



Office of the Auditor General / Bureau du vérificateur général

**AUDIT OF THE ENVIRONMENTAL COMMITMENTS IN THE
OTTAWA 20/20 GROWTH MANAGEMENT STRATEGY**

2007

Chapter 3

**VÉRIFICATION DES ENGAGEMENTS D'ORDRE
ENVIRONNEMENTAL ÉNONCÉS DANS LA STRATÉGIE DE
GESTION DE LA CROISSANCE OTTAWA 20/20**

2007

Chapitre 3

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EXECUTIVE SUMMARY

Introduction

The Audit of the Environmental Commitments in the Ottawa 20/20 Growth Management Strategy was included in the 2007 Audit Plan of the Office of the Auditor General, first presented to Council in December 2004.

Background

In June 2001, the City of Ottawa held a Smart Growth Summit, following which City Council formulated seven principles to guide subsequent planning activity by the City. One of these principles is “a green and environmentally sensitive City.”

In the spring of 2003, *Window on Ottawa 20/20 – Ottawa’s Growth Management Strategy* (GMS), was presented to Council for information. This document further refined the seven principles contained in the GMS to provide more specific objectives for each. In this document, the environmental principle of “a green and environmentally sensitive City” was backed by five more specific environmental commitments. These environmental commitments are as follows:

1. Preserve greenspace;
2. Strengthen ecosystem planning and design;
3. Protect surface and groundwater;
4. Improve air quality and reduce greenhouse gas emissions; and,
5. Protect and conserve our resources.

On September 28, 2005, Council approved the first City Corporate Plan (CCP). In the CCP, these same five commitments are presented as the “20/20 Strategic Directions” and form the City’s “Environmental Agenda” for 2006-2009. Throughout this report the terms “environmental commitments” or “commitments” is used to describe these five elements of the Environmental Agenda.

Responsibilities for implementing, monitoring and reporting on progress rest with a number of City branches and departments that are involved to varying degrees in the delivery of the environmental commitments. The Environmental Sustainability Division plays a central coordination and integration function for environmental initiatives within the City.

Audit Objectives and Scope

The purpose of the audit was to provide an independent and objective assessment of the City’s capacity to meet the environmental commitments outlined in the *Window on*

Ottawa 20/20 - Growth Management Strategy document and the Environmental Agenda as described in the CCP and assess its progress to date towards these commitments.

The specific audit objectives were twofold:

1. Determine the City's management capacity related to each of the five environmental commitments, including whether:
 - The commitments are well-defined and articulated;
 - Roles and responsibilities for achieving these commitments have been established and communicated;
 - Plans have been established to meet these commitments;
 - Adequate resources have been assigned to meet them;
 - A system is in place to monitor progress towards these commitments on a regular basis; and,
 - Appropriate information is being reported to Council.
2. Determine whether progress to date towards these environmental commitments is reasonable and the City appears on track to meet these commitments.

Our assessment of progress reflects the long-term nature of the commitments. At the time of the audit, the City had 13 years within which to meet the commitments fully.

The scope of the audit included an examination of activities and initiatives related to each of the five environmental commitments contained in the *Window on Ottawa 20/20* and the Environmental Agenda for the City. The audit included an examination of activities and initiatives related to environmental commitments contained in supporting plans and strategies where these commitments directly aligned with one of the five environmental strategic directions. The audit did not examine other environmental activities and initiatives that did not directly support one or more of these commitments. This was an important boundary to the audit, given the large number and range of environmental initiatives underway at the City. The temporal scope of the audit was for the period 2004 to the spring of 2007.

Organizational Strengths

A number of organizational strengths were identified during the course of the audit:

- The City has begun and, in some cases, completed a large number of environmental policies, programs and initiatives.
- City staff interviewed was knowledgeable of and committed to the City's environmental initiatives. In addition, the City has initiated environmental

programs that are beyond the scope of activities defined by the environmental commitments.

- The existence of a designated Division for Environmental Sustainability facilitates the continued development, refinement, implementation and monitoring of the City's environmental agenda. At the time of the audit, this Division was working with the City Managers' Environmental Working Group to develop a logic model for the City's environmental programs, which will be supported by outcome-based objectives and performance measures. This work is expected to provide a framework to guide future priority setting and performance monitoring and reporting.

Findings

Overall Findings

City staff manages to their individual branch plans and to the supporting growth management plans, such as the Environmental Strategy and the Greenspace Master Plan, and not to the environmental commitments as outlined in the CCP and the *Window on Ottawa 20/20* document. There is no broader monitoring framework in place for these five environmental commitments, which impedes tracking of the City's overall progress towards these commitments.

