



L'ASSOCIATION DES PILOTES MARITIMES DU CANADA
CANADIAN MARINE PILOTS' ASSOCIATION

Submission to
The Canadian Transportation Act Review Panel

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EXECUTIVE SUMMARY

There is no more efficient and systematic way to mitigate navigational risks than by making sure that those who conduct vessels in high-risk areas have expert, independently verified, local knowledge.

Canada has an excellent pilotage system. It has served the country, and marine transportation in particular, very well and compares favourably with anywhere else in the world. The recommendations offered in this submission reflect this fact and, accordingly, focus on making sure the pilotage system continues to be consistently and diligently enforced.

Recommendation 1 – Pilotage Authority Decision-making

- To address issues resulting from delays in the approval process of regulatory changes, tariffs and capital acquisitions, a working group comprised of the players from the four Pilotage Authorities and the various government departments involved should be established. The group would map out the decision-making and approval process and, from there, find consensus on how the process could be made shorter and more efficient, without compromising statutory requirements or the public interest.

Recommendation 2 – Marine Infrastructure Investment

- Recognizing the important return on investment for both safety and improved operations, the Government of Canada should undertake the capital projects necessary to ensure adequate and reliable ice-breaking, as well as optimally-functioning buoys on Canada's waterways and, in particular, on the St. Lawrence-Great Lakes waterway.

Recommendation 3 – The North

- A government-appointed working group should be established to address how putting an arctic pilotage service in place could be achieved, with the ultimate deliverable of draft regulations setting out the compulsory areas and other requirements for pilotage. The working group should also identify the elements of a strategy for recruiting and training a cadre of pilots to deliver the service and an appropriate administrative structure for the proper and most cost-effective management of the service.

I. Introduction

Mandate of the CTA Review

The Canadian Marine Pilots' Association (CMPA) welcomes the statutory review of the *Canada Transportation Act*, established by the Minister of Transport in June 2014. In particular, marine pilots note the Panel mandate's specific reference to the governance and service delivery models for key federal agencies, including Pilotage Authorities.

The Canadian pilotage system has, of course, been the subject of several well-regarded reviews, all of which remain relevant today. The system now in place is the direct result of the longest Royal Commission in the country's history (nine years), which completed its work in 1968 and led to the *Pilotage Act* (1972). Since then, there have been very few amendments to the *Act*, the most significant one, requiring the Pilotage Authorities to be financially self-sufficient, coming in 1998 as a result of the House of Commons' Standing Committee on Transport's review of marine policy.

In 1999, an in-depth examination of all "outstanding issues" related to pilotage, as identified by the Minister of Transport, was undertaken by the Canada Transportation Agency. The Agency made some practical recommendations to improve how pilotage was managed and delivered; these recommendations called for no amendment to the *Act*, and were implemented by the Pilotage Authorities in collaboration with both pilots and users.

Pilotage was again examined in the 2002 review of the *Canada Marine Act*, although there were no changes to the pilotage system as a result. Similarly, a review in 2007 of matters related to regulation-setting and the employment status of pilots did not result in amendments to the *Pilotage Act*.

This submission builds on all the studies and work done to date, and is intended to provide the CTA Review Panel with pertinent information about pilotage in Canada today, and its prospects as a key element in efforts to ensure the country's marine transportation system remains safe and efficient.

Marine Pilots and the CMPA

There are about 400 licensed marine pilots working in Canada, providing pilotage service through the country's four Pilotage Authorities. Typically possessing more than 20 years of education and at-sea experience before being licensed, pilots board vessels requiring pilotage service in compulsory pilotage areas on the Atlantic and Pacific coasts, in the waters of the Port of Churchill, and on the St. Lawrence-Great Lakes waterway.

