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## **Final Report**

**2006-812**

### **Audit of the Management Practices of PWGSC Bridges and Dams used as Bridges**

**Audit and Evaluation Branch**

**2007-12-20**



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## **Main Points**

### **What was examined**

Public Works and Government Services Canada (PWGSC) is responsible for managing federal office accommodation and a number of non-office federal real property holdings, including engineering assets such as bridges and dams. The Minister's mandate includes managing and maintaining federal real property in a proper fashion and advising the public on the safe access to such property. The Minister's duty to maintain the safety and structural integrity arising from real property ownership is identified under various legislative frameworks. The *Bridges Act*, 1985, states the Minister is directly responsible for the administration, which includes the responsibility to perform inspections and examinations, of bridges identified in the *Act*. The Minister is also responsible for dams used as bridges under the *Act respecting certain works on the Ottawa River* and the *Public Works and Government Services Act*.

The inventory of engineering assets to be preserved under the Departmental *Bridge Inspection and Evaluation Policy* and draft Departmental *Dam Inspection and Evaluation Policy* totals 50 structures, including 25 bridges along the British Columbia portion of the Alaska Highway, five bridges on the Ottawa River between Ontario and Quebec, one bridge between Campbellton, New Brunswick and Pointe-a-la Croix, Quebec, one lock and dam in Lockport, Manitoba, one bridge in Kingston, Ontario, one bridge in Burlington, Ontario, one bridge on the Portage Channel at French River, Ontario, eight bridges in the Vieux Port de Montreal, a railway bridge in New Westminster, British Columbia, and six dams in Ontario and Quebec.

The replacement value of the portfolio of engineering assets is considered to be \$2.3B and the budget in 2005-06 was approximately \$26M in operating and maintenance and \$34M in capital. The management and operation of these assets directly employs close to 100 employees across the country.

### **Why it is important**

Public capital infrastructures provide a variety of services. Canadians expect to travel over bridges and to live nearby dams in relative safety. The preservation of bridges and dams is part of a larger North American public sector debate on how to effectively plan and manage transportation infrastructure. Governments must consider the age of assets, the increasing traffic and weight of transportation vehicles and the effect of corrosive salt on existing roadways and bridges. Those responsible for bridges in Canada have to address these factors.

### **What was found**

Although some progress has been made to improve PWGSC management practices over PWGSC-owned bridges and dams, there are several areas that require further attention.

Beginning 25 years ago, PWGSC was given a mandate to divest itself of its engineering assets. To date, it has successfully divested 10 of its 60 bridges and dams identified for divestiture and is

currently negotiating the transfer of three dams. As a result of a number of obstacles to divestiture and a lack of ongoing, stable funding to perform major repairs and negotiate transfers to other jurisdictions, PWGSC has had to manage a high level of risk in managing its bridges and dams. The most significant risk being the Department is unable to divest itself of the financial and administrative burden related to the assets. Recently, the Real Property Branch created a new Directorate whose mandate is to identify strategies for addressing these risks. Such strategies include considering alternative forms of asset transfer, such as provincial or public partnership, and actions to obtain the necessary funding for repairs and capital investment, as well as funding to negotiate transfers to other jurisdictions. We found that some progress has already been made. We believe that the Real Property Branch should also consider how it would manage assets in the long term of which it cannot divest itself.

We found that a sound policy framework exists, but that roles and responsibilities need to be clarified. This is of particular importance given that accountability for engineering assets rests at the National Headquarters level, while responsibility for managing these assets rests at the Regional level. Monitoring of asset management activities at the Headquarters level also needs to be strengthened to ensure that the Department can demonstrate that it has exercised due diligence in discharging its accountabilities despite these shared responsibilities between Headquarters and Regions.

We also found some continuing weaknesses in the management control framework:

- There is no single inventory of bridges and dams.
- Inspection documentation at Headquarters was incomplete and as such, the Branch was not able to demonstrate adequate monitoring of compliance with departmental policies.
- A National Investment Plan, which provides management with important information on the situation of its bridges and dams on a National basis was prepared, however, individual Asset Management Plans, which would consider the life-cycle management of each asset, remained to be completed.
- Supporting guidance on the monitoring of regional activities and inspection results needs to be improved.