Overall, interviewees had no common understanding of what constituted the City's environmental growth management objectives. City staff does not perceive the five environmental commitments as the guiding principles and objectives of the City's environmental programs. This inconsistent understanding of the role of the environmental commitments was identified as a significant barrier to the City's achievement of these commitments. Clarity of vision and objectives is a prerequisite for developing and executing focused implementation plans, and monitoring and reporting on progress.

While the supporting plans and the City Corporate Plan each contain elements of an implementation plan for the City's environmental programs, there is no overall implementation plan or strategy for the environmental commitments. Recognizing the long time frame for these commitments, an implementation plan is required to lay out the logical steps and activities required to achieve the commitments within measured blocks of time between the present and 2020.

Roles and responsibilities for implementing activities related to the environmental commitments are spread across a number of branches. Specific roles and responsibilities are not documented for the five environmental commitments and, in many cases, are not clearly defined in supporting strategies and plans.

There is no overarching system in place to track progress against the five environmental commitments. Branches responsible for implementing activities or initiatives related to one or more of the commitments monitor progress related to their own initiatives to varying degrees. While branch-level monitoring provides some useful data and information, there is no corporate-level roll-up to assess overall progress related to the environmental commitments. There is no systematic reporting to Council on initiatives related to these environmental commitments.

At the time of the audit, the City was reporting on only two of the five environmental performance indicators identified in the *Window on Ottawa 20/20* document. These two indicators are included in the Executive Management Committee scorecard process. The suite of five environmental indicators identified in the *Window on Ottawa 20/20* document is insufficient to assess progress relative to all five of the commitments, and should be expanded.

Clarity of Commitments

The majority of environmental commitments are clearly worded and understandable. However, the specificity of the commitments varies substantially. While a number of the commitments include activity-based measures that can be tracked, none of the commitments includes specific outcome measures. The lack of specificity of certain commitments could prevent the City from determining when the commitment has been achieved.

Four of the five environmental commitments address environmental challenges facing the City in a meaningful way. The *Protect surface and groundwater* commitment, however, includes only a commitment related to monitoring water quality and could be broadened to include a commitment related to the development and implementation of surface and groundwater protection policies. It should be noted that the Environmental Strategy does discuss protection of surface and groundwater at length and this is part of the actions under *Manage resources, Incorporate environmental factors into decision-making and Ecosystem approach commitments* contained in this document.

While the Environmental Strategy discusses solid waste management both in terms of strategic planning and program planning, none of the environmental commitments directly addresses solid waste management. Given the importance of solid waste management and the City's commitment to achieve a diversion rate of 60% of all solid waste by the end of 2008, this is a notable gap in the environmental commitments. If the five environmental commitments provide the environmental agenda or vision for the City, then these commitments should communicate the importance of integrated solid waste management in the City.

Supporting Plans

With few exceptions, all supporting plans relating to the environmental commitments have either been developed or are in the process of being developed. Supporting plans that have not yet been developed include:

- Cultural Services and Community Funding has not developed a specific plan to support the *Preserve greenspace* sub-commitment to “contribute to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors.”
- While the City addresses efficient energy use in plans and strategies related to its buildings, fleet and waste management activities, it has not yet developed a strategy to reduce consumption of other materials within City operations. At the time of the audit, a study on material usage within the City was underway, the results of which will inform such a strategy.
- The City has not detailed a plan or strategy to encourage and facilitate efficient material and resource use in the broader community.

Resources

Substantial resources are currently dedicated to environmental initiatives and programs at the City, many of which support the environmental commitments. Broadly speaking, it appears that sufficient resources are available to implement the environmental commitments, provided current levels of funding are maintained. Two specific areas were identified where lack of funding may jeopardize the City’s ability to meet its environmental commitments:

- Funding for activities detailed in the Groundwater Management Strategy was eliminated in the Long Range Financial Plan; and,
- Funding requests to support completion of an inventory of material resource use in the community were denied in the 2006 and 2007 budgets.

In addition to these areas, Council rejected requests in 2006 to fund the following:

- \$580,000 for Existing Buildings Energy Retrofit Program (based on Toronto Better Buildings Program example); including \$80,000 for new 2006 position of Buildings Program Coordinator;
- \$160,000 for Public Outreach for Air Quality and Climate Change; and,
- \$276,000 for a variety of smaller air quality and climate change initiatives, such as promoting green roofs and partnering with NRCan on a Commercial Buildings Incentive Program pilot project (\$80,000 each from the City and NRCan).

Finally, it should be noted that most of the funding to support air quality and climate change has been obtained from external sources. As the City identifies specific actions to be implemented over time in support of these environmental commitments, new funding may be required.