The Pilotage Authorities either hire marine pilots as employees, or enter into a contract with a group of such pilots, constituted as a corporation for that purpose, to supply services on an as-required basis. In point of fact, the pilots in two of the regions – Atlantic and Great Lakes – are employees of the Authorities, while in the other two regions – Laurentian and Pacific – pilots have formed corporations which contract with the Authorities for the provision of all pilotage

services in those regions, with the exception of pilots on the Fraser River, who are employed directly by the Pacific Pilotage Authority.

The CMPA is an incorporated, not-for-profit professional body founded in 1966 to represent Canada's marine pilots, of both entrepreneur and employee status, on legislative, regulatory and professional matters. The CMPA is a member of the Canadian Merchant Service Guild (CMSG), the national Association representing masters, mates, pilots, engineers and other marine officers.

The CMPA is not involved in contract negotiations or the day-to-day relations between pilots, the pilotage authorities and pilotage users. Rather, as a national body, the CMPA addresses marine issues as they affect pilots generally – as expressed through legislation, regulations, public reviews and industry consultations. The Association also helps pilots share their knowledge and experience in order to continuously improve maritime safety everywhere.

The CMPA is a leading member of the International Maritime Pilots' Association (IMPA), which represents pilots from five continents. The CMPA is also active in a number of other worldwide associations, including the International Maritime Organization, and contributes to their deliberations on issues regarding safety and regulation.



A pilotage assignment in the Thousand Islands area of the Great Lakes Region. Photo courtesy of Capt. Martin Mangan.

II. Pilotage in Canada

The *Pilotage Act*

The delivery model prescribed by the *Pilotage Act* establishes Pilotage Authorities as the entities responsible for designating compulsory pilotage areas and exclusively providing pilotage services within those areas. Only Canadian citizens holding a pilot license issued by an Authority may perform pilotage services in the designated areas.

The four Pilotage Authorities are organized on a regional basis, recognizing the uniquely local nature of pilotage requirements and the value of having those requirements addressed by local bodies.

Each Authority is a not-for-profit crown corporation, governed by a board of directors appointed by the federal cabinet. Although not specified in the *Act*, the consistent practice since its enactment has been that two of the six members of the pilotage authorities' boards have represented the public interest, two have represented the shipping industry and two have experience as pilots. The result of this balanced representation has been to ensure that the views of all parties are well represented, and that the decisions of the authority are based on a full assessment of all interests.

Four Characteristics of the Pilotage System

The four principal characteristics that distinguish pilotage in Canada are:

1. Protection of the public interest

The *Pilotage Act* specifically invokes the need to protect the public interest as a paramount objective. The *Act's* establishment of safety as the first priority reflects this.

In pilotage, the best way of maintaining safety is to make sure it is organized in such a way that its independence is ensured. This is achieved by the delivery of pilotage service through an independent federal agency, not beholden to commercial interests. It is the pilotage authorities that designate compulsory pilotage areas and exclusively provide pilotage services within those areas. As a consequence, pilots are able to exercise their best professional judgment without undue pressure from the owners of the vessels contracting for their services.

2. Rigorous standards

In order to be licensed as a marine pilot, candidates must have extensive seafaring experience, must undergo a rigorous training regimen, and must demonstrate their competence to an independent board of examiners. The competence required includes an in-depth knowledge of local waters. Once licensed, pilots must remain medically fit to undertake their duties, and must maintain technical proficiency so as to be able to use new navigational aids and techniques.

3. Recognition of regional differences

In the most practical manner possible, Canada's pilotage system takes account of the important differences that exist between its various maritime regions. The climatic conditions, navigational challenges, type of marine traffic, and the available infrastructure vary significantly from the Atlantic ports, to the St. Lawrence River, to the Great Lakes, and to the Pacific coast.

Accordingly, pilotage is organized and administered along regional lines, allowing each region to adopt practices and procedures best-suited to the conditions that exist there, while always maintaining core national standards, including those set out in the general pilotage regulations.

