulation technology, Bridge Resource Management training and onboard company Safety Management Systems, audited by Recognized Organizations, have also had an enormous positive impact on preparing vessel masters and officers for pilotage certification and enhancing pilot navigation. Vessels have also become more manoeuvrable with greater power and bow thrusters.

There is concern that there is a conflict of interest to have the pilotage authorities and their pilot employees or contracted pilots establish the requirements for pilotage certificates given the pilotage certificates would lead to a decrease in the provision of their services.

A competency-based pilotage certification program and process for vessel masters and navigation officers for obtaining pilotage certificates should be standardized and overseen by Transport Canada. It should also be scalable based on the risk and complexity of the port or

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waterway. Such a program would provide an alternative and flexible pilotage solution for shipowners who have masters and officers with the necessary experience and local knowledge to effectively perform the pilotage function. It would provide an equivalent level of safety while at the same time, give shipowners a more efficient means of managing their pilotage and crewing requirements.

It is worth noting that enhancing and promoting pilot certification is entirely consistent with the CTA Review. In noting the advanced age of the pilot workforce and related skills shortage, the CTA indicated that a more strategic approach and focus is needed that promotes more effective use of technology and innovation, and that compulsory pilotage areas could be reduced.

Recommendation #6 - Improved Pilotage Certification Program

In order to achieve an improved and effective national Pilotage Certificate Program to provide the opportunity for shipowners to qualify its own masters and navigation officers as pilots for their vessels, amendments to the *Pilotage Act* are required that would:

- (a) Allow for the implementation of a standardized and improved pilotage certification program administered by Transport Canada which facilitates and promotes the training and certification of a ship company's masters and navigational officers to pilot their vessels;
- (b) Allow shipowners to manage and deploy their pilotage-certificated masters and navigation officers among their fleet as needed to meet pilotage requirements and to facilitate training and the maintenance of qualifications of the piloting masters and officers;
- (c) Require that a Pilotage Certification Program: (i) be based on demonstrating competencies, experience and training; (ii) be developed in conjunction with Transport Canada, the Pilotage Authority and the shipowners and be approved by Transport Canada; (iii) allow for the use of simulators for training and maintenance of certification; (iv) take into account advances in modern navigation technology in determining certification maintenance requirements; (v) be scalable according to the risk and complexity of the port or waterway; (vi) ensure costs and administrative burdens are minimized; and (vii) have a process that is reasonable and achievable, consistent with the need to ensure safety and proper environmental stewardship, so as to promote widespread adoption.

2.2 Acceptance of unilingual-English for pilotage certificate holders in the LPA region

Currently, the LPA Regulations require pilotage certificate holders to be able to converse in English and French.

Firstly, with the advances in modern navigation technology such as AIS and modern ship tracking radars, there is less reliance on bridge-to-bridge voice communications. In fact, as

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technology moves forward and as e-Navigation develops, even less reliance will exist on such verbal communications.

In addition, French language competency as a requirement for the issuance of pilotage certificates is inconsistent with international conventions of which Canada is a party. Internationally, English is the universal language in which all mariners are expected to be able to communicate. Under the SOLAS Convention, Reg V/14.4 states:

“On ships to which chapter I applies, English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watch keeping personnel, unless those directly involved in the communication speak a common language other than English.”

Speaking a language other than English is not reasonably required for any reasons associated with the safety of the ship. Although SOLAS has limited applicability in Canada’s domestic trade, the fact remains that the French language requirement imposed on otherwise fully qualified officers employed on Canadian-crewed vessel as a condition for eligibility for pilotage certificates is an artificial and prejudicial restriction which is inconsistent with the principles to which Canada has committed to internationally.

Recommendation #7 - Language Requirements

The language requirements for the issuance of pilotage certificates within all pilotage regions should allow for qualified Canadian officers who are unilingual-English.

2.3 Assessment of Navigation Risk:

CMC supports the comments made in the CTA Review that noted “Canada’s pilotage regimes are based on risk assessments; however, these are slow to take into account new risk profiles, technologies or alternative arrangements.”