## **Recommendations**

The Assistant Deputy Minister, Real Property Branch (RPB) should:

- 1) develop and implement a national strategy for divestiture or retention and management, and pursue necessary funding for bridge and dam engineering assets;
- 2) clarify national and regional roles and responsibilities for the stewardship and asset management of bridge and dam engineering assets and ensure adequate monitoring to ensure roles and responsibilities are adequately discharged;
- 3) ensure that there is a single inventory of bridge and dam engineering assets and develop Asset Management Plans for each bridge and dam engineering asset; and
- 4) ensure that appropriate procedures exist, are approved, and communicated.

## **Management Response**

In this report, the Chief Audit Executive raises some important issues regarding the Real Property Branch (RPB) management practices related to Public Works and Government Services Canada (PWGSC) Bridges and Dams. RPB is in agreement with your recommendations in this report and will work with the appropriate stakeholders to implement actions in a timely manner, specifically:

Recommendation 1 – We agree with this recommendation. RPB is developing and implementing a national strategy for divestiture or retention and management. We are seeking approval to move the divestiture agenda forward, along with an appropriate level of funding. Actions will be completed in fiscal year 2008/2009.

Recommendation 2 – We agree with this recommendation. Mr. John McBain was appointed Associate Assistant Deputy Minister, Real Property Branch December 3, 2007. Mr. McBain will provide strategic and corporate support to the Assistant Deputy Minister in the management and operations of the Real Property Branch. Through the establishment of Engineering Assets Strategy Directorate (EASD) in January 2007, significant work has commenced on clarifying national and regional roles and responsibilities. RPB will develop a governance framework for engineering assets with clear lines of accountability. Actions will be completed by April 2008.

Recommendation 3 - We agree with this recommendation. While we know what assets we have, we recognize that our database does not reflect the assets in a consistent manner. We acknowledge that improvements have to be made. RPB will also develop Asset Management Plans for each of the bridge and dam engineering asset. Actions will be completed by June 2008.

Recommendation 4 - We agree with this recommendation. RPB will review and update all of the appropriate policies, procedures, and guidelines. RPB will also develop or update policies, procedures, and guidelines where required and communicate all revised and new direction to key stakeholders. Actions will be completed by June 2008.

## **Introduction**

Public Works and Government Services Canada (PWGSC) has conducted several audits and follow-up audits concerning the safety of bridges. A 1999 Audit of the Safety of Bridges found that while PWGSC adhered to the legislative framework in place, there were gaps and weaknesses in the management control framework, such as a need for a more stringent requirement for underwater inspections, load evaluations and maintenance standards. PWGSC prepared a management action plan to address these shortcomings by 2000. A 2001 follow-up audit reported that management actions from the 1999 audit had not been fully implemented. Additional follow-up work conducted in 2006 confirmed that the status of a number of the original 1999 actions could not be fully validated. In light of these findings, the Audit and Evaluation Branch proposed this audit of the management practices related to bridges under PWGSC's control, which was approved as part of the 2006-07 Audit and Evaluation Plan.

## **Background**

PWGSC is responsible for managing federal office accommodation and a number of non-office federal real property holdings, including engineering assets such as bridges and dams. The Minister's mandate includes managing and maintaining federal real property in a proper fashion and advising the public on the safe access to such property. The Minister's duty to maintain the safety and structural integrity arising from real property ownership is identified under various legislative frameworks. The *Bridges Act*, 1985, states the Minister is directly responsible for the administration, which includes the responsibility to perform inspections and examinations, of bridges identified in the *Act*. The Minister is also responsible for dams used as bridges under the *Act respecting certain works on the Ottawa River* and the *Public Works and Government Services Act*.

Within PWGSC, the Assistant Deputy Minister, Real Property Branch, is accountable for managing PWGSC real property assets across the country. The inventory of engineering assets to be preserved under the Departmental *Bridge Inspection and Evaluation Policy* and the draft Departmental *Dam Inspection and Evaluation Policy* totals 50 structures, including 25 bridges along the British Columbia portion of the Alaska Highway, five bridges on the Ottawa River between Ontario and Quebec, one bridge between Campbellton, New Brunswick and Pointe-à-la-Croix, Quebec, one lock and dam in Lockport, Manitoba, one bridge in Kingston, Ontario, one bridge in Burlington, Ontario, one bridge on the Portage Channel at French River, Ontario, eight bridges in the Vieux Port de Montréal, a railway bridge in New Westminster, British Columbia, and six dams in Ontario and Quebec.

The replacement value of the portfolio of engineering assets is considered to be \$2.3B and the budget in 2005-06 was approximately \$26M in operating and maintenance and \$34M in capital. The management and operation of these assets directly employs close to 100 employees across the country.