4. Responsiveness to changing circumstances

The framework governing pilotage in Canada has stood the test of time. The system has been in place for over 40 years and has proven remarkably resilient, given the significant changes that have affected marine transportation, including technology, communications, vessel size, infrastructure, and shipping patterns. The reason for this resilience lies in the pilotage system's ability to adapt to changing circumstances. Pilotage Authorities can not only change areas designated for compulsory pilotage, they can also review pilotage requirements in light of evolving circumstances, introduce new pilotage practices, and make exemptions when warranted.

Regulation-setting

The requirements for compulsory pilotage are set by regulation; regulations regarding general requirements are the responsibility of Transport Canada, while each Pilotage Authority develops regulations that meet specific, local requirements. In all cases, the regulations are subject to review by the federal cabinet and are published for comment in the Canada Gazette before coming into force. Among other things, the regulations cover the following:

- designation of compulsory pilotage areas;
- vessels subject to, or exempt from, compulsory pilotage;
- pilotage tariffs;
- requirements for obtaining a pilotage license; and,
- requirements for obtaining a pilotage certificate.

The regulation-setting process provides ample opportunity for government scrutiny and for comment by marine sector stakeholders and the general public.

Compulsory Pilotage Areas

Pilotage Authorities designate pilotage as compulsory in those areas where levels of risk require an extensive knowledge of local conditions to ensure safe navigation. The determination of a compulsory pilotage area is based on the specific and unique circumstances of the area in question.

Authorities regularly monitor and assess areas already designated as compulsory pilotage areas as well as others to determine if there are material changes that might impact on safe

navigation. If there are, an Authority would conduct a formal risk assessment, providing all stakeholders with an opportunity to input into a process to determine whether or not a compulsory designation should remain unchanged, or whether or not such a designation is required.

Vessels Subject to Pilotage

Pilotage Authorities also determine which types of vessels are subject to compulsory pilotage. In general terms, the criteria used to determine if a vessel must board a pilot in a compulsory area relate to the vessel's size, purpose, registry, and local traffic patterns.

Delivery of Pilotage Service

Pilotage service is delivered solely through the appropriate regional Pilotage Authority, which either employs duly-qualified marine pilots or enters into contracts with groups of such pilots, constituted as a corporation for that purpose. In either case, pilotage services are never provided on a basis where pilots compete with each other for the right to provide the service.

In Canada, the pilot has conduct of the vessel in compulsory waters, rather than the ship's master, ensuring there is no ambiguity as to how the vessel is navigated.

All of this safeguards the duty of pilots to act independently and to exercise their professional judgement first and foremost on behalf of the public interest.

Exemption from Pilotage

Despite the compulsory nature of Canada's pilotage regime, domestic shipping companies can avoid having to engage pilots by taking advantage of provisions in the *Pilotage Act* regarding pilotage certificates. Pilotage certificates may be issued to Canadian ship masters who have demonstrated "skill and local knowledge of the waters of the compulsory pilotage area equivalent to that required" of a pilot (section 22 of the *Pilotage Act*).

Pilotage Authorities may, in exceptional circumstances, issue waivers on a one-time basis relieving vessels of the requirement to board a pilot in a compulsory pilotage area. The circumstances for issuing waivers are set out in regulation, but in all cases waivers are only issued when the Authority is satisfied that the requirement for safe navigation has been met.

Tariff-setting

The tariff for vessels using pilotage services is intended only to recover the costs associated with providing those services. Tariffs are set by regulation by the Pilotage Authorities after consultation with the users. If an interested party objects to a tariff that has been set, the party may appeal to the Canadian Transportation Agency. The Agency undertakes an investigation to determine if the tariff is in the public interest; this investigation can include public hearings. The Agency's findings are binding.

III. System Performance

Operating Results

The number of pilotage assignments in any given year varies, of course, by region and is a direct function of relevant marine traffic volumes. The Laurentian Pilotage Authority handled nearly 21,000 assignments in 2013; the Pacific Authority, 13,600; the Atlantic, 8,300; and the Great Lakes, 6,400. Overall, the number of pilotage assignments in 2013 was slightly higher than in 2012.