The LPA is currently conducting a review of pilotage requirements for District 3 North Shore Ports. A District 3 review for compulsory ice pilots is planned, along with a review of the South Shore Ports. The GLPA plans a review of all their compulsory pilotage districts based on recommendations from the recent Auditor General’s audit where a review on a five-year basis was not done. The APA review of pilotage requirements for the Port of Belledune remains under Minister’s investigation based on the Canadian Shipowners Association’s (now CMC) formal objection to compulsory pilotage.²

² The Port of Belledune PRMM proposed specific certification requirements suitable to the port. The review was completed in 2011 and recommended that the port of Belledune be designated a compulsory pilotage area. However, it also recommended that not all ships be required to take a pilot recognizing that a significant amount of the traffic posed a low, acceptable risk and that master training and experience should be taken into account. It therefore recommended for certain ships that either exemptions or pilotage certification program based on master experience and training be undertaken. However, no distinction was made to allow for certain vessels not to hire a pilot when the proposed amendments to make Belledune a compulsory pilotage area was published in the Canada Gazette, Part 1 in 2013.

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The CMC considers these compulsory pilotage area reviews to be a means of potentially expanding compulsory pilotage areas when there have been no compelling safety issues that would warrant undertaking such reviews. The energy and resources required to conduct and participate in such studies, and the associated costs, are significant. Pilotage area reviews should be undertaken only when compelling issues so dictate, and where changes or opportunities are identified by authorities or stakeholders, in all cases using pre-established criteria.

As stated previously, the pilotage area reviews, including the establishment of standards and criteria, and eventual decisions to designate areas as compulsory pilotage areas should not be left to pilotage authorities on the grounds that, amongst other things, a conflict of interest may exist. Rather, the review process should be vested in an independent body such as Transport Canada.

There also needs to be a consistent and objective standard of acceptable risk with any variance to that standard to be explained and supported through a risk-based assessment. A process managed by pilotage authorities and pilots may not be objective or unbiased in this respect.

Recommendation #8 – Assessment of Navigation Risk

With respect to the assessment of navigation risk and the establishment of compulsory pilotage requirements, amendments to the *Pilotage Act* are required to vest such responsibility with Transport Canada and further require that any risk-based assessment process:

- (a) Be based on an overall navigation risk assessment aimed at identifying, assessing and managing risk, using realistic risk scenarios, and consider any number of risk mitigation solutions i.e., technology, procedures, navigation services etc. as might be determined in a transparent, objective and recognized process; and not focus solely on determining pilotage requirements;
- (b) Result in regulatory and service outcomes that follow from the results of the assessment;
- (c) May, if required, include risk analysis programs for a quantitative approach to the risk assessment to support the decision-making process;
- (d) Be initiated when there is an identified need and not be based on an arbitrary 3 to 5-year ongoing review time schedule as recommended in the CTA Review;
- (e) Be initiated after following pre-established national criteria that identifies the need for the risk assessment, including when the assessment is to examine reducing an existing pilotage area; and
- (f) Consider the capabilities and implications of existing and emerging technologies with the aim of reducing unnecessary mandatory pilotage areas.

3. Labour Models

3.1 Employee Pilots versus Pilot Corporations

As it currently stands, the *Pilotage Act* creates two very distinct silos or sets of relationships that limit the hiring flexibility of pilotage authorities, limit the oversight and authority of pilotage authorities, result in a lack transparency and accountability and lead to higher costs for users.

The first is the service-delivery relationship between the pilotage authorities and the users. The authorities are responsible for administering and providing pilotage services to the users including the setting of tariffs and the conditions for delivering such services.

The second silo is the employment relationship between the pilotage authorities and the pilots and /or the pilot corporations. That relationship calls for collective bargaining, and in the case of pilot corporations, ultimately, for final offer arbitration for the determination of conditions pursuant to which the pilots are required to work.

What ultimately causes conflict is that the two silos are separate and distinct, and the users (who ultimately must use the system) have no say in how the collective bargaining process affects the ultimate delivery and costs of the services to be provided by the pilots.

