



Advisory Services

# The St. Lawrence Seaway Management Corporation

SPECIAL EXAMINATION  
REPORT

JANUARY 4, 2012



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# Main Points

## What We Examined

The St. Lawrence Seaway Management Corporation (SLSMC or the Corporation) is a not-for-profit organization established in 1998 under the *Canada Marine Act* to manage and operate the Canadian assets of the St. Lawrence Seaway for the federal government under a long-term Management, Operation and Maintenance Agreement (MOMA) with Transport Canada. This agreement, along with the *Canada Marine Act*, defines the SLSMC's corporate responsibilities in managing the Seaway. The Corporation has a responsibility under the *Canada Marine Act* to protect the long term viability and operation of the Seaway, protect the investments of the Government of Canada with respect to the Seaway, and promote the Seaway's competitiveness, among other responsibilities. The MOMA further defines the SLSMC's requirement to manage, operate, maintain, repair, acquire and replace the managed assets and other managed assets and properties defined under the MOMA in a competent, honest and commercially prudent manner. The MOMA is in force until March 31, 2018.

We examined the SLSMC's systems and practices to determine whether, in the period under examination, they provide the Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively. Our examination covered the systems and practices that were in place between June 2011 and December 2011.

We examined how the SLSMC undertakes: strategic and operational planning; performance measurement, monitoring, and reporting; procurement; human resources management; and the management of strategic infrastructure projects. In addition, we examined how the Corporation manages risks related to the environment and emergency situations.

## Why It's Important

The SLSMC has jurisdiction over thirteen of the fifteen locks on the St. Lawrence River between Montreal and Lake Erie, through which it provides commercial vessels and pleasure crafts with access to 3,700 km of navigable waters. The Corporation provides government inspections at entry, 24-hour navigation and traffic management, conducts ship inspections, and operates the bridges and locks within its jurisdiction. It is a critical component of the North American transportation system and provides a mechanism through which raw and finished goods can be transported to and from inland ports and worldwide markets. As such, the Corporation has a responsibility to provide its key stakeholders with a safe and reliable transportation system that is environmentally responsible and managed in a cost-effective manner.

## What We Found

Generally, the SLSMC has good practices in place and we found no significant deficiencies in the systems and practices we examined. In particular:

- The Corporation has good mechanisms in place to align its strategic objectives with its annual operational objectives and priorities. The Corporation also maintains strong communications and relationships with its key stakeholders, including customers. Stakeholder needs and interests are considered in the SLSMC's annual strategic and operational planning activities.
- The Corporation has demonstrated improvements in its performance measurement, monitoring, and reporting processes, resulting in a clearer alignment between the SLSMC's strategic, operational, and individual

employee goals. Sound mechanisms are in place to track and monitor performance against pre-defined targets, and performance information is used to inform management decision-making on a regular basis.

- The Corporation has demonstrated improvements in key aspects of its human resource management practices, most notably through an improved performance management system that enables a stronger alignment between the achievement of organizational objectives, employee performance, and compensation. The Corporation has also implemented good workforce planning processes and activities to help ensure that the human resources required to meet the SLSMC's current and future needs will be in place.
- The Corporation has a well defined emergency response plan in place that is annually tested and revised to make improvements based on changes in risks and information obtained through testing exercises and actual navigational accidents and incidents.

We also identified some areas where the SLSMC could benefit from further improving its practices.

- Although the SLSMC has mechanisms in place to align its strategic and operational objectives, its planning processes could be further strengthened by developing and implementing a consistent process to develop and document comprehensive medium term operational plans for key departmental areas. These plans should identify required resources, projects, and key initiatives for the current year and beyond, along with a risk and environmental analysis. In addition, as information on the application of new technologies is obtained, management would benefit from updating its strategic plan for the Seaway to help inform and communicate the SLSMC's plans and priorities to key stakeholders.
- The Corporation has generally good processes in place for its regular asset renewal and maintenance projects. However, due to the higher risk nature and the greater level of uncertainty associated with longer term significant and major improvement projects and initiatives, management would benefit from clearly defining the specific project management and approval process required for these types of projects, including ongoing reporting and monitoring requirements.
- The SLSMC should continue its efforts to strengthen its performance measurement process by further streamlining the number of performance targets, indicators, and outcomes that are monitored at the executive committee level, and implementing procedures to verify the integrity of data underlying key performance indicators provided for internal and interim reporting.
- While the Corporation has processes in place to identify, monitor, and report on environmental risks, opportunities exist to further strengthen its tracking and monitoring of environmental training and auditing activities, and to more clearly define the nature and type of reporting required for environmental matters.

**The Corporation has responded.** *The St. Lawrence Seaway Management Corporation agrees with the recommendations. Its responses follow the recommendations throughout the report.*

## Special Examination Opinion

**To: The Board of Directors of The St. Lawrence Seaway Management Corporation and the Minister of Transport, Infrastructure, and Communities**

Under Section 85 of the *Canada Marine Act*, The St. Lawrence Seaway Management Corporation is required to maintain financial and management control and information systems and management practices that provide reasonable assurance that: its assets are safeguarded and controlled; its transactions are in accordance with the Act; its financial, human, and physical resources are managed economically and efficiently; and its operations are carried out effectively.

Section 87 of the *Canada Marine Act* also requires the Corporation to have a special examination of these systems and practices carried out at least once every five years.

Our responsibility is to express an opinion on whether there is reasonable assurance that during the period covered by the examination from June 2011 to December 2011, there were no significant deficiencies in the systems and practices we examined.

We based our examination plan on a survey of the Corporation's systems and practices, which included a risk analysis. We submitted the plan to the Audit Committee of the Board of Directors on August 12, 2011. The plan identified the systems and practices that we considered essential to providing the Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively. Those are the systems and practices that we selected for examination.

The plan included the criteria for the special examination that we selected specifically for this examination in consultation with the Corporation. The criteria were based on our experience with performance auditing. Our choice of criteria was also influenced by legislative and regulatory requirements, professional literature and standards, and practices followed by the Corporation and other organizations. The criteria and the systems and practices we examined are listed in **About the Special Examination** at the end of this report.

We conducted our examination in accordance with our plan and with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants. Accordingly, it included the tests and other procedures we considered necessary to provide us with sufficient and appropriate evidence to reach our conclusion. We also relied on internal audits conducted by the SLSMC where appropriate.

In our opinion, based on the criteria established for the examination, there is reasonable assurance that there were no significant deficiencies in the systems and practices we examined.

The rest of this report provides an overview of the Corporation and more detailed information on our examination observations and recommendations for improvement.



KPMG LLP

Ottawa, Canada  
January 4, 2012

# Overview of the Corporation

## Mandate, Vision, and Mission

The SLSMC is a not-for-profit organization established in 1998 to manage and operate the Canadian assets of the St. Lawrence Seaway for the federal government under a long-term Management, Operation and Maintenance Agreement with Transport Canada that is in force until March 31, 2018. This agreement, along with the *Canada Marine Act*, defines the SLSMC's corporate responsibilities in managing the Seaway. These responsibilities, along with the SLSMC's mission, vision, and values, form the basis for the SLSMC's expected corporate results.

As defined under Section 78 of the *Canada Marine Act*, the intended objectives of the Corporation are to:

- (a) promote a commercial approach to the operation of the Seaway;
- (b) protect the integrity of the Seaway;
- (c) protect the rights and interests of communities adjacent to the Seaway;
- (d) protect the long-term operation and viability of the Seaway as an integral part of Canada's national transportation infrastructure;
- (e) promote the competitiveness of the Seaway;
- (f) protect the significant investment that the Government of Canada has made in respect of the Seaway;
- (g) encourage user involvement in the operation of the Seaway; and
- (h) encourage new cooperative arrangements with the United States for the management of the transportation facilities and services in the Great Lakes-St. Lawrence region.