Progress Towards Each of the Commitments

The City has initiated and, in some cases, completed a large number of environmental policies, programs and initiatives. Recognizing that the environmental commitments are long-term commitments that are to be achieved by 2020, the City has made reasonable progress towards achieving all of the environmental commitments. The following table presents a summary of progress to date related to achievement of the environmental commitments. Each commitment is broken down into its constituent components.

Commitment and Related Sub-Commitments	Status			
	No action	In planning	In progress	Complete
Preserve Greenspace				
UNDERTAKE A GREENSPACE MASTER PLAN TO IDENTIFY AND CHARACTERIZE ALL OF THE INDIVIDUAL GREENSPACES IN THE CITY.				X
Rural land use management practices will be centered on the protection of forests, wetlands, natural areas, greenspace and agriculture;			X	
Work with Conservation Authorities and other partners to develop a Forest Strategy to manage and protect the rural and urban forest;			X	
Both the Greenspace Master Plan and Forest Strategy will include policies and programs to enhance and protect our biodiversity (EnvS); and			X	
A vibrant focus on the arts will also contribute to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors (AHP).		X		
Strengthen Ecosystem Planning and Design				
Undertake watershed and sub-watershed plans in priority areas, both urban and rural, in order to identify environmental features and conditions;			X	
Recommend measures to mitigate the impacts of existing and proposed land-use activities; and,				X
Development proponents will be expected to use "design with nature" principles.			X (qualified)	
Protect Surface and Groundwater				
Policies to protect groundwater help to ensure potable water in rural areas while clean surface water is used for both drinking and recreation;			X	
Monitoring of surface water quality will be carried out through the Water Environment Protection program;				X (on-going)
Watershed planning, [and] a Groundwater Management Strategy [in addition to Water Environment Model assessed below] will be used to improve water quality monitoring for all areas of the City; and			X	
A Water Environment Model [in addition to two listed components above] will be used to improve water quality monitoring for all areas of the City.	X			
Improve Air Quality and Reduce Greenhouse Gas Emissions				
Initiatives have been identified and developed for:				
• Buildings;			X	
• Transportation; and,			X	
• Waste.			X	
There is a system in place to monitor progress towards achievement of the commitment, including:				
• Emissions inventory for: <ul style="list-style-type: none"> ○ GHG's; and, ○ Criteria Air Contaminants. 				X
• Baseline data for each initiative to provide a basis for assessing the air quality and GHG emissions impact of the initiative; and,		X		
• Regular monitoring of the impact of each initiative.	X			

Commitment and Related Sub-Commitments	Status			
	No action	In planning	In progress	Complete
Protect and Conserve Our Resources				
Plans have been established to identify and implement initiatives identified in the commitment. The City has taken initiatives that allow it to:				
• Demonstrate efficient use of material and energy resources in its own operations;			X	
• Encourage and facilitate efficient use of material and energy resources in the wider community;			X	
• Work towards adopting alternative technologies that result in cleaner air; and,			X	
• Establish partnerships related to the adoption of alternative technologies that result in cleaner air.			X	

As shown in the table, the City has initiated action related to the majority of the constituent components of the environmental commitments. This audit has identified several areas where additional effort will be required to achieve certain elements of the environmental commitments by 2020:

- An implementation plan is required to support the sub-commitment to “establish creative green environments and gardens, land art, and art pathways that follow green corridors”. The Policy Statement in this area reads, “The City will develop and implement a comprehensive municipal public art policy that results in: a) the integration of permanent, site-specific works of art into municipal buildings, natural places, public spaces and structures; and b) expanded partnered efforts to integrate public art into all major, new and redevelopment projects in Ottawa.” Funding has not yet been approved to complete this public art policy.
- There has been limited outreach to members of the developers’ community to make them aware of the expectation to apply “design with nature principles” in their projects, and there is a need for tools that can be used by the City’s application review staff to ensure these principles are systematically considered in the application review process.
- Clarity is required on what was intended by the commitment to develop and implement a Water Environment Model.
- The City requires a system to ensure it collects the data and information required to measure and report on the actual air and greenhouse gas emission reductions resulting from significant projects and initiatives designed to improve air quality and/or reduce greenhouse gas emissions. Both RPAM and Fleet have baseline data required to assess the greenhouse gas emissions impact of their initiatives. The impact on total emissions is reported in the Annual Report, but not the specific impact of the initiatives. Emissions are not measured directly; they are calculated as a function of energy consumption and technology.
- Responsibility and resources need to be assigned for the development and implementation of a strategy to encourage and facilitate efficient use of material and energy resources within the wider community.