Pilot corporations are a monopoly within a monopoly and, unlike pilotage authorities, they lack public (or user) oversight and accountability. Where pilot corporations exist, the *Pilotage Act* does not allow the pilotage authority to employ its own pilots. This means the pilotage authority must rely on corporation pilots whenever their expertise is needed to advise on requirements and standards for safe navigation and the efficient delivery of services on the respective area. However, since pilotage requirements and determining mandatory pilotage areas could impact the pilots' income, there is an inherent conflict of interest.

The pilotage authority must have direct access to objective pilotage expertise and must have an alternative to the pilot corporations within every pilotage area. Therefore, consideration needs to be given to allow a pilotage authority to hire its own employee pilots, either as employees or as individual contractors - in areas where the delivery of services is provided through pilot corporations.

If the authority is permitted to hire employee pilots, then consideration should also be given to whether pilot corporations add any real value and if they should continue to exist. Disbanding the pilot corporations is believed to result in an immediate savings in costs passed on to the pilotage authorities through the elimination of offices, overhead and administrative support expenditures.

If the pilot corporation model is to be allowed to continue, then in addition to allowing the authority to hire its own (employee or individual contractor) pilots, it would also be essential that the pilot corporations operate under greater transparency and accountability. The authority must also be able to provide greater oversight and management control over the

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pilot corporations and its pilots to ensure the pilotage services and standards are provided as per the authority's mandate and regulatory requirements.

Recommendation #9 - Hiring of Pilots

With respect to the hiring of pilots, amendments to the *Pilotage Act* should be made to eliminate (or phase-out as collective agreements expire) the ability of pilotage authorities to contract with pilotage corporations for pilotage services.

In the event this recommendation is not adopted:

- (a) Pilotage authorities should be permitted to hire their own employee pilots, or contract with individual pilots, regardless of whether a corporation exists in the area or not;
- (b) Pilotage authorities must have the appropriate oversight and authority to ensure the pilot corporations deliver services to the required standards and meet pilotage requirements. This would include setting mandatory practices and procedures for pilot corporations and their pilots to follow when providing pilotage services;
- (c) Pilotage authorities must be permitted to investigate pilot incidents and disputes with a view to determining the pilot's fitness for duty and what, if any, corrective action is needed (i.e., training). The results of the investigations should be provided to the relevant vessel operator;
- (d) Pilot corporations must be required to make public the corporations' financial statements, service contracts etc. and be subject to audits for greater transparency and accountability; and
- (e) Consideration should be given to limit, to the extent allowable by law, the ability of individual pilots to strike or undertake any form of industrial action.

3.2 Commercial contracts with Pilot Corporations not to override regulatory requirements

In 2016, an arbitrator in the context of final-offer arbitration between the LPA and the Corporation des Pilotes du Saint-Laurent Central Inc. accepted a proposed change to the contract between the Parties that would have circumvented the provisions set out in the LPA Regulations regarding pre-departure notices. Such a change would have had a significant negative impact on CMC shipowner members (potential delays, reduced updating of departure times, possible pilot detention fees, etc.).

The result of contract negotiations should not be allowed to override regulatory requirements, circumventing the regulatory process, including stakeholder consultations.

Recommendation #10 - Scope of Rulemaking

The *Pilotage Act* should be amended to ensure that terms and conditions negotiated under pilot corporation service contracts or terms and conditions of arbitration decisions, cannot include pilotage requirements related to safety of navigation or navigation restrictions that would be imposed on users and that are within the scope of the regulation-making authorities of the *Pilotage Act*.

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4. Tariff Setting Process

Under the current legislative framework governing pilotage, the requirement for a pilotage authority to be financially self-sufficient may not be consistent with the requirement that tariffs be fair and reasonable for the waterway user. This results in a situation where pilotage authorities and their employee and/or contract pilots have little incentive to reduce costs or to maximize efficiency to ensure the competitiveness of the marine trade corridors or system users.