The responsibilities of the Corporation are further defined under Section 3 of the MOMA which states the SLSMC's requirement to manage, operate, maintain, repair, acquire and replace the managed assets and other managed assets and properties defined under the MOMA in a competent, honest and commercially prudent manner.

The SLSMC has defined its mission, vision, and strategic objectives based on the requirements defined under the MOMA and the *Canada Marine Act*. The mission of the SLSMC is to "pass ships through a safe and reliable waterway system in a cost-effective, efficient and environmentally-responsible manner for the benefit of all our stakeholders, today and into the future".

The SLSMC serves commercial vessels and pleasure crafts through a series of thirteen of the fifteen locks and channels connecting Montreal to mid-Lake Erie, thereby providing its stakeholders with access to 3,700 km of navigable waters. As such, it is a critical component of the North American transportation system and provides a mechanism through which raw and finished goods can be transported to and from inland ports and worldwide markets. The Corporation's vision is for the SLSMC and its partners to be "an essential transportation system for the 21st century".

To achieve its mission, the SLSMC is focused on five key strategic objectives that are further broken down into seventeen corporate objectives, which collectively are expected to lead to overall sustainability through which costs are managed, impacts related to the Seaway are minimized, and benefits to stakeholders are maximized. These five strategic objectives formed the context for the Special Examination:

Strategic Objective	Corporate Objectives
<b>Stakeholder Engagement</b>	<ul style="list-style-type: none"> <li>▪ Engage Canada/U.S. in common vision</li> <li>▪ Position Seaway as key part of Gateway</li> <li>▪ Engage in industries' environmental agenda</li> <li>▪ Protect the 'essential components' of a sustainable system</li> </ul>
<b>Business Growth</b>	<ul style="list-style-type: none"> <li>▪ Eliminate barriers to entry</li> <li>▪ Attract new cargo</li> <li>▪ Reduce cost and complexity</li> </ul>
<b>Operational Excellence</b>	<ul style="list-style-type: none"> <li>▪ Do it right, do it safe</li> <li>▪ Improve through technology</li> <li>▪ Increase customer value</li> <li>▪ Plan and implement long-term maintenance</li> </ul>
<b>High Performance Workforce</b>	<ul style="list-style-type: none"> <li>▪ Develop an engaged and accountable workforce</li> <li>▪ Maintain a skilled and versatile workforce</li> <li>▪ Match resources to requirements in a healthy work environment</li> </ul>
<b>Financial Sustainability</b>	<ul style="list-style-type: none"> <li>▪ Manage within Budget and Business Plan</li> <li>▪ Cover controllable costs with revenue</li> <li>▪ Manage funds wisely and able to withstand public scrutiny</li> </ul>

## Background on Operations

The SLSMC provides government inspections at entry, 24-hour navigation and traffic management, and is ISO 9001:2000 certified for ship inspections, traffic control, and lock operations. It has jurisdiction over five of the seven locks on the St. Lawrence River between Montreal and Lake Ontario and maintains and operates eight locks on the Welland Canal between Lake Ontario and Lake Erie. The remaining two locks are operated by its U.S. counterpart, the St. Lawrence Seaway Development Corporation (SLSDC). Throughout its years of operation, over 95% of the Seaway's traffic has been made up of bulk cargoes, such as grains, iron ore, coal, chemicals, and oil. At the end of its fiscal 2011 year, total combined traffic was 36.55 million tonnes and 3,925 vessel transits were registered. In this same fiscal year, \$50.8 million was spent on asset renewal projects to maintain the reliability of the infrastructure, which is now over 50 years old.

The Seaway's transit volumes are highly susceptible to changes in general economic conditions, including trends affecting traditional core commodities, such as iron ore and grain, as well as new cargo sources. This, combined with competitive pressures and the nature of the Seaway operations, has increased the need for the SLSMC to explore new technologies to enhance the reliability, safety, and cost-effectiveness of Seaway transit. In addition, as the Seaway infrastructure continues to age, increased investment will be required to maintain the reliability of the infrastructure within existing risk tolerance levels.

In 2011, the SLSMC reported approximately \$66 million of consolidated revenues, \$118 million of expenses (of which \$51 million related to regular and major maintenance and capital expenditures incurred to maintain the federal government's infrastructure), and had a contribution of \$67 million from the Capital Fund Trust. The Corporation is mandated to charge tolls and other revenues to finance the operation and maintenance of the Seaway as defined under the terms of the MOMA. Additional funds that may be required to eliminate cash deficits may be recovered from the Capital Fund Trust.

The SLSMC employs approximately 560 employees and operates out of offices located in three primary regions: its head office in Cornwall; the Montreal to Lake Ontario (Maisonneuve) region; and the Welland Canal (Niagara) region. The majority of SLSMC employees are unionized with the National Automobile, Aerospace, Transportation and General Workers Union of Canada. There are three collective agreements with this union, covering the following employee groups: 1) Operations and Maintenance Union Group, which applies to regional operations and front-line maintenance personnel; 2) Supervisory Union Group, covering supervisors and engineering personnel; and 3) Cornwall Head Quarters Group. All three collective agreements were renegotiated in the fall of 2011.

## Focus of the Special Examination

In accordance with the examination plan we submitted to the Audit Committee of the Board of Directors on August 12, 2011, we examined the SLSMC's systems and practices in the areas of: strategic and operational planning; performance measurement, monitoring, and reporting; procurement; human resources management; infrastructure; and emergency preparedness and environment. Our objective was to determine whether the Corporation has reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively.

Further details on the audit objective, the key systems and practices examined, and the criteria are provided in **About the Special Examination** at the end of this report.



# Observations and Recommendations

## Strategic Planning

Strategic planning is a core management function for any organization. The SLSMC has a wide range of stakeholders, including carriers, industry, legislative bodies, pilotage authorities, government departments at various levels, and local communities, to which it is accountable. Considering this and the extent of the infrastructure it manages on behalf of Transport Canada, the SLSMC needs sound strategic plans to help ensure that its activities are well coordinated, effectively carried out, and that risks that could prevent the Corporation from achieving its objectives are identified, measured, and mitigated.

We examined the SLSMC's processes and practices for setting strategic direction, coordinating strategic and operational planning, and managing risks. We also examined the Corporation's processes for identifying and responding to stakeholder and customer needs through its strategic and operational plans and through its strategic projects. We expected that the SLSMC would have clearly defined strategic direction, with specific and measurable goals and strategies that are linked to its legislative mandate. We further expected that the Corporation's strategic direction and goals would take into account stakeholder and customer needs and priorities, identified risks, and the need to control and protect its assets and to manage its resources economically and efficiently.

We reviewed documents the Corporation uses to develop strategic and operational plans, including documents provided to the Board of Directors and documents managers and employees used to guide their work. We examined documentation supporting the Corporation's engagement of and responsiveness to its key stakeholders and customers. We also examined the systems and practices in place to define, plan, prioritize, and evaluate strategic and improvement infrastructure projects. Observations and recommendations regarding our review of the project planning and decision making process are provided under the Infrastructure section of this report.

### **The SLSMC has generally effective processes to set its strategic and operational goals and priorities.**

The SLSMC has a well defined process for updating its strategic and corporate plans. The Corporation has defined five strategic objectives that are aligned with the Corporation's responsibilities as defined under the *Canada Marine Act* and the MOA. Annually, strategic planning exercises are initiated through which internal and external environmental scans are conducted that include consideration of political, economic, social, technological, market, and internal events and circumstances that may impact the Corporation and the achievement of its strategic objectives. Critical issues are identified, rated for potential impact, and assessed to help define key strategies and actions required over the planning cycle. We observed evidence of the SLSMC's engagement of key external stakeholders through its planning process, including the St. Lawrence Seaway Development Corporation and customers. The Corporation's strategic plan is reviewed with the Board on an annual basis.