Recommendations and Management Responses

Recommendation 1

That management review the environmental commitments to determine whether these accurately convey the City's environmental vision and objectives and revise them as required.

Management Response

Management agrees with the recommendation.

The City's environmental commitments are already under review as part of the review of the City's Environmental Strategy. The review began with the publication of the Getting Greener directory in September 2007 and will be completed in Q4 2009.

There is an important distinction that must be made up front in this audit response. The draft Audit Report stated that "City staff manages to their individual branch plans and to the supporting growth management plans, such as the Environmental Strategy and the Greenspace Master Plan, and not to the environmental commitments as outlined in the City Corporate Plan and the Window on Ottawa 20/20 document." This is factually correct however, what is incorrect is the idea that the Window on Ottawa 20/20 document is itself a policy document. The growth management plans and other supporting plans are the relevant Council's policy documents to which staff should be and are managing. The Window on Ottawa 20/20 document was written as an overview of Ottawa 20/20 for general public information and was received by Council in April 2003.

The subheadings from the pages for each Ottawa 20/20 principle were later incorporated as strategic directions in the 2006 City Corporate Plan. However, their use in the City Corporate Plan does not supersede the more complete commitments and decisions on priorities in the growth management plans, which were approved by Council as policy documents after extensive public consultation.

Recommendation 2

That management develop a logic model to support achievement of the City's environmental vision and objectives and that this logic model include:

- a) Desired environmental outcomes (long-term, medium-term and immediate); and,**
- b) Specific activities and their outputs to achieve the environmental objectives and desired outcomes. Activities should be for a prescribed period, with an indication of what actions will be required in each time period to achieve the objectives by 2020 (i.e., an implementation roadmap).**

Management Response

Management agrees with the recommendation.

The Environment Working Group, a senior level team consisting of directors of environmental programs, chaired by City's Environmental Commissioner (the Deputy City Manager for Planning, Transit and the Environment), has already begun work on developing a logic model. Development of an initial logic model will include activities, outputs and outcomes and is expected to be completed by end of Q4 2008. An implementation roadmap will be completed in 2010, after the Environmental Strategy review has been completed, and will be presented to the new Council in 2011.

Recommendation 3

That management continue to strengthen the alignment across the Corporate Plan, and other plans and strategies in support of the environmental commitments as they are revised, including drawing direct linkages to the five commitments.

Management Response

Management agrees with the recommendation.

The City has made reasonable progress towards achieving all of its environmental commitments. Management will use the annual refresh of the City Strategic Plan as well as the reviews of the Ottawa 20/20 growth management plans to strengthen the alignment of the Strategic Plan and other plans and strategies with the City's environmental commitments as revised. This will include direct linkages to the commitments.

Recommendation 4

That management ensure the Corporate Plan includes priority actions required to implement the environmental commitments.

Management Response

Management agrees with the recommendation.

Environmental commitments are already captured in the Corporate Plan. Management will ensure that City Council is provided with information on any additional priority actions required to implement its environmental commitments as part of the annual refresh of the City Strategic Plan. The timing of the refresh of the City Strategic Plan had not been determined at the time of this response.

Recommendation 5

That management communicate the City's environmental commitments to all branches and staff responsible for implementing environmental programs and initiatives to develop a common understanding of the City's environmental commitments, how they relate to the environmental strategies and plans within the City, and how the branches' activities support their achievement.

Management Response

Management agrees with the recommendation.

This effort is already underway via the Environment Working Group, which is composed of the City's Environmental Commissioner and directors of various City branches whose mandates have a significant environmental impact. Going forward, both the review of the Environmental Strategy and the development of the logic model (which will involve both the Directors and their staff) will be used to review and discuss the City's environmental commitments, and how the activities of various branches support their achievement. Development of the logic model will be completed by end of Q4 2008. The review of the Environmental Strategy will be completed in Q4 2009.

Recommendation 6

That management include a new environmental commitment to reduce the amount of waste that Ottawa residents and businesses send to landfill to align the environmental commitments with the City's existing commitment priorities.

Management Response

Management agrees with the recommendation.

City Council has approved a 60% diversion target for residential waste collection. Work is also underway on an ICI (Industrial, Commercial and Institutional) strategy. This diversion target can be featured more prominently in the City's environmental commitments. This will be addressed during the review of the Environmental Strategy in 2008-09.

Recommendation 7

That management establish and communicate specific, measurable, actionable, relevant and time-bound objectives and targets for each of the environmental commitments.

Management Response

Management agrees with the recommendation.