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For many years PWGSC has helped build and maintain Canadian landmarks from coast-to-coast-to-coast. Events in the last 25 years have impacted how bridges and dams and other unique federal government infrastructure assets have been managed.

Exhibit 1 - Chronology of the Divestiture Mandate for Engineering Assets

Year	
<b>1980</b>	The Minister of Public Works was directed to divest the department of further responsibility for the Marine and Highway Programs.
<b>1985</b>	The Report of the <b>Task Force on Program Review</b> , also referred as the Nielsen Task Force Report, directed the Minister of Public Works to divest itself of the responsibility for engineering assets, including bridges and dams, as these properties were not considered required for program purposes.
<b>1993</b>	Public Works Canada reviewed the divestiture activity and established a <b>Divestiture Strategy</b> that sought ongoing funding for the assets under divestiture, while acknowledging the Department's mandate to divest of the assets in the long-term.
<b>1994</b>	Public Works and Government Services Canada sought approval for Part I of the Department's Long-Term Capital Plan: <b>National Investment Strategy</b> . Main elements of the 1993 <b>Divestiture Strategy</b> were included as part of this submission. The government approved funds for the office accommodation program portion but not for divestitures or recapitalization funding for bridges and dams. This first <b>National Investment Strategy</b> , established critical targets, objectives, guiding principles and a national strategic perspective for the Real Property Business Line.
<b>2000</b>	Public Works and Government Services Canada completed a second <b>National Investment Strategy</b> that confirmed the Real Property Branch's focus to divest itself responsibility for its bridges and dams through innovative approaches. Subject to adequate financing, marine structures and highway development assets were to be brought up to, and maintained at, a state of repair that minimized federal liabilities.
<b>2007</b>	<b>Program Integrity funding</b> has provided extra funding for repairs since the early 2000s on selected assets, however this funding will sunset in 2007-08, reducing the department's resources available for these expenditures.

## Focus of the Audit

The objective of this audit was to assess whether the management practices related to bridges and dams are adequate to ensure that Public Works and Government Services Canada (PWGSC) discharges its responsibilities under relevant authorities. Our audit focused on key elements of the management control framework that supports these management practices, including planning, accountabilities, monitoring, resources, risk management, and reporting. Our audit was conducted from January to August 2007 and focused on the activities conducted within the Real Property Branch from fiscal year 2001 to fiscal year 2006.

Our audit was not designed to assess the condition or safety of bridges and dams used as bridges, but rather to examine the management practices to support the discharge of responsibilities under relevant authorities. We examined documentation, such as strategic plans, policies, procedures manuals, and inspection manuals to assess whether a sound management framework existed. We

also examined the inventory records of engineering assets to identify those bridges and dams used as bridges that would be managed under this management framework. From these records, we selected a sample of bridges and dams used as bridges and reviewed the inspection reports to determine whether the inspections had been completed and whether their completion was monitored and incorporated into planning. We did not assess the quality of the inspections or verify their compliance with relevant authorities.

More information on the objectives, scope, approach, and criteria can be found in the section *'About the Audit.'*

## **Observations**

### **1.0 Divestiture Mandate**

#### 1.1 Limited success with the divestiture mandate

Inherent in an examination of management practices related to bridges and dams is the longstanding government direction initially in 1980 and then again in 1985 in the Report of the Task Force on Program Review, also referred as the Nielsen Task Force Report. This Report directed the department to divest itself of its marine and land assets, including its bridges and dams.

We expected to see substantive results towards divestiture of bridge and dam assets. However, limited progress has been achieved in the past 25 years. Initially, the department successfully transferred some of its attractive assets, such as the 1999 transfer of the re-built Perley Bridge in the National Capital Area. Other assets required repairs or repair funding before divestiture could be achieved.

Of the 60 bridges and dams identified for divestiture, PWGSC has transferred 10 bridges. A 1993 Real Property Branch internal review identified the following obstacles to divestiture:

- bridges were generally in poor condition;
- divestiture packages were not always seen as advantageous by other jurisdictions;
- bridges preserve the federal government presence in the regions;
- intense negotiations were costly; and
- legal and environmental liabilities inhibited interest from other levels of government.

Many of these obstacles remain unchanged today. Since 2002, the Real Property Branch has had limited success in achieving its divestiture mandate. Further, the rust-out of these assets has increased over the past 25 years. There are limited organizations that could or would be interested in such assets, given the resource demands of these assets are significant. As a result, the 2006 National Investment Plan concluded that PWGSC's divestiture strategy was ineffective and outdated.