The notion that time costs money is as true in the marine industry as it is elsewhere. Accordingly, the on-time delivery of pilotage service is an important factor in maintaining an efficient and cost-effective maritime transportation system. Of the thousands and thousands of pilotage assignments undertaken every year, almost all of them are on time. For example, in the two largest pilotage regions, the Laurentian and the Pacific, on-time service was 99.91% and 99.98%, respectively.

In terms of financial performance, the Laurentian Authority had a 2013 profit of \$1.5 million on revenue of \$78.1 million. With \$57.2 million in revenue, the Pacific Authority had a small loss of \$300,000, which was covered by its financial reserves. The Great Lakes Authority had revenue of \$22.2 million and a profit of \$890,000. The Atlantic Authority's profit was \$100,000 on \$21.5 million in revenue. While the level of profitability of the Authorities varies from year to year and as a result of differing circumstances, all the Authorities are financially self-sufficient. Three are debt-free, with the Great Lakes Pilotage Authority expecting to be restored to that status in 2015.

Safety

Both the *Pilotage Act* and the *Canada Marine Act* emphasize safety in marine transportation. By any yardstick, the pilotage service has contributed to a marine transportation system which is very safe by international standards. The safety record of pilotage is particularly high. The rate of incident-free pilotage assignments in 2013 for each of four regional pilotage authorities exceeds 99.9%. This truly impressive performance has been consistently achieved year after year.

The excellent safety record of pilots is all the more impressive when it is noted that the environment in which they operate is filled with hazards. This accomplishment has not been achieved by chance. It is the result of rigorous standards in recruiting, training and examining pilots before a license is issued. Perhaps above all, it reflects the emphasis placed on the importance of an intimate local knowledge of the area concerned, supplemented by specialized training on the most up-to-date ship equipment and simulation facilities available, and reinforced by a pilot proficiency evaluation system.

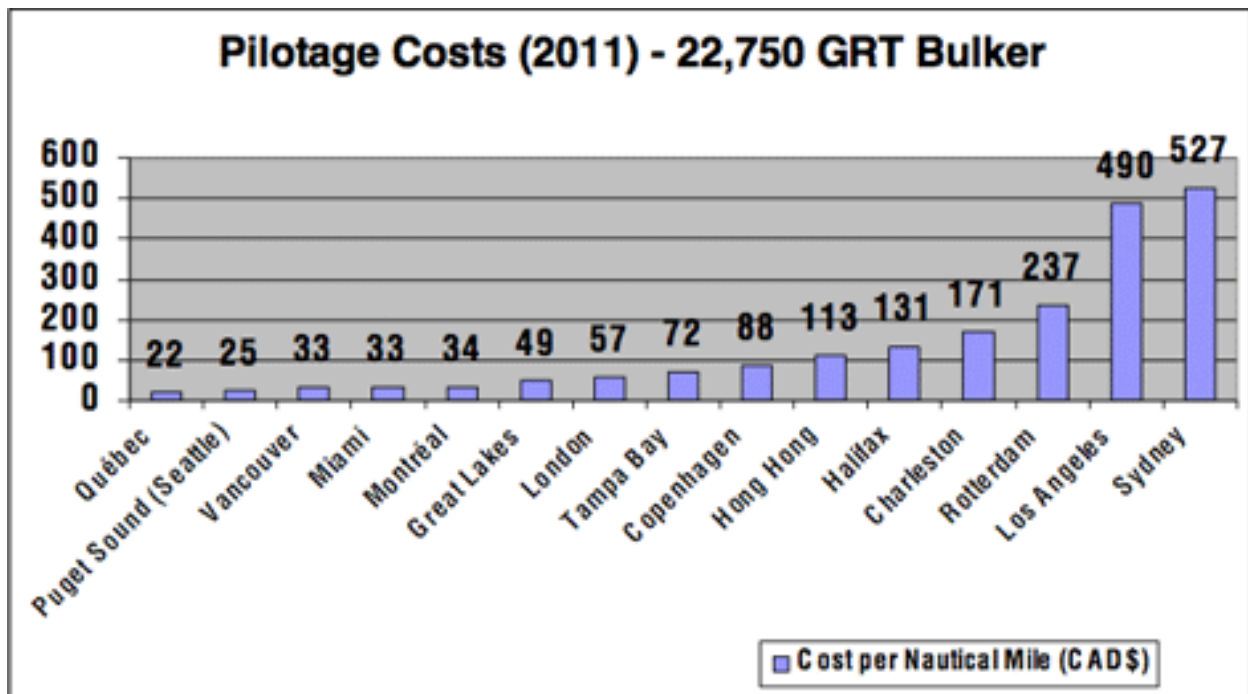
Tangible economic benefits result from a safe, reliable pilotage service. Safe and timely arrival of goods maximizes assets of both shipping companies and ports and contributes to Canada's success as a trading nation.