Pilotage costs represent a significant cost to users and have a long history of increasing at rates that far exceed the rate of inflation:

- Based on data provided by CMC shipowner members, while transiting the compulsory pilotage zones in the St. Lawrence River, the cost of the pilot is equal to or, in certain cases, 1.5 times greater than the cost of the entire ship's crew.
- On a combined basis for the Great Lakes, Laurentian and Atlantic Pilotage Authorities, pilotage tariffs and fees have outpaced inflation by a rate of 2.7 times during the period of 2012 to 2016.³
- Similarly, the rate of increase in the average cost per assignment (including fees, salaries and benefits, pilots boat, operations and administrative costs) has increased at 2.9 times the rate of inflation between 2012 and 2016.

Table No. 1 - Fees and costs per assignment (2012 versus 2016) for the combined Great Lakes, Laurentian and Atlantic Pilotage Authorities

	2012	2016	% Change
Revenues excl. other income (in \$000's)	\$119,180	\$140,990	
Total expenditures (in \$000's)	\$116,685	\$139,528	
Total number of assignments	\$36,727	\$37,411	
Revenue per assignment	\$3,245	\$3,769	3.8% p/yr.
Expenditures per assignment	\$3,177	\$3,730	4.1% p/yr.
Consumer Price Index (Canada)	100.0	105.67	1.4% p/yr.

Since pilots negotiate from a position of dominance (i.e., under the monopoly umbrella of a pilot corporation and/or limited workforce alternatives), pilotage authorities have little

³Annual Reports for the Great Lakes Pilotage Authority, Laurentian Pilotage Authority and Atlantic Pilotage Authority, 2012 and 2016.

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bargaining room in negotiations and, in the context of “self-sufficiency” under the *Pilotage Act*, are required to pass higher costs on to users.

As an example, in 2002, in a contract renewal process between an authority and a pilot corporation, a large fee increase was awarded by an arbitrator. The authority then proceeded with requesting a significant tariff increase to pay for the fee increase. Following up on an objection filed with the Canadian Transportation Agency, the CTA recommended against the increase, making it impossible for the authority to be financially self-sufficient. However, the Governor in Council overturned the CTA decision and allowed the proposed tariff. This led the Minister of Transport to introduce Bill C-64 and subsequently Bill C-4 in 2007 to prevent this situation from happening again.

Recommendation #11 – Tariffs

With respect to the setting of pilotage tariffs, amendments to the *Pilotage Act* should include:

- (a) Clarifying the definition of "self-sufficiency" and the manner in which it is to be achieved;
- (b) Defining what the arbitrator should take into account in a contract renewal process i.e., government policy and the authorities' mandate, corporate plan, financial status and commercial competitive considerations;
- (c) The requirement for greater overall transparency and consistency in the reporting of costs and operational data (current and historical) across all pilotage authorities;
- (d) The requirement to conduct regular reviews of the effectiveness of administrative and operational practices that impact service delivery efficiency and costs; and
- (e) Permitting users the necessary standing to legally challenge any final decision within the arbitral process in the event such decisions have the effect of imposing conditions on the delivery of service by pilots that is inconsistent with governing regulations or tariffs.

5. Use of Modern Technology

Frequent reference has been made on the use of modern technology in this submission. The CTA Review noted “...the governance of pilotage has not changed fundamentally since 1972, in spite of advances in technology. Canada has not fully taken advantage of these advances to improve efficiency and reduce overall costs...”

“The Great Lakes shipping industry has been proactive in the development and adoption of satellite-navigation technology to improve safety. Prior to the introduction of mandatory carriage of this modern equipment, Great Lakes operators were utilizing electronic charting, satellite positioning, and ship information-transmission technology. Significant testing in its infancy and advancement of this navigation technology are credited to the pioneering efforts of Great Lakes shipping companies.”

Safety Profile of the Great Lakes-St. Lawrence Seaway System, Research and Traffic Group, March 2014.