Objectives and targets have been established in a number of areas including provision of greenspace, greenhouse gas emission reduction, waste diversion, tree cover, and transit modal split. When these targets are based on community progress, it must be recognized that City programs and initiatives may not be able to achieve these targets on their own. Programs and commitments from other levels of government, as well as individual choices, may also be critical success factors for meeting community targets. Continued setting and refinement of objectives and targets will occur as the City's environmental commitments are reviewed and confirmed, during the review of the Environmental Strategy in 2008-09 and contained in the revised Environmental Strategy.

Recommendation 8

That management define and document roles and responsibilities for implementing the environmental commitments, as well as for implementing initiatives contained in supporting strategies and plans.

Management Response

Management agrees with the recommendation.

Roles and responsibilities have traditionally followed departmental lines, where the department delivering the program and service is the one responsible. Going forward, there is the opportunity to further define roles and responsibilities as part of the logic model development, and confirmed, or revised as needed during the review of the Environmental Strategy in 2008-09. It will also be reviewed on an ongoing basis as various other plans and strategies are developed, or reviewed, or when City work units are re-organized.

Recommendation 9

That management identify resource requirements for actions required to implement the environmental commitments as part of the Ottawa 20/20 implementation plan.

Management Response

Management agrees with the recommendation.

Required and ongoing resources will continue to be identified and input into the annual budget process and the Long Range Financial Plan. Any new initiatives identified as a result of the implementation roadmap will be incorporated into the Long Range Financial Plan. The implementation roadmap will be completed in 2010, and will be presented to the new Council in 2011.

Recommendation 10

That management develop a performance measurement and reporting strategy and direct staff to report on the performance indicators identified in the *Window on Ottawa 20/20* document.

Management Response

Management agrees with the recommendation.

As stated earlier, it is important to distinguish between the policy documents (i.e., Official Plan, and Environmental Strategy) and the summary document (*Window on Ottawa*). As noted in the *Window on Ottawa 20/20* document, these indicators are only examples but are considered to be valid indicators of whether the community is moving toward sustainability.

The five identified indicators are:

- Annual transit ridership (total and per capita);
- Greenhouse gas emissions per capita;
- Solid waste per capita – volume and % landfill versus recycled or composted;
- Residential densities and mix in plans of subdivision built; and,
- Results of well water sample testing.

Currently, most of these indicators are reported, although not in one document. The transit ridership and solid waste indicators are reported in the City of Ottawa Annual Report. The residential densities and mix data is reported in the Annual Development Review.

The Environmental Sustainability Division, in December 2007, brought to Council the results of an inventory of greenhouse gas emissions, both corporate and community, for 2004. Greenhouse gas emissions will be reported at four or five year intervals, as the information is too expensive to collect on an annual basis. The focus will be on total emissions rather than emissions per capita as Council's target is for an absolute reduction in emissions rather than an intensity target.

Staff will report on well water sample testing based on the data currently available from the Provincial Groundwater Monitoring Network locations in the City of Ottawa. The provincial data will be reported in 2008. In addition, staff will work with IT Services to make available compiled results from the tests of private well water samples received from the Ministry of Health, in a way that respects the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA). The usefulness of this data will be reviewed after two years of reporting (2009 and 2010).

A performance measurement and reporting strategy will be developed by the Environment Working Group working with Corporate Performance Measurement Reporting division during 2008 and finalized in early 2010 after approval of the Environmental Strategy in 2009.

Recommendation 11

That management ensure the performance measurement and reporting strategy aligns with the logic model and includes a broader set of Key Performance Indicators (KPI) to track progress against all five of the environmental commitments. These KPIs should be integrated into the Executive Management Committee Scorecard process.

Management Response

Management agrees with the recommendation.

As stated earlier, it is important to distinguish between the policy documents (i.e., Official Plan, and Environmental Strategy) and the summary document (Window on Ottawa). Further development of the logic model will draw on the Environmental

Strategy and a number of supporting plans and will be the first step in developing a broader set of key performance indicators against the City's environmental commitments. This will ensure that the performance measurement and reporting strategy aligns with the logic model. Initial development of the logic model will be completed by end of Q4 2008. If the Environmental Strategy review results in changes to the City's environmental commitments, the logic model will be revisited. As the data and results for the key performance indicators become available, the Corporate Performance Measurement and Reporting division will incorporate this information, and accompanying analysis, into the Corporate Performance Reporting Framework, including annual and quarterly reporting through the Annual Report and the Quarterly Performance Report to Council, as appropriate.

Recommendation 12

That management establish processes and procedures and assign responsibility for monitoring and reporting on progress related to the five environmental commitments.

Management Response

Management agrees with the recommendation.