Cost and Efficiency

1. Tariffs

Canadian pilotage tariffs are among the lowest in the world, and help ensure that the country’s marine transportation system is globally competitive.

The table below shows pilotage costs at a number of Canadian and international locations, as measured by cost per nautical mile. Canadian tariffs are not only lower than those charged by most other jurisdictions, but they represent, in absolute terms, only a tiny fraction of the overall operating costs for shipping lines.



2. Self-sufficiency

The requirement to be financially self-sufficient, with no access to the Government of Canada’s Consolidated Revenue Fund, has been successfully met by all four Pilotage Authorities since its statutory enactment in 1998. The forecasts and long-term plans of the Authorities indicate the self-sufficient nature of their operations will continue in the future.

Continuous Improvement

1. Pilotage Risk Management Methodology

The most important practice contributing to the system’s ability to respond to change while ensuring safety is the Pilotage Risk Management Methodology (PRMM).

The methodology requires pilotage authorities to identify and review, in consultation with interested parties, safety factors and considerations which could result from proposed changes in pilotage regulations. These risk-based assessments provide a rigorous, open process through which any important change can be effectively evaluated. The PRMM, which was introduced after a recommendation made by the Minister's review of outstanding pilotage issues in 1999, has now been used to conduct assessments in all regions.

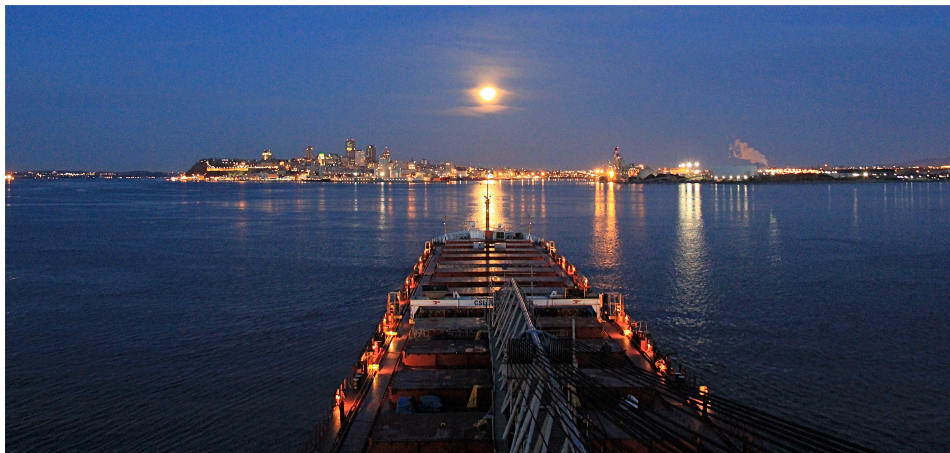
The Authorities regularly monitor and assess designated compulsory areas to determine if there are material changes that might impact on safe navigation. If there are, the Authority initiates a PRMM, giving all stakeholders an opportunity to participate in assessing whether or not the compulsory designation should remain. The same process is used for areas without a compulsory designation, but where changes in circumstances might affect safe navigation.