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The incredible advances that have been made in navigation technology in recent years should have had a profound impact on the requirements for pilotage services, yet little has changed since 1972 when most of the existing pilotage requirements came into effect. The navigation equipment on a ship 40 years ago was extremely limited in capabilities and consisted of not more than a radar, gyro-compass, magnetic compass and a paper chart. As previously referenced, modern navigation equipment on a ship today is vastly improved and sophisticated in comparison and includes; real-time electronic position-fixing systems, electronic charts, integration of information and display, advanced radars with automatic target tracking, automatic identification systems and other technologies to assist in safer navigation and pilotage. Many vessels are fitted with draught information systems that provide a dynamic portrayal of the clearance between the bottom of the vessel and the bottom of the channel. These systems use electronic charts, real time water level information and vessel squat calculations to determine and predict safe routing and acceptable speeds. All of this updated technology allows trained masters and officers to undertake their own pilotage with the highest navigation safety standards and capabilities.

Internationally, the International Maritime Organization is now beginning to have discussions concerning autonomous ships. The 2016 CTA Review Report stated *“The Pilotage Authorities acknowledge that technology, including remote piloting of vessels and automated navigation systems, reduce the requirement to have pilots available at all times and in all circumstances.”*

Modern technology provides mariners with considerably better training, and provides the navigator with significant support in voyage planning, execution and monitoring and will play an ever-growing role as technology continues to advance. This should lead to more masters and navigating officers qualifying for self-pilotage under pilotage certification programs which will reduce qualifying and maintenance trips and will also result in the reduction in mandatory pilotage areas.

Ultimately, this will lead to a more cost-effective delivery mechanism without compromising safety or environmental safeguards.

Technology can also have a large role in the shore services provided to support waterway management (CCG Vessel Traffic Services) and navigation aids. The CCG could provide a more direct role in shore-based traffic management to better assist and plan the traffic in a pilotage area and monitor the traffic. The CCG’s initiative for SMART Vessel Traffic Services (VTS) should be able to facilitate this.

In the Laurentian pilotage area, regulations require a minimum of two pilots to perform the pilotage duties under certain conditions. For example, post-panamax vessels going to and from the Port of Montreal must take two pilots to both pilot the vessel and to monitor the traffic and assess meeting locations for safe vessel encounters. During the winter navigation period, a second pilot is required due to conditions such as ice, status of navigational aids, weather etc.

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These are examples of requirements that should be reviewed and where technology can be used to reduce unnecessary pilotage costs. With today's shipboard positioning, monitoring and tracking technology, officer training and certification, bridge resource management and safe management practices, there would appear to be limited benefit in requiring a second pilot, provided the pilot's passage plan is shared with the bridge team.

Recommendation #12 - Technology

Amendments to the *Pilotage Act* must consider and allow for the use of existing and emerging technologies in: (i) the development of risk assessments; (ii) the determination of pilotage requirements and (iii) the ultimate delivery of pilotage services, to ensure the advantages and benefits offered by technology are fully realized by users through enhanced safety, improved efficiency and reduced costs of pilotages services.

6. Recruitment

Companies report an estimated 15-20% turnover of masters and senior navigation officers annually, mainly to pilotage authorities. This is likely to increase given today's demographics. The salary disparity between pilots and vessel crews make retention of masters and senior navigation officers an enormous challenge. As noted previously, pilots earn on average \$375,000 compared to masters earning \$175,000 who are often piloting in the same waters. In addition, working conditions can be vastly different where, due to the nature of piloting assignments, pilots work a far reduced number of days compared to masters (120 versus 180 days) and are not away from home for extended periods of time.

"Commercial vessels operating on the Great Lakes-Seaway are under the control of professional mariners that have not only received specialized training, but have also been licensed by government authorities. A ship's captain, for example, will have graduated from an accredited maritime academy or university program, and will have accumulated years of experience and passed a series of written and oral examinations before obtaining a Master's (Captain's) ticket. In the United States, licensing of merchant mariners is the responsibility of the USCG. In Canada, licensing is the responsibility of Transport Canada.

In Canada and the U.S., becoming certified as a Master takes a minimum of between six and eight years and, given the need for gaining necessary experience, often longer. Following certification, companies will often require Masters to serve on different ship types; conduct a period of sailing with "Training Masters"; complete additional training on simulators for ship handling, pilotage and bridge resource management; and complete other management courses before taking on command of a ship. A "Master-in-Training" often undergoes 6 to 12 months of additional onboard training under Training Masters, with formal assessments documented."