The SLSMC has good mechanisms in place to communicate and align annual objectives and priorities with its overall strategic objectives. To support the achievement of its five strategic objectives, management has developed "line of sight" documents for each department within the Corporation. These documents are used to define corporate or operational goals and activities at the departmental level that are clearly aligned with the Corporation's strategic objectives in a consistent manner. Using these tools, strategic goals cascade down through corporate objectives, key performance indicators, departmental objectives, and finally individual objectives. The Corporation follows a zero based budgeting methodology through which management determines the resources required to achieve its defined objectives for the upcoming fiscal year.

**The Corporation has a well defined mission and vision, but improvements can be made to the content of its operating plans to support its strategic objectives.**

The Corporation's strategic plans generally cover a three year period through which strategic objectives are aligned with the Corporation's mission and vision. Strategic plans also include descriptions of key initiatives planned for each strategic objective over the three year planning period and include designated responsible personnel and expected timelines. While the focus of the strategic plans is on the upcoming three years, it is acknowledged that many of the Corporation's strategic objectives, as currently stated, may be of relevance over a longer time period than the three years covered by the plan. The Corporation's mission, vision, and strategic objectives are well communicated through annual reports, the Corporation's intranet and external web site, and other publications.

As noted previously, the alignment of individual and departmental objectives with overall strategic objectives on an annual basis is strong. Information supporting annual strategies, activities, and priorities exist in various forms within each department, such as through budget documents, project plans, line of sight documents, and other sources of information. However, key departmental operating strategies planned for the medium term are not currently summarized in a comprehensive document. To help strengthen the alignment of priorities and resource allocation decisions with the Corporation's strategic objectives and three year strategic plan, we would expect to see medium term operational plans and strategies in place that identify required resources, projects, and key initiatives for the current year and beyond, along with a risk and environmental analysis, to help guide operational and corporate level activities related to the achievement of these strategies. While we did not identify any misalignment between existing operational planning documents (such as the line of sight documents and project details provided in the strategic plan) and the SLSMC's strategic objectives, implementing a consistent process for preparing more robust operational plans may provide the Corporation with additional assurance that it has sufficient departmental plans to operationalize its strategic objectives, and might improve planning efficiency.

The Corporation's long term vision was formally developed in 2002 through a ten year roadmap that defined the Corporation's need to shift long term strategies and initiatives to focus on growing revenues. Since this time, the internal and external landscape has changed significantly, and has created new risks and opportunities for the Seaway which are identified and considered through annual and three year planning exercises and special studies. The consideration of the impact of these risks and opportunities on the Corporation's vision and strategic objectives through the Corporation's planning exercises has resulted in strategies to leverage technology, customize services, and improve the cost-effectiveness of the Seaway as a transportation mode. As additional information on the results of these strategies, such as the potential application of new technologies and system improvements, becomes available with greater certainty, the Corporation should be positioned to update and document its longer term strategy to share with selected stakeholders to help guide future priorities and define the future needs of the Corporation. The implementation of comprehensive and longer term operational or departmental plans to support the SLSMC's longer term vision and strategy will enhance the Corporation's ability to measure progress against its objectives, determine when changes in strategy or planned actions may be required, and revise operational strategies in a timely manner. This will become increasingly important as the ending term of the MOMA approaches in 2018.

**The Corporation maintains strong communications and relationships with key stakeholders.**

The SLSMC maintains a stakeholder map that summarizes its key stakeholders according to the following categories: governments, principal Canadian ports, marine stakeholders/forums, logistics industry, environmental groups, trade media, and communities. The Corporation participates in a number of initiatives to maintain relationships and engage with key stakeholder groups. Recent examples include: the SLSMC's role as a partner of Green Marine, a joint Canada – U.S. initiative aimed at implementing a marine industry environmental program throughout North America; its sponsorship and participation in the Hwy H<sub>2</sub>O campaign; participation in economic

and environmental studies through the Marine Delivers Program; and participation in the Great Lakes Ballast Water Collaborative Group.

We observed evidence of frequent meetings with various stakeholder representatives, including Transport Canada, the Canadian Shipowners Association, the Chamber of Marine Commerce, and the SLSDC. In addition, the Corporation attends major trade exhibitions and plans and organizes the annual Hwy H<sub>2</sub>O conference which helps create system and stakeholder awareness.

Based on our interviews with representatives from the SLSDC and our review of supporting documentation, we observed evidence supporting increased collaboration with SLSDC in areas including market development, operations and technology, public relations/government (Canada/US) relations, and the environment. We also observed evidence supporting the engagement of key stakeholders, including SLSDC and industry representatives, on the SLSMC's strategic objectives.

Responsibility for maintaining stakeholder relations is currently decentralized throughout the Corporation, under the overall direction and oversight of the President. Because the SLSMC operates within the Seaway system that falls under the jurisdiction of a number of authorities from both Canada and the United States, the Corporation has a wide range of stakeholders from the public sector, legislative and regulatory bodies, industry, and communities. To help ensure consistency in the Corporation's strategies, messaging, and responsiveness to its various stakeholders, the development, communication, and execution of robust operational plans for stakeholder relations is an important management practice to be implemented.

**The Corporation has sound mechanisms in place to identify and respond to customer needs.**

The Corporation has a number of formal mechanisms in place to measure and monitor customer satisfaction and identify customer needs. Formal satisfaction surveys are conducted for customers and shipmasters on an alternating basis every two years. In addition, market intelligence data is gathered from a number of internal and external sources to help identify risks and opportunities for growth initiatives.

Customer relationships are maintained at various levels throughout the Corporation, ranging from operational contact at the ship inspector and operational team level, to business development discussions with market development personnel. The Corporation holds two annual customer meetings through which new initiatives are discussed and customer concerns and interests are raised. The Corporation has also hosted annual trade missions with the SLSDC to foreign countries to meet with existing customers and explore opportunities to develop new business in new markets.

Our interviews with a sample of customer representatives were consistent in identifying strong relationships with the SLSMC. In particular, customer representatives identified that the SLSMC has strong and timely communication mechanisms in place and that they have seen significant improvements in customer relations over the past few years. Overall, customers believe they are kept apprised of key strategic initiatives and their progress.

We understand that the SLSMC is in the process of preparing a joint market development plan with the SLSDC. This will replace the current plan which is over six years old. Given the significant downturn in the global economy in 2008/09 and the changes in global and domestic markets that have occurred in the recent past, the Corporation could benefit from the development of more timely market development plans. This is consistent with our previous observation regarding the need for the Corporation to strengthen its medium term operational planning processes. The development of this plan should include consideration of the strategic goals for the Corporation and should explicitly consider the risks that may preclude the achievement of these goals and identify measures to mitigate the risks identified.

**Conclusion on strategic planning:** Overall, we found that the SLSMC has set strategic and operational directions and objectives to achieve its mandate. We further found that the SLSMC's planning processes include effective mechanisms to identify and consider stakeholder and customer needs and priorities. However, the Corporation could strengthen its strategic and operational planning by implementing a consistent and more comprehensive approach to the development of departmental plans and strategies covering the medium term to help strengthen the alignment of priorities and resource allocation decisions with the Corporation's strategic objectives.

**Recommendation.** The SLSMC should strengthen its strategic and operational planning processes by developing and implementing a process to develop medium term plans for key departments that identify required resources, projects, and key initiatives for the current year and beyond, along with a risk and environmental analysis, and which are monitored and updated as necessary based on new information on performance results and future priorities. As additional information on the results of current strategies and initiatives is available with greater certainty, the Corporation should update and document its longer term strategy to share with selected stakeholders to help guide future priorities and define the future needs of the Corporation.