2. Operational Innovation

The concept of continuous improvement has been fully embraced by pilotage in Canada, where a culture of innovation and best practices has resulted in a system that is second to none.

A number of recent innovations have focused on improvements to navigational aids. These include the use of pilot portable units (PPUs), which allow pilots to take advantage of digital information, such as real-time water levels, wherever they are and in whatever circumstance. Also, pilots led the successful effort to deploy new, state-of-the-art weather buoys in coastal areas near the ports of Halifax and Saint John, thereby allowing for more accurate and real-time information on fast-changing weather and sea conditions affecting key shipping lanes.

In the pursuit of ever-safer navigation, pilotage practices are continually evolving. Such changes have, for example, allowed for incident-free winter night-time navigation on the St. Lawrence above Quebec City. Similarly, new practices have resulted in the safe transit of larger vessels under the Halifax bridges. Customized docking manoeuvres were developed to assure the safe arrival and departures of LNG vessels at a new Port of Saint John facility. In Vancouver, improvements to navigational procedures were introduced so that larger tankers could safely transit the Second Narrows.



An assignment close to Quebec City, in the Laurentian region. Photo courtesy of Capt. Louis Rhéaume.

IV. Issues, Challenges and Recommendations

Pilotage Authority Decision-making

Under the *Pilotage Act*, the objects of Pilotage Authorities are “to establish, operate, maintain and administer in the interests of safety an efficient pilotage service” (section 18). To achieve this broad mandate, Authorities may “make regulations necessary for the attainment of [their] objects” (section 20). While several specific matters on which regulations can be made are listed in section 20 of the *Act*, it is important to note the section does not restrict the power of Authorities to these matters, thereby allowing them to make regulations on any other issue so long as it is required to achieve their objects.

Despite the broad scope described in the *Act*, Pilotage Authorities do not have *carte blanche* for regulation-setting. The obligations imposed as a result of being both crown corporations and monopolies mean the Authorities require policy and/or regulatory approval from the federal government.

The sometimes cumbersome and slow-moving decision-making and approval processes in Ottawa means that Pilotage Authorities can feel constrained in their ability to respond in a timely manner to fast changing circumstances. This is particularly the case, not only in respect of regulatory changes, but also in respect of tariffs and capital acquisitions.

On more than one occasion, Pilotage Authorities have raised this issue with decision-makers in Ottawa, although solutions to the problem are yet to be explored. Both the Laurentian and the Pacific Pilotage Authorities have experienced long delays in obtaining approvals from central agencies for tariff increases, despite full consultations by the Authorities with stakeholders and the provision of well-documented justification for the tariff changes. Delays of this type raise questions of responsibility, in that the consequence of the revenue lost as a result of a delayed tariff increase falls to the Authority, although the delay was actually the result of government inaction.

These difficulties between Pilotage Authorities and government decision-makers at both Transport Canada and central agencies are *process-based* rather than *systemic*. The framework provided by the *Pilotage Act* clearly delineates the respective roles and responsibilities of the Authorities and the government; this delineation is a balanced one taking into account the need to protect the public interest and the importance of accountability. It may be, however, that government oversight of Pilotage Authority operations and decisions can sometimes be characterized as “second-guessing” rather than actually considering the matter in question from new public policy and public interest perspectives.

To address this, the best approach would be a collaborative one, establishing a working group comprised of the players from the four Authorities and the various government departments involved. The group would map out the decision-making and approval process and, from there, find consensus on how the process could be made shorter and more efficient, without compromising statutory requirements or the public interest.