Because of the limited success in achieving the divestiture mandate, the lack of ongoing stable funding to negotiate transfers to other jurisdictions, combined with the fact that funding to perform major capital repairs since the year 2000 has come from Program Integrity Funding, which will sunset, we found that management has had to manage a level of risk regarding PWGSC bridges and dams used as bridges. The most significant risk being the Department is unable to divest itself of the financial and administrative burden related to the assets. More specifically, these risks relate to the possibility interested buyers cannot be found; the concern as the assets age, the financial and administrative burden could increase; and the likelihood alternative funding sources will need to be identified on a regular basis.

Exhibit 2 - Alexandra Bridge from Ottawa, Ontario to Gatineau, Quebec



In January 2007, the Engineering Assets Strategy Directorate was created within the Real Property Branch. This Directorate is responsible for developing strategies related to the potential divestiture and possible long-term stewardship of PWGSC's inventory of engineering assets. We found that since its creation, the sector has made some progress in redefining and implementing the divestiture mandate, including initial steps to transfer three dams in Quebec, and considering alternative forms of asset transfer, such as provincial or public partnership. We believe that it should also consider how it would manage assets in the long term of which it cannot divest itself.

### 1.2 Repair and capital funding uncertain

As long as the Department remains the custodian of engineering assets, it has a duty to maintain these assets to standards. However, as assets age, capital investment becomes increasingly necessary to meet those standards.

While the Department believes it has maintained its engineering assets to standards through regular inspection and repair of identified concerns, its ongoing funding envelope has been restricted to inspecting assets and covering minor repairs. Supplementary funding to support capital improvement and major repairs to assets was provided through Program Integrity exercises. However, funding associated with these programs will sunset in 2007-08. Recently, the government approved \$30M from the Management Reserve to cover major repairs to the Alexandra Bridge in Ottawa, Ontario.

The Department has determined that many of these assets are unattractive to potential owners because they have aged beyond their life span, are in need of upgrading, rebuilding, or replacement, and/or are very costly to maintain. Further, a risk assessment completed in 2006 indicates that 35 of the 50 remaining engineering assets have a high likelihood of requiring the

structure to be closed or functionality to be limited within the next 10 years unless additional major capital investment is made.

To address the financial gap that will be created after the sunset of Program Integrity Funding, the newly created Engineering Assets Strategy Directorate is taking actions to obtain additional funding for repairs and capital investment, as well as funding to negotiate transfers to other jurisdictions. Some of these actions are in progress.

## **2.0 Management Control Framework**

### 2.1 A sound policy framework exists, but roles and responsibilities need to be clarified

To help ensure appropriate accountability and support achievement of objectives, it is important that a sound policy framework exist and that roles and responsibilities are clearly defined, well communicated, and understood.

In May 2001, the Real Property Branch developed a *Bridge Inspection and Evaluation Policy*. The purpose of this policy is “to ensure that, in the interest of preservation of the assets, and public safety, PWGSC bridges are maintained to a level of service consistent with industry codes and standards.” The Policy provides general assignment of roles and responsibilities between various Directorates at Headquarters and the Regional Offices. It was reported that recently, PWGSC conducted a review of the Policy in cooperation with Parks Canada that concluded that the Policy is consistent with other transportation agencies in North America. Further, the Policy is supported by the *Bridge Inspection Manual 2001* which must be adhered to when performing regular and ongoing structural bridge inspections.

We also found that the Real Property Branch developed a *Dams Inspection and Evaluation Policy* in 2004 and an *Engineering Asset Management Policy* in 2006, however both are still in draft form. The draft *Dam Inspection Manual* is available only in French.

Because accountability for engineering assets rests at the National Headquarters level, but responsibility for managing these assets rests at the Regional level, we expected that roles and responsibilities between the various players would be documented and clearly communicated.

We found that Memorandums of Understanding (MOU) between National Headquarters and Regions for bridges and dams existed in Atlantic, Ontario, Western, Pacific and the National Capital Area (NCA); however, they did not always assign appropriate accountability for all roles responsibilities. As a result, some important responsibilities were not assigned to anyone and sharing of responsibilities between Headquarters and Regions was not always clearly defined. We also found that there was no MOU in Quebec Region.

Of specific concern are the unclear assignment of roles and responsibilities relating to the Old Port of Montreal within the Quebec Region. Although a 1981 agreement created the Old Port of Montreal Corporation to manage the Port, the Minister’s duty to maintain assets in a safe condition binds the Federal Crown to the bridges located at the Old Port of Montreal. We found that the roles and responsibilities document provided by the Quebec Region was general in

nature and the agreement between the Old Port of Montreal Corporation and PWGSC had not been amended and clarified to address concerns about the fragmented approach to the management of assets as recommended in an internal review conducted in 2001.