**The Corporation's response.** *The Corporation agrees that developing and implementing medium term plans for key departments that identify required resources, projects and key initiatives for the a three-year horizon, along with risk and environmental analyses which are monitored and updated regularly would strengthen its strategic and operations planning processes. Those plans which already exist including HR, operations and maintenance will be modified to use a standardized format and include all the above mentioned sections and a formal process to develop and maintain three-year operational plans for all key processes including marketing, IT/OT and stakeholder engagement will be implemented. Furthermore, as additional information on the results of the current strategies and initiatives becomes available with greater certainty, the Corporation agrees to update and document its longer term strategy to share with selected stakeholders as a guide in establishing a common vision for action.*

## Procurement

The SLSMC has a number of strategic supplier contracts in place across many areas of the organization. In particular, a significant number of construction contracts are required to support the maintenance of the infrastructure assets that the SLSMC manages on behalf of Transport Canada. The Corporation has a responsibility under the MOMA to operate in a commercially prudent manner, which includes the procurement of goods and services in a fair and transparent manner that provides the SLSMC with value-for-money.

We examined the SLSMC's procurement policies and procedures for selecting and monitoring strategic contracts. We reviewed existing policies and procedures for completeness and consistency with leading practices and conducted an analysis of procurement activities over the past three years. In addition, we examined vehicles used to modify procurement policies. We also examined a selection of strategic supplier contracts to determine whether they were identified, evaluated and selected in accordance with the SLSMC's policies and procedures and to determine whether management monitors and resolves supplier performance and costs in relation to the SLSMC's needs and requirements. We expected that the SLSMC would have policies and procedures in place to enable consistent, fair, and transparent procurement to meet its needs in a cost-effective manner.

**In general, the SLSMC has effective procurement systems and processes to attract and select qualified suppliers and to monitor and manage key supplier contracts.**

The SLSMC has defined processes for contracting with suppliers, including separate policy documents covering different types of purchases and defined delegated signing authorities. Policy documents and delegated signing authorities consider the inherent risks of relevance to different purchase types, including general purchases, professional/consulting services, and construction. We understand that management is planning to consolidate its various procurement policies into one document. The consolidation of all procurement policies and guidance in

one central document and the development of common tools and templates to support key procurement activities, such as sole source approval templates, would help to provide greater clarity and consistency in procurement activities. In addition, the Corporation could benefit from modifying its delegated signing authority levels to better align approval levels with underlying procurement risk, including Board approval.

While procurement at the SLSMC has been decentralized throughout the three regions, the SLSMC has recently formed the Procurement and Material Management Committee (PMMC) to review and recommend updates to all procurement policies and to provide a forum through which procurement issues and challenges may be discussed and compliance with overall policies and guidelines can be promoted. The new committee stems from the amalgamation of the previous two committees – the Materials Management Committee and the Contract Committee. The Corporation’s procurement process could be further strengthened through the assignment of overall oversight and authority for procurement policies and procedures for the organization as a whole to a designated member of the executive management team.

All procurement policies require suppliers to be selected based on “best value”. Typically, the SLSMC requests competitive bids and evaluates proposals using pre-defined criteria to select suppliers. When contracting with suppliers, the SLSMC has clear and transparent standard terms and conditions that are used, and penalties are utilized to motivate suppliers to meet critical deadlines. Responsibility for monitoring supplier performance under the contract is delegated to the appropriate user group. Although expected contract monitoring practices are not specifically defined for all purchasing activities in existing procurement policies and procedural documents, we did identify strong monitoring practices in place for the sample of contracts we examined. Monitoring practices that we observed included: periodic assessments of the reasonableness of costs; monitoring and revision of performance measures, targets and benchmarks to ensure continued relevance; assessment of supplier performance against expectations; and timely actions taken to resolve supplier performance issues.

**Conclusion on procurement:** Overall, we found that the SLSMC has processes and practices in place for transparent and fair procurement that balance the need to protect the Corporation’s interests and provide cost effective contracts and supply arrangements. We encourage management to continue with its initiatives to further improve the efficiency and effectiveness of its procurement process.

## Infrastructure

The Seaway’s infrastructure is aging, with the Welland Canal having been completed in 1932 and the St. Lawrence Seaway opening to deep-draft traffic in 1959. As the infrastructure ages, increased investment will be required to maintain the reliability of the infrastructure within existing risk tolerance levels and to meet the Corporation’s responsibilities of protecting the long term operation and viability of the Seaway. To sustain its ongoing operations and meet its future needs, the Corporation must have processes in place to maintain and renew the managed infrastructure assets as appropriate. In this regard, the SLSMC has a number of strategic projects to maintain and renew the Seaway’s infrastructure, some of which includes the introduction of new technologies into the Seaway’s operations.

We examined the Corporation’s systems and practices for approving, implementing, managing, and monitoring strategic and improvement projects. Our examination focused on whether the SLSMC had systems and practices to evaluate multi-year strategic and improvement project commitments based on a defined business case analysis and to implement and monitor strategic and improvement projects in a manner that enables the achievement of clearly defined project objectives. We also examined a sample of strategic and improvement projects for consistency with the SLSMC’s policies and procedures. We expected the SLSMC to have comprehensive plans, strategies, systems, and practices in place to plan, implement, and monitor its infrastructure projects to help ensure the continuity of its current and future operations in a cost-effective manner.

### **Infrastructure projects are generally well planned and monitored.**

The SLSMC has defined processes in place for planning, approving, and monitoring its major infrastructure projects. In conjunction with its five year corporate business planning activities, the Corporation defines the projects expected to be implemented over the planning cycle to determine the asset replacement funding envelope to be requested under the MOMA. When project funds are requested, a Project Plan is developed for each project, with the exception of small maintenance projects that are consolidated as one line item. Project Plans define the scope of the project, activities expected to be conducted within the year, and budgetary requirements, and are reviewed by a cross-functional committee on an annual basis to enable trade-off decisions to be made between projects based on a consideration of project risks and legal / regulatory requirements. Once reviewed, the Project Plans are brought forward to the Capital Committee and the Board as part of the annual approval of the Asset Renewal Plan (ARP). This annual review and approval process allows for strategic project directions and scope to be modified based on progress achieved in the prior year and provides a formal point at which the appropriateness of continuing the project can be considered.

Roles and responsibilities as well as delegations of approval authority are defined and documented, and, based on our examination of a sample of infrastructure projects, are followed in practice. The Corporation's infrastructure management process is supported by guidelines that require asset renewal programs to be reviewed in a structured manner prior to initiating new programs of work. The program review process helps to ensure that significant programs are aligned with corporate objectives and will continue to provide value to the Corporation. In addition, the Corporate Project Manual defines the processes that should be followed in key phases of project execution including the evaluation, design, tendering and implementation of a project along with associated cost control processes and delegated levels of financial authority.

As required in the MOMA, the Capital Committee not only approves annual ARP projects at the beginning of each year, but meets as required throughout the year to consider whether the Asset Renewal Plan should be amended, supplemented, or replaced. Based on our examination of a sample of project files, we observed evidence of monitoring and reporting on project status throughout the year, including the performance of feasibility studies and the engagement of executive management and/or the Capital Committee on key decision points occurring over the life of the project.

### **Processes and procedures for the approval, monitoring, and management of long-term improvement projects need to be more clearly defined.**

To enhance the reliability, safety, cost-effectiveness, and competitiveness of the Seaway as a viable transportation vehicle, the Corporation is exploring new technologies and approaches. In recognition of the higher risk nature of these types of projects, we noted that the SLSMC has introduced additional controls on an ad-hoc basis to oversee these projects at key stages, including the implementation of a stage gating process for one of the projects included in our sample. However, processes and procedures for major improvement / enhancement projects were not clearly defined in the past as these types of projects have not been traditionally undertaken under the MOMA.