Safety Profile of the Great Lakes-St. Lawrence Seaway System, Research and Traffic Group, March 2014.

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These are masters and senior officers who the companies have invested heavily in. Data provided by several of CMC's larger shipping company members indicates the magnitude of the amounts be spent on pilotage training each year:

- Spending by one company will be approximately \$800,000 in 2017 for wages and travel for pilotage training during the 2017 shipping season.
- Spending by one company will be approximately \$400,000 in 2017 for Bridge Resource Management training (and refresher courses), ECDIS training, simulator courses and manned model training for new masters.
- For each first mate trained to become a piloting mate, it costs an estimated \$75,000 due to extra crew costs for training officers and travel.

Canadian shipping companies effectively serve as the primary training ground and principal source of recruitment for Pilotage Authorities and the various pilot corporations to fill the demand for pilots to assist foreign-flag vessel operators that are responsible for 85% of pilotage assignments in the Great Lakes, St. Lawrence and Atlantic regions. This cross-subsidization places an unfair competitive burden on domestic shipowners who represent only 15% of services delivered by pilotage authorities in these regions yet have incurred the bulk of the costs to train pilots.⁴

Recruitment by pilotage authorities often results in the senior officer leaving abruptly with only short notice, sometimes only a few weeks before fit-out. This can leave a company in a difficult staffing situation and a critical shortage.

A public body such as a pilotage authority must take into account when hiring new pilots the drain such employment will have on the availability of qualified masters and officers, as well as the loss of investment that the pilot recruitment practices have on Canadian shipowners.

Recommendation #13 - Pilot Recruitment Practices

The recruitment practices of pilotage authorities must be reviewed (including consideration given for a mechanism for fair compensation to Canadian domestic shipowners) to minimize the financial and competitive impacts on domestic shipowners resulting from the loss of senior officers to pilotage authorities.

⁴ Based on internal survey conducted by the Chamber of Marine Commerce, pilotage fees paid by shipowner members totaled \$21.2 million in 2016 representing 15.1% of the \$141.0 million in pilotage revenues (excluding other income earned) reported by the Great Lakes, Laurentian and Atlantic Pilotage Authorities in 2016.

CONCLUSION

There is a wide consensus among the marine industry that today's pilotage system is overly costly, inflexible, out-of-date and in desperate need of modernization.

CMC's submission offers a set of recommendations aimed at modernizing governance structures and embracing advances in navigational technologies that should form the basis for bringing Canada's pilotage system into the 21st century. Proposed amendments to the *Pilotage Act* necessary to achieve this goal include:

- Setting out the objectives of the *Pilotage Act* to set the foundation for safe, efficient, competitive and reliable marine transportation system.
- Consolidating the governance and administration of pilotage services under a National Pilotage Authority, with a board of directors reflecting the diversity of stakeholders. By establishing a National Pilotage Authority, the existing myriad of different requirements, policies, and approaches between the various pilotage authorities, often affecting vessels passing through the different regions on the same voyage, will be streamlined and harmonized, leading to efficiencies and consistency of services.
- Separating the regulatory function from the delivery function of pilotage services will address the inherent conflicts of interest that can exist when the two functions in this case are under the same entity. The delivery of the pilotage services for licensed pilots should remain with the pilotage authorities. However, regulatory functions such as the determination of compulsory pilotage areas, standards and requirements for the issuance of pilotage certificates, and the obligations of vessels when transiting compulsory pilotage areas should be transferred to a separate authority, in this case, Transport Canada.
- Developing a National Certification Program that encourages and facilitates shipowners to train their masters and navigating officers to become certified pilots in order to allow for much needed efficiencies and flexibility in managing their pilotage and crewing requirements.
- Eliminating pilot corporations and limiting the authorities to hiring employee licensed pilots, or to contract with individual pilots, who will continue to have all available right to reasonable assembly and collective bargaining.
- Leveraging advancements in technology and recognizing the need to assess navigational risk in an objective manner.

CMC submits that these reforms will lead to a more modern and responsive pilotage system which will continue to ensure safe navigation while improving the efficiency and competitiveness of Canada's commercial marine transportation system well into the future.