Exhibit 3 - La Salle Causeway Kingston, Ontario



Without clear roles and responsibilities it is possible that important compliance activities, such as inspections, training, and reporting, may not be carried out in an appropriate and/or timely manner. This is of particular importance in situations where those that are responsible for actions, in this case the Regions, are different from those who are accountable for those actions, in this case National Headquarters.

## 2.2 Monitoring of compliance with departmental policies needs to be improved

Although accountability for managing engineering assets rests with the Minister, as discussed previously, responsibility for managing is shared by a number of different Sectors and Directorates at Headquarters and Regions. To ensure accountability, it is critical that compliance to departmental policies be monitored. Under these policies, responsibility for monitoring rests with the Professional and Technical Program Sector at Headquarters.

We expected that the sector would monitor compliance with departmental policies. We found that documented evidence to support that monitoring activities are taking place was inconsistent. For example, the Annual Summary Inspection Report of PWGSC Bridges was prepared and distributed to senior managers, but it was not clear that the information had been reconciled to the Building Management Plans. Management could demonstrate more clearly the linkages between the annual Building Management Plans process and the annual PWGSC bridge inspection process, and that policies are being monitored appropriately.

Exhibit 4 - Rideau Falls Dam  
Ottawa, Ontario



To ensure that the Department can demonstrate that it has exercised due diligence in discharging its accountabilities despite shared responsibilities, it is important that compliance with departmental policies be monitored and that these monitoring activities be documented.

### 2.3 No central inventory of PWGSC bridges and dams

Accurate, complete and timely information on the age, condition, costs and location of the departmental bridge and dam inventory helps to ensure that the Department can discharge its mandated responsibilities related to all those bridges and dams for which it is responsible.

We found that there is no single reliable mechanism for identifying the inventory of engineering assets, as there is more than one source of information and the various sources are not cross-referenced or reconciled to each other. Further, we found that a review of asset records was not consistently performed. The Annual Summary Inspection Report of PWGSC Bridges is relied upon as a source of information on the inventory of PWGSC bridges and dams. The most recent report issued, in July 14, 2006, included 38 structures; missing were the bridges in the Vieux Port of Montreal and some dams. Information on these other bridges and dams was contained in other documents. We were pleased to note that a master inventory database of bridge and dam information is now being developed.

Without complete and accurate inventory records that are periodically monitored for accuracy and completeness, there is a risk that the department cannot demonstrate that it is meeting its obligations and responsibilities related to all bridges within its responsibility.

### 2.4 A National Investment Plan was created, however Asset Management Plans did not exist

Management of engineering assets requires an understanding of the age, condition, the impact and the costs of multi-year repairs to maintain the assets integrity. Further, long-term plans that identify and prioritize repair and maintenance projects based on risk and available funding, as well as specific actions to manage the assets are critical to demonstrate good management.

We expected that Asset Management Plans would be created for each of the assets and that they would provide financial analysis, a building condition report, a threat and risk assessment, and a business continuity plan. We also expected that results of inspections, needed repairs, and other concerns, including environmental, would be reflected in the Asset Management Plans.

We found that a ten-year National Investment Plan had been created in 2006, although not all of the 50 bridges and dams identified were included in the Plan. The purpose of the long-term plan was to provide an indication of the investment that would be required in the event that divestiture was not achieved. It notes that major reinvestment is required and highlights several major projects.

However, Asset Management Plans, which would consider the life-cycle management of each asset and review all costs related to all options including possible demolition, have not yet been prepared. In 2005, a prototype report was prepared for the Des Allumettes Bridge. We understand that management is planning to prepare Asset Management Plans for the remaining engineering assets in the near future based on the prototype that already exists, with the incorporation of lessons learned from its preparation. It is important that these Plans reflect the results of inspections and be updated on a regular basis as new inspection results become available and repair work is completed

Asset Management Plans will support the divestiture strategy, as well as provide credible information on short and long-term funding requirements related to the bridges and dams under the responsibility of PWGSC.

### 2.5 Additional supporting guidance is required

Procedures manuals provide guidance to help ensure that activities are carried out in a consistent, timely, and appropriate manner.