As described previously, in addition to the approval of ARP activities in the five year budget, project activities are formally revisited and approved annually by the Capital Committee, with further meetings held during the year to consider changes as required. Because this annual approval does not necessarily correspond with the timing of key project decisions on multi-year and more innovative projects, it may not consider all of the expected elements in a project's business case, such as an assessment of the impact of the project on key stakeholders, a full project schedule, or expected costs and benefits over the life of the project. While some of these elements may be considered in the analysis supporting the presentation of project information to management or the Capital Committee, there are inconsistencies in the depth and nature of information provided. In particular, challenges in

budgeting and approving major improvement / enhancement projects may arise in the case of projects that span more than one five year business planning cycle and due to greater levels of uncertainty.

We noted that one exception to the standard annual approval process relates to an improvement project for system enhancements that is currently being managed using a stage gating process with formal “go/ no-go” decision points. At key points, this project is being approved by Transport Canada based on a separate business case analysis, which include details over and above those considered in regular asset renewal projects, such as expected longer term benefits, resource requirements, and estimated costs over the life of the specific phases of the project. However, the expectations and reporting requirements for a project of this nature were not formally defined and/or agreed to up front, and additional details regarding the underlying assumptions used, calculations and analysis of costs and benefits under different options, and future costs have been requested by the Crown. Under the stage gating process being followed, management is planning to provide additional details on these matters at the completion of the next generation of testing, as future viability and resource requirements are expected to be known with greater certainty at that time.

Due to the higher risk nature and the greater level of uncertainty associated with longer term improvement / enhancement projects, management would benefit from clearly defining the specific project management approach required for these types of projects, such as the requirement for the adoption of a stage gating approach for these projects, the development of robust business case analysis at the outset of the project, and clearly defining reporting requirements throughout the project life cycle to help ensure consistency in the management of these types of projects and enable timely decision making regarding investment decisions. The depth and accuracy of the business case analysis should be reflective of the significance of the project in terms of materiality and other risk factors of relevance to the particular stage of the project.

**Conclusion on infrastructure:** Overall, we found that the SLSMC has processes and practices in place to plan, manage, and monitor its infrastructure projects to help ensure continuity of operations. However, as the Corporation enters into more innovative and longer term improvement projects, additional clarity regarding the process and reporting to support investment decisions and strengthen ongoing project monitoring for these types of projects may be of benefit.

**Recommendation.** The SLSMC should define and implement a clear process for the approval and management of significant and major improvement projects. This should include clearly defined business case requirements, allow for the assessment of ongoing viability at key phases of the project, and define ongoing reporting and monitoring requirements for management, the Board, and the Capital Committee that consider the total life of the project, project costs, benefits, feasibility, and impact on stakeholders.

**The Corporation’s response.** *Management agrees with the recommendation and will develop and implement a process for the management of significant and major improvement projects along with defined reporting requirements for management and other approval authorities.*

## Human Resources Management

The management of human resources is a core corporate function, as it provides a strategic and coherent approach to the management of the SLSMC’s personnel, who individually and collectively contribute to the achievement of its strategic objectives and mandate. The Corporation employs approximately 560 employees, the majority of whom are unionized with the National Automobile, Aerospace, Transportation and General Workers Union of Canada. A significant percentage of the SLSMC’s workforce is eligible for retirement over the next five to seven years. As such, the corporation faces the combined challenge and opportunity of managing potentially significant attrition while attracting, engaging, and retaining employees within the changing demographics of the

Canadian workforce. In addition, given the nature of the SLSMC's operations, effective employee health and safety programs are critical to enabling a safe working environment.

We examined the plans, systems, and practices in place that relate to workforce planning, staffing, retention, training and development, performance management, employee engagement, knowledge management, health and safety, and labour relations. We expected that the SLSMC would manage human resources and health and safety programs in a manner that engages employees and provides the SLSMC with the human resource capacity and the work environment needed to support the achievement of its goals and objectives.

We reviewed human resources documents that dealt with the alignment of human resources activities with the SLSMC's strategic objectives, changing demographics, and with managing workforce attrition and turnover. We reviewed a sample of plans for managing the succession of critical positions, including the training and development of employees. We examined a sample of employee performance appraisals and performance incentive compensation payments. We analyzed the results of the annual employee survey, examined various communications to employees regarding health and safety and other issues, and reviewed a sample of the minutes from joint management and union committee meetings. We also examined how the SLSMC plans to maintain accident rate targets and improve time lost per employee through health and safety programs and initiatives.

**The Corporation has implemented processes to help ensure it will have the employees necessary to support the achievement of its goals and objectives.**

We found that the SLSMC has sound workforce planning processes in place that align human resource needs with the organization's strategic objectives. Workforce plans are informed by information relating to the planned implementation of strategic initiatives and projects, activities planned under the Asset Renewal Plan, and demographic analysis. The Corporation updates its human resource plans annually, which are presented to executive management and the Board. Plans include up to date summary level information on employee attrition and turnover, and are supported by more detailed analysis of anticipated attrition and turnover by level and by employee. The SLSMC has also developed a succession plan for critical and management positions to help manage risks associated with both planned and unanticipated turnover. For positions at a management level and above, the SLSMC has identified potential successors capable of filling positions in the event of unanticipated turnover. For critical workforce positions, management has identified potential gaps due to future turnover and any related training and development needs to help ensure that sufficient human resources will be in place to meet future operating requirements.

The staffing process at the SLSMC is largely influenced by requirements stipulated in the collective agreements for unionized positions. Management tracks the progress of staffing activities through a bi-weekly staffing status report. Delays have been experienced in the staffing process primarily due to a limited supply of required skill sets in the market and the need to have classification assessments conducted when vacant positions are being staffed. SLSMC management has recognized the delays associated with the classification process and has engaged a third party to perform the classification assessment in the hopes of reducing the associated processing time. It is too early in the process to determine whether this activity has significantly reduced the staffing process timeframe. With respect to staffing delays due to limited specialized skill sets, management is working to mitigate this risk by actively advertising open positions in a wide range of mediums and promoting the benefits of employment with the Corporation.



**The Corporation has implemented processes that, in general, help to ensure that its employees have the necessary skills to support its business needs.**

The SLSMC has identified that 32% of its workforce is considered critical, and of this employee group, 34% is eligible to retire in the next five years. Given this reality, the SLSMC has been actively planning to help manage the retention of corporate memory and retain required knowledge and skill sets during times of potential future turnover. As of the end of our examination fieldwork, management has identified priority areas, performed knowledge mapping assessments to identify specific knowledge transfer needs, and defined suggested approaches to manage this transfer. Management is currently implementing a pilot project to address one of the priority areas. However, we noted that progress to date on this initiative has been slow, as other priorities of relevance to human resources have arisen that have reduced the extent to which resources have been focused on this initiative. We stress the need for management to prioritize its knowledge management and retention efforts to help ensure that information related to priority areas is appropriately transitioned within the Corporation.

The SLSMC evaluates employee performance annually through its implementation of an improved performance management system. The system was implemented over the past two years and is applicable to all employees, including front-line staff. The system was introduced to employees through formal presentations and working groups to address questions or concerns, and the Change Management Committee engaged the union on the performance assessment tools. A separate performance management form has been defined for each employee level, each of which considers a number of categories against which the employee is assessed using pre-defined ratings. Based on our examination of a sample of performance assessments and documentation supporting the performance management process, we noted that the forms are lengthy and could benefit from being further streamlined to reduce the number of categories against which performance is rated and to reduce the potential for overlap between the categories that currently exist. We also identified some inconsistencies in the quality of information that was populated in the form. We further noted that there are still a number of performance evaluations outstanding for the 2010-2011 fiscal year. We understand that statistics on outstanding performance management forms are being discussed at the executive committee level to increase the percentage of completion and that management plans to perform a quality review of performance management forms in the next year and conduct follow-up training or communications to address any gaps noted. We encourage management to continue its efforts to further improve the performance management system.