The processes, procedures and responsibilities for monitoring some indicators, (e.g., transit ridership and density of new residential development) are already in place and functioning well. In other cases, such as urban tree canopy and greenhouse gas emissions, baseline measures have been collected. As additional indicators are agreed to (primarily through the logic model development in 2008), the necessary processes to collect the needed data will be established and responsibility for data collection assigned. Responsibility for reporting will be determined as part of the performance measurement and reporting strategy, which will be finalized in early 2010.

Recommendation 13

That Cultural Services and Community Funding develop an implementation plan to support the sub-commitment to "establish creative green environments and gardens, land art, and art pathways that follow green corridors" and that this branch develop a methodology for systematic review of projects greater than \$2 million in value to identify opportunities to include a public art component.

Management Response

Management agrees with the recommendation.

A comprehensive review and harmonization of the City's various pre-amalgamation public art policies is needed in order to implement this recommendation. The development and implementation of a new Public Art Policy was also identified in the Ottawa 20/20 Arts and Heritage Plan. Recently, funds to support the

development of a new policy were identified in a report to City Council in August 2007, but the report was not approved. Additional resources in the amount of \$50,000 are required to develop and implement a Public Art Policy that would incorporate recent best practices relating to environmental sustainability and public art in general, including criteria and methodology for identifying the projects that would include a public art component. Subject to Council 2009 budget approval, an inter-departmental Steering Committee will be established in March 2009, and will report back to City Council by June 2010 with a proposed Public Art Policy for the City of Ottawa.

Recommendation 14

That management develop and provide tools to application review staff to ensure that “design with nature principles” are systematically considered in the application review process, and to allow collection of data and information related to the application of these principles and that management use these results to determine what targeted outreach activities are required for members of the developers’ community.

Management Response

Management agrees with the recommendation.

In order to advance the “design with nature principles” within the application review process, staff intends to compile a toolkit, elements of which already exist, for the City and the development industry to use in preparing and reviewing applications. This toolkit will be used in the pre-consultation and at the formative stages of development proposals, prior to design concepts becoming entrenched. Many elements of the toolkit (sustainable development checklist, review of EIS guidelines, development of natural channel design guidelines) are already in the 2008 work program.

The Official Plan incorporates policies that set the stage for development review. A strengthened toolkit to support the Official Plan will include Council approved guidelines for required studies and improved tools for implementation, possibly including regulations and budgets. This toolkit will be used to support the Integrated Environmental Review to assess development applications as described in Section 4.7.1 of the Official Plan. The kit will incorporate existing tools, such as the Environmental Impact Statement guidelines that will be reviewed in 2008 and brought to Council in Q2 2009. It will also include new natural channel design guidelines to be completed by Q2 2009. Staff will complete an examination of the value and feasibility of a Site Alteration by-law by Q3 2008. The toolkit will include a sustainable design checklist to be used when evaluating applications. This checklist is part of a larger green building promotion program that was presented to Planning and Environment Committee for consideration in January 2008. The checklist will be

completed by Q4 2008. Development of the toolkit will be done using existing resources.

The sustainable design checklist will be used to track, the degree to which various design measures are achieved. Tracking will be implemented on a pilot basis in 2008 and on an ongoing basis after formal approval of the checklist in Q4 2008. This will be done using existing staff resources within the Environmental Sustainability Division and the Planning Branch.

The development industry will be among the stakeholders engaged in the review and development of the guidelines and the sustainable development checklist. Tracking against the sustainable development checklist will be used to target additional outreach to the industry. This outreach will focus on promotion of best practices and developments that demonstrate sustainable design, as well as information sessions on specific “design with nature” or sustainable design practices (such as tree preservation, natural channel design, and green roofs).

Recommendation 15

That management revise the *Protect surface and groundwater* commitment to include a specific commitment related to protection of ground and surface water, and that it clarify the commitment to use a Water Environment Model and determine what action may be required to meet the spirit of this original commitment.

Management Response

Management agrees with the recommendation.

The municipality is doing a great deal to protect surface and ground water, including sub watershed planning, stream restoration projects, development and implementation of the Lower Rideau Watershed Strategy, development of a Stormwater Management Strategy, the Rural Clean Water grant program, groundwater capacity studies in villages, educational workshops and support of programs with partners such as the Children’s Water Festival. Protection of surface and groundwater that is the source for municipal drinking water systems is receiving a great deal of study through the provincially directed Drinking Water Source Protection program. City staff is participating directly in these studies and municipal involvement will increase as the process moves from the technical assessment to the planning stage. A more visible and specific commitment to the protection of surface and groundwater will be considered in the review of the Environmental Strategy in 2008-09. The commitment to develop a Water Environment Model will be clarified and the appropriate action identified.