We expected that procedures manuals would exist and be current. We found that a *Bridge Inspection Manual* to guide the inspection activities in the regions exists. However, procedures manuals to guide the activities in Headquarters, in particular in relation to monitoring of regional activities and actions to be taken based on the results of inspections, did not exist. We also found that Emergency Response Plans existed for some bridges and dams notably in the National Capital Area and along the Alaskan Highway, but that emergency contact information in the NCA was generally out of date. Finally, we noted that Emergency Response Plans did not exist for other bridges and dams.

Without up-to-date approved procedures to provide guidance for employees, there is a risk that important activities will not be carried out as prescribed. Out of date emergency contact information could result in delays in responding to emergencies.

### 2.6 Monitoring of compliance of inspections with departmental policies needs to be strengthened

The *Bridge Inspection and Evaluation Policy* and the draft *Dam Inspection and Evaluation Policy* provide guidance on the conduct of inspections. Compliance with these policies ensures the adequate discharge of the Department's responsibilities. Further, the *Bridge Inspection Manual* and *Dam Inspection Manual* provide specific direction on the conduct of inspections.

Exhibit 5 - Trout River Bridge, Alaska Highway, British Columbia



We expected that all inspections would be performed in compliance with the *Bridge Inspection and Evaluation Policy* and the draft *Dam Inspection and Evaluation Policy*. We also expected that inspection reports and results would be monitored for compliance to Policy requirements and for the identification of needed repairs.

As per the departmental policies, Regions are responsible for ensuring that inspections, and needed repairs, are conducted. However, these policies hold Headquarters accountable for ensuring that inspections conducted in

Regions are completed in compliance with these policies.

The Annual Summary of Bridge Inspection Report provides management with information on inspection results, repair requirements, and planned actions. The information contained in these reports is reviewed and monitored by the Professional and Technical Program Sector at Headquarters, which is responsible for monitoring inspection reports and results to ensure compliance with departmental policies. However, we found that they did not have copies of all bridge and dam inspections in its possession, and as previously noted, eight bridges and several dams were not on the Summary Report. Further, we determined that inspections of the eight bridges at the Vieux Port de Montreal were missing, although they are now being completed. Finally, we did not find any documented evidence of review to ensure that the inspections comply with departmental policies. Headquarters had not maintained sufficient documentation on file to demonstrate to the auditors that it was adequately monitoring the inspections to ensure compliance with these policies.

Without consistent and timely inspections of the inventory of aging bridges and dams in accordance with departmental policies, there is a risk that needed repairs may go undetected and the risks to the Crown will increase. It is important that the Department demonstrate that it has exercised proper due diligence by monitoring to ensure that inspections of bridges and dams are conducted in accordance with departmental policies.

#### 2.7 Risk assessment is ongoing but incomplete

Risk management is a systematic approach to identifying, assessing and managing risks, including the identification and implementation of strategies to mitigate the identified risks. These risk strategies are then monitored and evaluated to ensure that risks are adequately managed and that any residual risk is acceptable.

We found that a preliminary profiling and ranking of risks at the portfolio level had been developed. We also found that an environmental scan has been completed in consultation with the Office of the Chief Risk Officer. Further, a portfolio risk summary has been completed and a more precise assessment of risk has been made. Finally, we found that a formal risk assessment of individual bridges and dams is in progress.

We encourage the completion of the formal risk assessment as this information is important to the development of the Asset Management Plans.

#### 2.8 Some progress has been made in implementing 1999 action plan items

We noted some progress has been achieved in implementing management actions from the 1999 audit. Exhibit 6 below summarizes our assessment given the significance and complexity of the issue, and the time that has elapsed since the recommendation was made.

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Exhibit 6 - Assessment of progress in implementing 1999 audit recommendations

<b>Recommendation</b>	<b>Progress</b>
A policy on the standard to be followed in inspecting, evaluating, and maintaining bridges within the PWGSC portfolio that is generally consistent with provincial standards should be approved and promulgated.	● <b>Satisfactory progress.</b> The Real Property Branch has finalized and distributed a <i>Bridge Inspection and Evaluation Policy</i> supported by a <i>Bridge Inspection Manual</i> and has a draft <i>Dam Inspection and Evaluation Policy</i> and <i>Engineering Asset Management Policy</i> .
Responsibilities are to be clarified so that there is a clear understanding amongst all personnel involved as to their respective responsibilities.	● <b>Some progress.</b> The Real Property Branch has made efforts to establish roles and responsibilities in regional memoranda. However, the responsibilities between headquarters and the Region still need to be enhanced.
Planning should take a longer-term focus and the inspection process should better support it.	● <b>Some progress.</b> The Real Property Branch ensured short-term inspection funding was in place. Management was unable to meet long-term planning needs. [ * ]].
The Assistant Deputy Minister, Real Property Branch should ensure there is ongoing monitoring and periodic reporting to senior management on the status of the bridges and the practices followed.	● <b>Some progress.</b> The Real Property Branch provided Annual Summary Bridge Inspection reports to its management team. However, the responsibilities for monitoring due diligence and compliance do not appear adequately established as recommended in June 2001 Follow-up Audit of the Safety of Bridges.