Management has greatly improved the alignment of performance assessments with compensation over the past year. For non-unionized positions, annual performance assessments are used to determine an individual's short-term incentive payment and merit increase. For unionized positions, performance assessments help to support an individual's eligibility for a merit increase in line with requirements specified in the collective agreement. Results of our interviews indicate that this strengthened alignment between performance and compensation has resulted in a more engaged and motivated workforce. Annual performance assessments are also used to identify high performing staff members and to identify future development needs that are defined through tailored individual development plans.

**The Corporation has demonstrated improvements in its working environment.**

The SLSMC conducts periodic employee surveys, generally every two years, to help measure the level of employee engagement and satisfaction. The results of the last survey conducted in 2009 demonstrate that employees at the management and administrative/clerical level are most highly engaged, while employees in maintenance and canal operations feel the least engaged. The Corporation's overall level of engagement in the survey has remained low, and management has developed and implemented strategies to improve in this area. Overall scores were highest for questions related to job security, organizational reputation, and work environment. Management uses the survey results to develop action plans. For example, changes were made to the

performance incentive program over the past year in response to survey results that demonstrated the least amount of overall satisfaction with performance management, pay, and recognition programs.

The SLSMC has a number of mechanisms in place to develop and maintain relationships with its union. Key mechanisms in place include the use of a Change Management Committee to engage union representatives in discussions on strategic changes planned and/or in the process of implementation within the organization, and the Union Management Change Committee which is a vehicle through which labour relations issues and other concerns are discussed before they escalate to become grievances. The SLSMC has a sound process in place to assess grievances received. The SLSMC's labour relations team tracks all labour grievances and their resolution on a central listing, and all managers are expected to engage HR business partners when addressing grievances to help ensure consistency in the process. Regional management is kept informed of grievances through regional management meetings. All three of the collective agreements were successfully renegotiated in the fall of 2011 during the course of our fieldwork.

With respect to health and safety, at a regional level, proposed legal changes, health and safety incidents, and prevention activities are overseen by a Regional Health and Safety Committee that includes members of management, the union, and regional health and safety officers. Each committee independently determines appropriate recognition to be provided based on the achievement of low accident rates. Employees are also assessed on their contribution to health and safety through their annual performance reviews. Each region is brought together on a regular basis through Corporate Health and Safety Committee meetings and we also observed evidence of informal information sharing between the two regional officers regarding programs and legal requirements. Because SLSMC's health and safety programs are administered regionally, some inconsistencies were identified in the tools, templates, and forms being used, as well as in regional promotion and recognition programs in place. We understand that the Corporate Health and Safety Officer is currently leading a program to better align the tools and programs within the Maisonneuve and Niagara regions. To manage accident rates, management conducts interventions in three different forms: site inspections; safety observations; and toolbox meetings. Each of these forums allow for the communication of key health and safety messages. Health and safety metrics, such as lost time indices, number of safety interventions, and near misses, are reported and monitored by region (Maisonneuve and Niagara) using the performance tracking tool. Overall, corporate health and safety performance is reviewed monthly at the executive committee level and quarterly at the Board level.

**Conclusion on human resources management.** Overall, we found that the SLSMC manages human resources in a manner that provides the human resources capacity and the work environment it needs to achieve its goals and objectives. We encourage management to continue with its initiatives to further strengthen its human resource management practices in areas such as performance management and succession planning.

## Performance Measurement, Monitoring, and Reporting

Accurate and timely performance information underlies the systems and practices that the SLSMC uses to achieve its mandate and objectives. Performance information is required to monitor the Corporation's progress in achieving its strategic objectives and priorities and to manage its resources economically, efficiently, and effectively.

We examined the SLSMC's systems and practices for performance measurement, monitoring, and reporting, including the process followed to develop performance indicators, collect performance information, report and monitor performance results, and use performance information to inform its decision-making. We expected that the SLSMC would have identified and implemented performance indicators to measure whether it is achieving its legislative mandate and strategic objectives. We expected that the Corporation would also produce reports that provide complete, accurate, timely, and balanced information for decision-making and accountability reporting.

We reviewed documents and systems used by the SLSMC to develop performance indicators and targets and to report on its performance against objectives. We also reviewed formal and ad hoc performance reporting prepared by the Corporation for reporting to management, the Board of Directors, and the public regarding its performance.

**The Corporation has defined qualitative and quantitative performance indicators to measure performance against its mandate and objectives.**

The Corporation has been in the process of revising its performance measurement process over the past year to allow for a greater focus on key performance indicators and targets. A performance tracking tool has been developed that defines key activities and performance targets for the current fiscal year against each of the Corporation's five strategic objectives. The performance measures provide a good balance of targets across a number of critical areas, including financial performance, operational performance, health and safety, stakeholder engagement, and workforce management. Performance targets are established by the executive committee and any changes to targets must be approved by the President and executive committee.

At an operational level, management has developed and implemented "line of sight" documents for each major functional and operational area that define key performance indicators of relevance for each business unit against each of the Corporation's five strategic objectives. As a result, these documents are well aligned with the tracking tool.

**The SLSMC has performance reports that compare actual to planned performance on a regular basis. However, improvements could be made to further strengthen the integrity and concision of internal performance reporting.**

Performance activities and targets are stated in both qualitative and quantitative terms and progress is monitored and reported on a monthly basis at the executive committee level using the tracking tool. The tracking tool is an excel-based tool that is manually updated on a monthly basis based on information provided by relevant centres of responsibility.

In addition to the tracking tool, the Corporation has a formal performance measurement system that has been in place for over ten years that is used to track and report on a number of quantitative performance measures. Some of this information is used to populate and monitor progress against objectives in the tracking tool. Performance information in the measurement system is regularly verified for accuracy and completeness. However, similar verification work has not yet been performed for performance information reported through the tracking tool that is provided outside of the measurement system. While the presentation and review of monthly tracking tool reporting at the executive committee level provides some degree of review of the accuracy and reasonableness of information being reported, there is currently no formal process in place to independently verify the accuracy of all performance information reported through the tracking tool.

In addition, while the tracking tool provides an improved focus on both quantitative and qualitative performance measures when compared to the full performance measurement system, the tool currently has over 75 activities and outcomes that are monitored, tracked and reported on at the executive management level. Management is encouraged to continue its efforts to further streamline the number of activities and outcomes being monitored at the executive level.

Externally, the Corporation includes information about its performance through its annual reports. The annual reports provide year over year results of actual performance on a number of measures for each of its strategic objectives, including traffic volume, revenue, vessel transits, new cargoes, system reliability, and accident rates. Performance targets are also provided for some of these measures.

**Performance information is used by the Corporation to manage its operations.**

We found that management is using performance information to manage operations and develop action plans to address any performance issues identified. Responsibility for the achievement of performance targets is formally assigned through the tracking tool. In addition, individual employee goals and objectives are aligned with corporate and strategic objectives. We confirmed through our testing of a sample of individual performance management plans that employee goals are well aligned with the goals for the operational or functional area within which the employee resides and that performance measures are utilized internally to track individual progress against objectives.

**Conclusion on performance measurement, monitoring, and reporting:** Overall, we found that the SLSMC has identified and implemented performance measures and indicators to measure the achievement of its legislative mandate and strategic objectives. We further found that the Corporation produces and utilizes regular reports on performance results to help manage operations and track overall progress against its objectives. However, the Corporation could benefit from additional improvements to streamline the performance measurement process and to strengthen controls over the integrity of interim internal performance reporting.