Recommendation 16

That management assign adequate resources to support implementation of the groundwater management strategy.

Management Response

Management agrees with the recommendation.

Implementation of the Groundwater Management Strategy has two components: existing activities and proposed new activities. Spending on existing groundwater activities varies from year to year and averaged \$230,000 per year between 2001 and 2006. All existing authority for this purpose may be utilized by the end of 2008, resulting in a requirement for \$230,000 in annual funding beginning in 2009.

The Groundwater Management Strategy included a proposal for the City to undertake new activities, some of which, such as groundwater use assessments and monitoring, overlap with initiatives under Drinking Water Source Protection. Source Protection Committees have recently been appointed. Their first task is to prepare a Terms of Reference by October 2008. If, as hoped, the preparation of Terms of Reference clarifies what will be accomplished (and funded) through the Drinking Water Source Protection process and what needs to be a local initiative, staff will be able to advise on the resource requirements to fund the new activities in the Groundwater Management Strategy in the 2009 budget requests.

In addition, the City staff commitment to the Drinking Water Source Protection process is already significant and is expected to increase with the formation of Source Protection Committees and the subsequent preparation of Terms of Reference, as well as the requirement to prepare responses to anticipated postings on the Environmental Bill of Rights registry. This workload may reach a point where additional staff resources are required.

Recommendation 17

That management develop a system to collect the data and information required to measure and report on the actual air and greenhouse gas emission reductions resulting from significant projects/initiatives designed to improve air quality and/or reduce greenhouse gas emissions.

Management Response

Management agrees with the recommendation.

Fleet Services has collected data and information regarding fleet emissions since 2002 and systematically presents a Fleet Emissions Reduction Strategy to Council every term. Improvements have been made as new tools have become available such as NRCan's GHGenius analytical tool that permits modeling of greenhouse gas (GHG) reductions for various on-road transportation scenarios. Fleet Services will continue to refine methods to measure and report on fleet emissions in accordance with Council priorities.

The Diesel Electric Hybrid Bus project includes a validation phase to confirm actual performance of the bus compared to estimates. Similarly Real Property Asset

Management is able to track the reductions in energy consumption and associated reductions in GHG emissions from their significant projects/initiatives.

The Environment Working Group will put in place a system by Q4 2008 to ensure that the emissions reductions resulting from significant projects/initiatives are measured (based on fuel consumption and technology) and reported.

Recommendation 18

That management assign responsibility and resources to develop and implement a strategy to encourage and facilitate efficient use of material and energy resources within the wider community.

Management Response

Management agrees with the recommendation.

Currently, community outreach occurs as a component of individual programs such as waste diversion, water efficiency, anti-idling, and energy conservation through Hydro Ottawa. Other outreach programs related to green building measures in the private sector and land stewardship are under development in the Environmental Sustainability Division. A more integrated approach to encouraging more environmental responsibility in the community will be done as part of the implementation roadmap. The roadmap will be completed in 2010, and will be presented to the new Council in 2011.

Recommendation 19

That management develop specific commitments on the adoption of alternative technologies and partnerships that result in clean air and integrate them into Ottawa 20/20 supporting plans and strategies.

Management Response

Management disagrees with the recommendation.

The draft Audit Report lists examples of alternative technologies used by the City and more than half a page of partnerships in this area, including both the private sector, non-profit and government agencies. However, there is no evidence that specific commitments on the adoption of alternative technologies or partnerships would lead to better outcomes or that the City's progress in this area is deficient. It is not possible to know what new technologies may be developed or what partnership opportunities will arise. As examples, City staff would not have identified the technology being tested by Plasco in advance. While the City has partnered with Hydro Ottawa on energy conservation initiatives in the past, the energy conservation initiatives that local hydro authorities were developing and implementing have now been centralized with the Ontario Power Authority. Specific advance commitments to the adoption of alternative technologies and partnerships are likely to lead to the need for revisions as new opportunities are identified and circumstances change.

This creates process requirements with no offsetting benefit. Management agrees that as new technologies and partners are identified, where agreements can be reached that yield significant air quality benefits, these initiatives should be integrated into Ottawa 20/20 supporting plans and strategies.

Conclusion

The City has begun and, in some cases, completed a large number of environmental policies, programs and initiatives. While many of these initiatives can be seen as aligning with the environmental commitments contained in the *Window on Ottawa 20/20 – Growth Management Strategy* and the CCP, City staff manages to their individual branch plans and to the supporting growth management plans and not to the environmental commitments. The City has not developed a management framework to support achievement of the environmental commitments. The lack of a management framework that includes a logic model, a roles and responsibilities matrix, and a performance measurement and reporting strategy could impede the City's ability to achieve its long-term environmental commitments.