Centralization of Services

Because the local nature of pilotage requires a regional rather than a national approach to how it is regulated and delivered, there are four Pilotage Authorities, each preoccupied with quite different waterways, traffic, climatic conditions and operating requirements.

The question is sometimes raised as to whether there could be significant savings by amalgamating all or some of the four Pilotage Authorities, while still properly responding to local requirements.

A review of the operating and financial implications of a scenario in which all the Authorities are consolidated into a new, single national Crown Corporation with one Board of Directors and one Chief Executive Officer indicates marginal cost savings (say, \$5 million on a base of \$180 million), but is almost certain to have a negative impact on service delivery. Interface between users and those managing the system, as well as between those who deliver the service (pilots) and those who manage it, would be particularly vulnerable to degradation. Also, a centralized dispatch system would likely be less timely and responsive.

The cost to industry of a less efficient pilotage operation would probably be greater than the savings made in operating expenses. This would also be the case, although to a somewhat lesser extent, if the consolidation was restricted to a smaller number of Authorities, say the Laurentian and the Great Lakes Pilotage Authorities.

Universal and Consistent Application of the *Pilotage Act*

It is generally accepted that in circumstances where safe navigation in certain high-risk waters calls for local knowledge, this requirement is most effectively met through the provision of pilotage. While there is more than one way to deliver pilotage services, only compulsory pilotage as established in accordance with the *Pilotage Act* ensures that it is delivered without compromise to safety and the public interest. The *Pilotage Act* promotes the highest standards of safety and the best regard for the public interest in three principal ways.

1- Designation of compulsory pilotage areas

It is only through the *Pilotage Act* that an area can be designated in such a manner as to make pilotage non-discretionary, subject to change through an open regulatory process that must take account of the public interest. Requirements for pilotage established through other means can be changed arbitrarily and without public notice or due regard for the public interest.

2- Independent decision-making by pilots

Under the *Pilotage Act*, pilots are assigned by, and are under the supervision of, independent Pilotage Authorities. Those assigned to pilotage duties through any means other than those set out in the *Act* itself, cannot be seen as truly independent, inasmuch as they may be employed by, or be accountable to, shipping lines or port authorities. In these circumstances, the interests of the company that owns the ship, or of the port concerned with accommodating the company, may take precedence over the public interest. Moreover, pilots licensed under the *Pilotage Act* and providing service in a

compulsory pilotage area are accorded “conduct of the vessel”, a legal concept which allows the pilot to exercise pre-eminent navigational authority which he could not otherwise do.

3- Quality of pilotage

In order to qualify for a license under the *Pilotage Act*, candidates must have extensive seafaring experience, must undergo a rigorous training regimen, and must demonstrate their competence to an independent board of examiners. Once licensed, pilots must maintain technical proficiency and must remain medically fit to undertake their duties. There are no set standards or qualification requirements for individuals engaged by third parties such as shipping lines or ports.

In areas that are not designated as compulsory pilotage areas in accordance with the *Pilotage Act*, maritime interests other than Pilotage Authorities may, on their own motion, hire individuals to act as pilots either on their own vessels or within the waters of a port. Also, individual contractors can offer their services as pilots to vessels which, for their own reasons, seek local help in navigating certain waters.

In such cases, a decision to have pilotage and, conversely, a decision to remove a requirement for pilotage, is arbitrary and solely in the hands of the entity concerned. Those providing the service may have a conflict of interest arising from their employment status, inasmuch as they would not be employed by an independent agency without commercial or operational interest related to the vessels being piloted. Moreover, the quality of pilotage service would not be to a universally-accepted public standard as is the case with pilotage under the *Act*.

Particularly noteworthy examples of such cases are in the Laurentian Pilotage Region, especially in respect of north shore ports along the Lower St. Lawrence. The need to properly assess risk and consider the advisability of compulsory designation is especially crucial at the Ports of Sept-Iles, Baie-Comeau and Port-Cartier where the safe navigation of vessels carrying dangerous products and cruise ships would elsewhere require the boarding of a licensed pilot.