- **Significantly addressed.** Most of the original significant audit findings have been fully addressed.
- **Satisfactory progress.** Substantial progress has been made in addressing the original audit findings, but some additional action is still required.
- **Some progress.** Some progress has been made in addressing the original audit findings, but considerable additional action is still required to achieve the desired results.
- **Unsatisfactory progress.** Progress has not been made in addressing the original audit findings, and action remains outstanding.

## **Conclusions**

Although some progress has been made to improve PWGSC management practices over PWGSC-owned bridges and dams, there are several areas that require further attention.

Beginning 25 years ago, PWGSC was given a mandate to divest of its engineering assets. To date, it has successfully divested 10 of its 60 bridges and dams identified for divestiture. PWGSC has had to manage a high level of risk in managing its bridges and dams used as bridges as a result of a number of obstacles to divestiture, and a lack of funding to negotiate transfers to other jurisdictions combined with the fact that since 2000 funding to perform major capital repairs has come from Program Integrity Funding, which will sunset. The most significant risk being the Department is unable to divest itself of the financial and administrative burden related to the assets. Recently, it has created a new Directorate whose mandate is to identify strategies for addressing these risks. Such strategies include considering alternative forms of asset transfer, such as provincial or public partnership and actions to obtain the necessary funding for repairs and capital investment, as well as funding to negotiate transfers to other jurisdictions. We found that some progress has already been made. We believe that the Real Property Branch should also consider how it would manage assets in the long term of which it cannot divest itself.

We found that a sound policy framework exists, but that roles and responsibilities need to be clarified. This is of particular importance because accountability for engineering assets rests at the National Headquarters level, but responsibility for managing these assets rests at the Regional level. Monitoring of asset management activities at the Headquarter level also needs to be strengthened to ensure that the Department can demonstrate that it has exercised due diligence in discharging its accountabilities despite these shared responsibilities.

We also found some continuing weaknesses in the management control framework:

- There is no single inventory of bridges and dams.
- Inspection documentation at Headquarters was incomplete and as such, it was not possible to demonstrate adequate monitoring of compliance with departmental policies.
- A National Investment Plan, which provides management with important information on the situation of its bridges and dams on a National basis was prepared. However, individual Asset Management Plans, which would consider the life-cycle management of each asset, remained to be completed.
- Supporting guidance on the monitoring of regional activities and inspection results needs to be improved.

Many of the obstacles to divestiture continue to exist. The risk of rust-out continues to increase and the 50 bridges and dams under the responsibility of PWGSC are almost 25 years older. Without an achievable divestiture strategy and ongoing stable funding to perform major repairs and negotiate transfers to other jurisdictions, management will continue to have to manage a high level of residual risk in managing PWGSC bridges and dams. And until such transfer takes place, PWGSC remains responsible to exercise due diligence in managing its bridges and dams and protecting public safety in accordance with relevant legislation.

## **Recommendations**

The Assistant Deputy Minister, Real Property Branch (RPB) should:

- 1) develop and implement a national strategy for divestiture or retention and management, and pursue necessary funding for bridge and dam engineering assets;
- 2) clarify national and regional roles and responsibilities for the stewardship and asset management of bridge and dam engineering assets and ensure adequate monitoring to ensure roles and responsibilities are adequately discharged;
- 3) ensure that there is a single inventory of bridge and dam engineering assets and develop Asset Management Plans for each bridge and dam engineering asset; and
- 4) ensure that appropriate procedures exist, are approved, and communicated.

## **Management Response**

In this report, the Chief Audit Executive raises some important issues regarding the Real Property Branch (RPB) management practices related to Public Works and Government Services Canada (PWGSC) Bridges and Dams. RPB is in agreement with your recommendations in this report and will work with the appropriate stakeholders to implement actions in a timely manner, specifically:

Recommendation 1 - We agree with this recommendation. RPB is developing and implementing a national strategy for divestiture or retention. We are seeking approval to move the divestiture agenda forward, along with an appropriate level of funding. Actions will be completed in fiscal year 2008/2009.