**Recommendation.** The SLSMC should continue its efforts to strengthen its performance measurement process by:

- further streamlining the number of performance targets, indicators, and outcomes that are monitored at the executive committee level; and
- implementing procedures to verify the integrity of all key performance information provided for internal and interim reporting.

**The Corporation's response.** *The Corporation agrees with the recommendation recognizing the various tools used at the Executive Committee level fulfill distinct and important needs. The Measurement System is used to track quantitative indicators while the Initiative Tracking Tool serves as the vehicle to monitor qualitative progress against strategic objectives and discuss any adjustments that may be required. The Corporation will continue to improve each tool as part of its overall strategic performance measurement process. The Corporation further agrees with the need for continued reinforcement of the processes already in place to ensure integrity of the information being reported.*

## Emergency Preparedness and Environment

The SLSMC has a responsibility to ensure that risks related to the environment are identified, mitigated, monitored, and reported as appropriate. In addition, the MOMA and the *Canada Marine Act* specify requirements for the SLSMC to have and maintain an emergency response plan that provides the guidance and protocol for responding to emergencies involving major accidents, incidents, or spilling of dangerous substances in the Seaway or lands managed by the Corporation.

We examined the SLSMC's systems and practices for emergency response planning and for identifying, assessing, mitigating and monitoring environmental risks. We expected that SLSMC would have mechanisms in place to help ensure that risks related to the environment and emergency situations are identified, mitigated, monitored, and reported in a timely manner.

We reviewed the documents and systems used by the SLSMC to develop, maintain, communicate and test its emergency response plan. We reviewed a sample of incident / accident reports, emergency response testing exercises, and communication materials for compliance with established procedures. We also reviewed documents and systems used by the SLSMC to identify, manage, and report on environmental risks.

**The Corporation has a well defined emergency response plan that is monitored and tested.**

The SLSMC has comprehensive policies and procedures that specify the procedures to be followed to handle navigational accidents and emergencies, including required points of contact and communication requirements. These policies and procedures are readily available on the SLSMC's intranet site. The SLSMC's Traffic Control Center, as the first point of contact, communicates required information internally and externally and dispatches a ship inspector to the vessel to determine additional actions that may be required, and reports are entered into the Traffic Management System (TMS). The TMS then sends automatic internal and external routing of the report to appropriate parties.

Debrief sessions are held after each navigational incident or accident to identify areas for improvement in the emergency response plan (ERP). This information is consolidated and presented to the Review and Planning Committee for consideration for the annual update of the ERP. We observed evidence of changes made to the ERP in response to recommendations brought forward to the planning committee in the spring of 2011.

The Corporation conducts annual emergency testing exercises in each Region and in its head-office. The specific exercises are selected and approved by each Region and are presented to the Review and Planning Committee for their concurrence. In addition, annual survey-based reviews of the ERP are conducted, the results of which are presented to the Executive Committee through the annual Emergency Preparedness Status Review. While aspects of compliance and effectiveness are tested through the annual emergency testing exercises and through debrief activities, the Corporation could benefit from a more comprehensive audit and testing plan to help ensure that sufficient coverage of the plan is tested over the planning period.

**The Corporation has a number of mechanisms in place to identify, measure, and manage environmental risks.**

The Corporation has a formal Environmental Management System (EMS) that includes an environmental policy, environmental management manual, and procedural documents, among other items. The Corporation's environmental policy and supporting manual clearly define environmental accountabilities and responsibilities for key SLSMC personnel. The overarching objective of the EMS is to manage and control all aspects of environmental protection and risk within the SLSMC's control.

Environmental impact assessments are conducted internally each year for all ARP projects. These include an assessment of the impact intensity against a number of environmental components and, where appropriate, mitigation measures to lower potential impact intensities. Environmental risks at a regional level have been identified and assessed through Environmental Conformance Verifications that are periodically completed by third parties in each region. Monitoring is accomplished through annual follow-ups conducted by the EMS Coordinator and others on recommendations identified in these reports. In addition, environmental risks may be identified through debrief sessions for accidents and incidents and through annual emergency response testing exercises. Risk assessments are also performed on a regular basis for certain operational activities, such as petroleum products storage systems. At a global level, studies have been commissioned to help identify current and potential future environmental risks of relevance to the Seaway, such as the 2007 Great Lakes St. Lawrence Seaway Study.

**The Corporation monitors and reports on its environmental performance to various parties, although reporting and training requirements need to be more clearly defined.**

The SLSMC's EMS Coordinator promotes consistent management and monitoring of environmental activities across the regions and subscribes to various authoritative sources to remain aware of new or changing legal requirements. The EMS Coordinator visits the SLSMC sites on an informal basis, to verify that appropriate practices are being followed and to advise employees on the risks of non-compliance. Policies are communicated

to employees through one-on-one interaction, where appropriate, and via the Corporation's intranet. In addition, internal newsletters are prepared generally on a quarterly basis to address environmental conformance issues, initiatives and best practices.

The recently revised Environmental Policy states that the SLSMC will provide training to all employees regarding their environmental responsibilities. We understand that the EMS Coordinator works closely with, and provides training for, representatives in each region and head office and that an understanding of "who does what" is also reinforced at regional management meetings attended by the EMS Coordinator, and through senior management meetings attended by the Environmental Officer. In addition, we have observed evidence of training sessions provided by the EMS Coordinator to SLSMC managers and coordinators in Cornwall, Maisonneuve, and Niagara on the Environmental Management Manual and on environmental issues generally. However, the Environmental Management Manual does not currently define the specific environmental training requirements for specific roles within the Corporation, nor is overall training on environmental policies, legislation, and procedures formally tracked and monitored.

The EMS Coordinator prepares routine reports and exception-based reports for various federal and provincial ministries. In addition, quarterly EMS activity reports are prepared for senior management that provide updates on energy conservation and greenhouse gas emissions, environmental audit results and follow up activities, environmental impacts of dredging projects, and other matters. Formal environmental reports and overviews are provided to the Board twice a year. The Corporation also reports on environmental performance through its annual reports on matters such as the SLSMC's participation in the Green Marine initiative, progress against its greenhouse gas emissions reduction plan, and results of ballast water management and inspections.

While it is our understanding, based on interviews with management, that informal criteria are utilized to guide environmental issues and performance that should be reported to the Board, we did not find evidence of any documented guidance for formal environmental reporting. We understand that any environmental issues that may involve legal issues, potential financial impacts, operating impacts, and negative publicity are reported to the Board, and that reporting to the SLSMC's Legal Counsel is performed on an ad hoc basis as issues arise. To improve the consistency and transparency with which environmental matters are reported, management should more clearly define the nature and type of reporting required for the Board, Legal Counsel, and public reporting.

In addition, while practice audits and environmental conformance verifications are conducted periodically, these audits tend to be based on observations of what is in place but do not extend to physical records verification and assessments of the quality of the EMS. The Corporation would benefit from conducting periodic EMS system audits that examine training, identification and reporting of non-conformities, operational controls, and other items for effectiveness.

**Conclusion on emergency preparedness and environment:** We found that the SLSMC has a well defined emergency response plan and has generally well defined environmental management policies and procedures. While mechanisms exist to monitor and report on the Corporation's performance with respect to its ERP and the environmental management system, opportunities exist to further strengthen environmental training and reporting activities.

**Recommendation.** The SLSMC should strengthen aspects of its existing environmental management system by:

- incorporating periodic EMS system audits that examine training, identification and reporting of non-conformities, operational controls, and other items for effectiveness in existing monitoring activities;
- more clearly defining the nature and type of reporting required for the Board, Legal Counsel, and public reporting on environmental matters; and

- more clearly defining and monitoring the specific environmental training requirements for specific roles within the Corporation.