As far back as the Brander-Smith Report of 1990, a recommendation was made to examine “the need to introduce a harbour pilot service for the approaches to the ports of Sept-Iles, Baie-Comeau and Port-Cartier¹”. This followed an earlier ministerial investigation into the collision between the *Algobay* and the Italian bulker *Cielo Bianco*, at Sept-Iles, which concluded: “the Laurentian Pilotage Authority should consider the desirability of requiring pilots at Sept-Iles to be licensed by that Authority”. It is only now that the Laurentian Pilotage Authority has announced its intention to proceed with a risk assessment to review whether provision of pilotage in accordance with the *Pilotage Act* is warranted.

Marine Infrastructure Investment

The infrastructure supporting marine navigation makes an important contribution to safe transportation in and of itself; it also helps pilots make their contribution to safety. In at least two areas, the investments in marine infrastructure have lagged behind requirements.

¹ Brander-Smith Report, 1990, Recommendation 6-18, p.143.

Ice-breaking on the St. Lawrence-Great Lakes waterway can not only extend the navigation season but can also make for safer and more efficient passages. The ice-breaking service, provided by the Canadian Coast Guard with some contribution to cost by users, does not meet demand with the result that vessels are delayed and, in some cases, their transit is more perilous than need be.

Similarly, on the same waterway, the installation and maintenance of buoys as aids to navigation is not at the level it should be to maximize the buoys' potential contribution to safety and efficiency. Investing in new, four-season buoys would be the best way of responding to this challenge of providing an aid to navigation that meets a consistently high standard.

In both cases, recognizing the important return on investment for both safety and improved operations, the Government of Canada should undertake the capital projects necessary to ensure adequate and reliable ice-breaking, as well as optimally-functioning buoys on Canada's waterways and, in particular, on the St. Lawrence-Great Lakes waterway.

The North

While the Great Lakes Pilotage Authority has delivered safe and efficient service for decades at the Port of Churchill, just south of the 60th parallel, pilotage is not provided anywhere else in Canada's arctic waters.

As economic activity in the north increases, and as the impediment ice presents to marine navigation decreases, pilotage in the North will become essential. While the preoccupation of pilots in this regard is for safe navigation, it is worth noting that the implementation of pilotage in northern waters would also assert Canadian sovereignty.

Putting an arctic pilotage service in place will require a concerted effort on the part of government and stakeholders. Questions related to how pilotage should be administered in the North must be addressed, as must matters related to the recruitment and qualification of pilots and the ongoing provision of service by them.

A substantial body of work must also be undertaken to make decisions regarding which arctic waters should be designated for compulsory pilotage, and to which vessels the designation should apply. Hydrographic surveys would have to be commissioned and certain waters charted.

A government-appointed working group should be established to address these issues with the ultimate deliverable of draft regulations setting out the compulsory areas and other requirements for pilotage. The working group should also identify the elements of a strategy for recruiting and training a cadre of pilots to deliver the service and an appropriate administrative structure for the proper and most cost-effective management of the service.

V. Conclusion

The Association offers the outstanding record of the Canadian pilotage regime as evidence that the system is effective and meets the objectives of the *Pilotage Act* to ensure safety and protect the public interest.

There is no more efficient and systematic way to mitigate navigational risks than by making sure that those who conduct vessels in high-risk areas have expert, independently verified, local knowledge. The process for pilot licensing and, for masters on board Canadian vessels, of pilotage certification provides such assurance.

Every time a pilot boards a vessel, the crew and the public at large are assured it is under the conduct of a well-rested, independent professional, expertly qualified to plan the vessel's passage, effectively appreciate the situation as the mission unfolds, and use expert local knowledge to take appropriate measures and ensure a safe passage. This is the best protection there is against marine accidents.



On the Fraser River, in the Pacific Region. Photo courtesy of Capt. Mike Armstrong.