Recommendation 2 – We agree with this recommendation. Mr. John McBain was appointed Associate Assistant Deputy Minister, Real Property Branch December 3, 2007. Mr. McBain will provide strategic and corporate support to the Assistant Deputy Minister in the management and operations of the Real Property Branch. Through the establishment of Engineering Assets Strategy Directorate (EASD) in January 2007, significant work has commenced on clarifying national and regional roles and responsibilities. RPB will develop a governance framework for engineering assets with clear lines of accountability. Actions will be completed by April 2008

Recommendation 3 - We agree with this recommendation. While we know what assets we have, we recognize that our database does not reflect the assets in a consistent manner. We acknowledge that improvements have to be made. RPB will also develop Asset Management Plans for each of the bridge and dam engineering asset. Actions will be completed by June 2008

Recommendation 4 - We agree with this recommendation. RPB will review and update all of the appropriate policies, procedures, and guidelines. RPB will also develop or update policies, procedures, and guidelines where required and communicate all revised and new direction to key stakeholders. Actions will be completed by June 2008.

## **About the Audit**

### **Objective**

The objective of the audit was to assess whether the management practices related to bridges and dams, for which PWGSC is the owner/custodian, are adequate to ensure that Public Works and Government Services Canada (PWGSC) discharges its responsibilities in accordance with relevant legislation, specifically:

- the *Bridges Act, 1985*, which states the Minister is directly responsible for the administration, that is the inspection and examination, of bridges built or constructed by specific companies defined in that Act.
- the *Crown Liability and Proceedings Act, R.S.C. 1985, c. C-50*, the *Canada Labour Code, R.S.C. 1985, c. L-2*, the *Canada Occupational Health and Safety Regulations, SOR/86-304* and the various provincial *Occupiers' Liability Acts.*, which require the Minister to maintain premises – in this case, bridges and dams - in a safe and structurally sound condition.

### **Scope**

The scope of this audit included all bridges, as defined by the Canadian Standards Association (CAN/CSA-S6-00 Canadian Highway Bridge Design Code), for which PWGSC is the owner /custodian as of December 1, 2006. As such, dams meeting the definition of the Canadian Highway Bridge Design Code are also included. A 2001 follow-up audit reported that the management actions from the 1999 audit had not been fully implemented. Additional follow-up work conducted in 2006 confirmed that the status of a number of the original 1999 actions could not be fully validated. In light of these findings, the Audit and Evaluation Branch proposed an audit in 2007 of the management practices related to bridges and dams under PWGSC's control.

We examined the following management control practices: planning, accountabilities, resources, risk management, reporting, and follow-up on the previous audit recommendations. This audit did not assess the quality of bridge inspections. Our audit focused on the activities conducted within Real Property Branch and the Regions from fiscal year 2001 to fiscal year 2006.

### **Approach**

The audit was conducted between January and August 2007 in the National Capital Area and the Quebec Region, although documentation from all Regions was reviewed. The audit also included National Headquarters, more specifically:

1. National Accommodation Portfolio Management Sector
2. Professional and Technical Services Management Sector
3. Program Policy Management Sector

The results of our audit were based on analysis of previous audits, interviews with key departmental executives and staff, and review of key documents, including policies, guidelines, MOUs, asset plans, presentations, internal reviews, inspection reports, and authorities relevant to the management of bridges and dams.

## **Audit Criteria**

### **1.0 Planning**

1.1 A sound policy framework is in place to manage the assets to meet the needs of the organization.

1.2 Strategic plans providing resource allocation, which consider priorities and risk, are promulgated, understood and complied with.

### **2.0 Accountabilities**

2.1 Roles and responsibilities are clearly defined, assigned, communicated and understood by all parties.

2.2: Accountabilities for the management of program are clearly defined.

2.3 Policy and procedures exist, are communicated, are being followed and help managers achieve program objectives.

### **3.0 Monitoring**

3.1 All inspection requirements are performed in compliance with BI&EP, 2001.

3.2 Inspection reports and results are monitored in compliance with BI&EP, 2001.

### **4.0 Resources**

4.1 A consistent/practical approach is used to identify funding requirements, prepare forecasts, and allocate resources in relation to objectives and priorities.

4.2 Adequate departmental expertise is available to ensure the successful achievement of program objectives.

### **5.0 Risk Management**

5.1 A risk management process is in place to support program managers with the achievement of program results.

### **6.0 Reporting**

6.1 The management framework provides for accurate information to be reported and acted upon.