**The Corporation's response.** *Management agrees with the recommendations and had already initiated a review of the EMS, starting with the Environmental Policy which was approved by the Board of Directors in December 2011. Management is now working at aligning the EMS with the ISO 14000 standards which support the recommendation of the system audits including training, identification and reporting of non-conformities, operational controls and other items for effectiveness, clear definitions of the nature and type of reporting required to the various parties, and the clear definition and monitoring of specific training requirements, this EMS review should answer all these issues.*

## Conclusion

Based on the criteria established for the examination, there is reasonable assurance that there were no significant deficiencies in the systems and practices we examined. We have also pointed out, throughout this report, various opportunities for improving the quality of these systems and practices. Such improvements would enable the Corporation to continue to provide safe, reliable transit through the Seaway waterway system in a cost-effective, efficient and environmentally-responsible manner, and to manage its operations economically and effectively.

## About the Special Examination

All of the audit work in this report was conducted in accordance with the standards for assurance engagements that the Canadian Institute of Chartered Accountants set. While KPMG adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

### Special Examination Objectives

As stated previously, under Section 85 of the *Canada Marine Act*, The St. Lawrence Seaway Management Corporation is required to maintain financial and management control and information systems and management practices that provide reasonable assurance that: its assets are safeguarded and controlled; its transactions are in accordance with the Act; its financial, human, and physical resources are managed economically and efficiently; and its operations are carried out effectively. Section 87 of the *Canada Marine Act* also requires the Corporation to have a special examination of these systems and practices carried out at least once every five years.

The opinion for this special examination is found on page 3 of this report. Special examinations answer the question: do the corporation's systems and practices provide reasonable assurance that assets are safeguarded and controlled, resources are managed economically and efficiently, and operations are carried out effectively?

### Key Systems and Practices Examined and Criteria

At the start of this special examination, we presented the Corporation's Audit Committee with an audit plan that identified the systems and practices and related criteria that we considered essential to providing the Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources managed economically and efficiently, and its operations carried out effectively. These are the systems and practices and criteria we used for examination.

Key System and Practice Examined	Main Criteria
<b>Strategic Planning</b>	The SLSMC has clearly defined strategic directions and specific and measurable goals and objectives to achieve its legislative and public policy mandate. Its strategic direction and goals take into account legislative and regulatory requirements, identified risks, and the need to control and protect its assets and manage its resources economically and efficiently.
<b>Procurement</b>	The SLSMC has processes and practices in place for transparent and fair procurement that balance the need to protect the Corporation's interests and provide cost effective contracts and supply arrangements.
<b>Human Resources</b>	Human resources are managed in a manner that engages employees and provides the SLSMC with the human resource capacity and the work environment needed to support the achievement of its goals and objectives.
<b>Infrastructure</b>	The SLSMC has plans, systems, and practices in place for the acquisition, maintenance, modification, and replacement of the infrastructure assets that SLSMC manages on behalf of Transport Canada. The SLSMC uses these plans, systems, and practices to ensure continuity of its operations and to meet its current and future requirements cost-effectively.
<b>Performance Measurement, Monitoring and Reporting</b>	The SLSMC has identified and implemented performance indicators to measure the achievement of its mandate and corporate objectives. It also has reports that provide complete, accurate, timely, and balanced information for decision making and accountability reporting.
<b>Emergency Preparedness and Environment</b>	The SLSMC has mechanisms in place to help ensure that risks related to the environment and emergency situations are identified, mitigated, monitored, and reported.



The Board reviewed and accepted the suitability of the criteria used in the audit.

### Audit Work Completed

Our examination covered the systems and practices in place between June 2011 and December 2011. We also examined certain matters that preceded the starting date of the examination. Audit work for this special examination was substantially completed on January 4, 2012.

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# **Appendix A – List of Recommendations**

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The following is a list of recommendations found in the Special Examination Report. The numbers in parentheses indicate the page number on which the recommendation is found.

Recommendation	Management Response
<p><b>Strategic Planning</b></p> <p>The SLSMC should strengthen its strategic and operational planning processes by developing and implementing a process to develop medium term plans for key departments that identify required resources, projects, and key initiatives for the current year and beyond, along with a risk and environmental analysis, and which are monitored and updated as necessary based on new information on performance results and future priorities. As additional information on the results of current strategies and initiatives is available with greater certainty, the Corporation should update and document its longer term strategy to share with selected stakeholders to help guide future priorities and define the future needs of the Corporation. (p.10)</p>	<p>The Corporation agrees that developing and implementing medium term plans for key departments that identify required resources, projects and key initiatives for the a three-year horizon, along with risk and environmental analyses which are monitored and updated regularly would strengthen its strategic and operations planning processes. Those plans which already exist including HR, operations and maintenance will be modified to use a standardized format and include all the above mentioned sections and a formal process to develop and maintain three-year operational plans for all key processes including marketing, IT/OT and stakeholder engagement will be implemented. Furthermore, as additional information on the results of the current strategies and initiatives becomes available with greater certainty, the Corporation agrees to update and document its longer term strategy to share with selected stakeholders as a guide in establishing a common vision for action.</p>
<p><b>Infrastructure</b></p> <p>The SLSMC should define and implement a clear process for the approval and management of significant and major improvement projects. This should include clearly defined business case requirements, allow for the assessment of ongoing viability at key phases of the project, and define ongoing reporting and monitoring requirements for management, the Board, and the Capital Committee that consider the total life of the project, project costs, benefits, feasibility, and impact on stakeholders. (p.13)</p>	<p>Management agrees with the recommendation and will develop and implement a process for the management of significant and major improvement projects along with defined reporting requirements for management and other approval authorities.</p>
<p><b>Performance Measurement, Monitoring and Reporting</b></p> <p>The SLSMC should continue its efforts to strengthen its performance measurement process by:</p> <ul style="list-style-type: none"> <li>▪ further streamlining the number of performance targets, indicators, and outcomes that are monitored at the executive committee level; and</li> <li>▪ implementing procedures to verify the integrity of all key performance information provided for internal and interim reporting. (p.18)</li> </ul>	<p>The Corporation agrees with the recommendation recognizing the various tools used at the Executive Committee level fulfill distinct and important needs. The Measurement System is used to track quantitative indicators while the Initiative Tracking Tool serves as the vehicle to monitor qualitative progress against strategic objectives and discuss any adjustments that may be required. The Corporation will continue to improve each tool as part of its overall strategic performance measurement process. The Corporation further agrees with the need for continued reinforcement of the processes already in place to ensure integrity of the information being reported.</p>

Recommendation	Management Response
<p data-bbox="188 233 683 260"><b>Emergency Preparedness and Environment</b></p> <p data-bbox="188 270 808 336">The SLSMC should strengthen aspects of its existing environmental management system by:</p> <ul data-bbox="188 363 808 756" style="list-style-type: none"> <li data-bbox="188 363 808 499">■ incorporating periodic EMS system audits that examine training, identification and reporting of non-conformities, operational controls, and other items for effectiveness in existing monitoring activities;</li> <li data-bbox="188 527 808 625">■ more clearly defining the nature and type of reporting required for the Board, Legal Counsel, and public reporting on environmental matters; and</li> <li data-bbox="188 653 808 756">■ more clearly defining and monitoring the specific environmental training requirements for specific roles within the Corporation. (p. 20 to 21)</li> </ul>	<p data-bbox="837 270 1468 701">Management agrees with the recommendations and had already initiated a review of the EMS, starting with the Environmental Policy which was approved by the Board of Directors in December 2011. Management is now working at aligning the EMS with the ISO 14000 standards which support the recommendation of the system audits including training, identification and reporting of non-conformities, operational controls and other items for effectiveness, clear definitions of the nature and type of reporting required to the various parties, and the clear definition and monitoring of specific training requirements, this EMS review should answer all these issues.</p>