City staff reported that work had recently been initiated to develop a logic model for environmental programs. This work should provide a framework to facilitate development of outcome-based objectives, monitoring and reporting.

Recognizing that the environmental commitments are long-term commitments that are to be achieved by 2020, the City has made reasonable progress towards achieving all of them, albeit via department-specific initiatives rather than a strategy to target the environmental commitments explicitly. This audit has identified several areas where additional effort will be required to achieve certain elements of the environmental commitments by 2020.

Acknowledgement

We wish to express our appreciation for the cooperation and assistance afforded the audit team by management.

RÉSUMÉ

Introduction

La vérification des engagements d'ordre environnemental énoncés dans la Stratégie de gestion de la croissance Ottawa 20/20 était prévue dans le Plan de vérification de 2007 du Bureau du vérificateur général, document soumis au Conseil municipal en décembre 2004.

Contexte

En juin 2001, la Ville d'Ottawa a tenu un Sommet de la croissance intelligente, à l'issue duquel le Conseil municipal a formulé sept principes directeurs pour guider les activités d'aménagement de la Ville. L'un de ces principes consiste à faire d'Ottawa « une ville verte et sensible à l'environnement ».

Au printemps 2003, le Conseil s'est vu remettre, à titre d'information, le document *Une fenêtre sur Ottawa 20/20 : La Stratégie de gestion de la croissance d'Ottawa*, qui explicite les sept principes de la Stratégie de gestion de la croissance en assortissant des objectifs précis à chacun d'eux. En particulier, le principe « Une ville verte et sensible à l'environnement » y est appuyé de cinq engagements ciblés en matière d'environnement, à savoir :

1. sauvegarder les espaces verts;
2. tenir compte des écosystèmes dans la planification et l'aménagement;
3. protéger l'eau de surface et l'eau souterraine;
4. améliorer la qualité de l'air et réduire les émissions de gaz à effet de serre;
5. protéger et conserver nos ressources.

Le 28 septembre 2005, le Conseil municipal a approuvé le premier Plan directeur municipal (PDM), dans lequel ces cinq engagements sont présentés comme les « orientations stratégiques d'Ottawa 20/20 » formant le « programme environnemental » de la Ville pour la période s'échelonnant de 2006 à 2009. Le terme « engagement » ou les expressions contenant ce terme, utilisés dans le présent rapport, renvoient à ces cinq éléments du programme environnemental de la Ville.

Les responsabilités associées à la concrétisation des engagements, au suivi des progrès et à la présentation de rapports sont réparties entre différentes directions et différents services municipaux participant de près ou de loin à la réalisation des engagements relatifs à l'environnement. La Division de la durabilité de l'environnement fait office de centre de coordination et d'intégration des projets environnementaux au sein de la Ville.

Objectifs et portée de la vérification

La vérification avait pour objectif d'évaluer de façon indépendante et objective, d'une part, la capacité de la Ville à concrétiser ses engagements relatifs à l'environnement, énoncés dans le document *Une fenêtre sur Ottawa 20/20 : La Stratégie de gestion de la croissance d'Ottawa*, ainsi que son programme environnemental, décrit dans le PDM, et, d'autre part, les progrès réalisés jusqu'à présent à ce chapitre.

Plus particulièrement, les objectifs de la vérification comportaient deux volets :

1. Déterminer la capacité de la Ville à gérer chacun des cinq engagements d'ordre environnemental, notamment en établissant :
 - si les engagements sont définis clairement;
 - si les rôles et les responsabilités associés à la réalisation de ces engagements ont été établis et communiqués;
 - si des plans ont été élaborés pour remplir ces engagements;
 - si des ressources adéquates sont affectées à la réalisation des engagements;
 - si un système a été mis sur pied pour assurer un suivi régulier des progrès effectués vers la réalisation des engagements;
 - si le Conseil est bien informé de l'évolution du dossier.
2. Déterminer si les progrès réalisés jusqu'à présent à l'égard des engagements d'ordre environnemental sont raisonnables et si la Ville semble sur la bonne voie pour respecter ces engagements.

Notre évaluation des progrès réalisés tient compte du fait qu'il s'agit d'engagements à long terme. Au moment de la vérification, la Ville disposait d'un délai de 13 ans pour s'acquitter pleinement de ses engagements.

La vérification a porté sur les activités et les projets liés à chacun des cinq engagements énoncés dans le document *Une fenêtre sur Ottawa 20/20* et constituant le programme environnemental de la Ville, de même que sur les activités et les projets liés aux engagements d'ordre environnemental pris dans les plans et les stratégies auxiliaires lorsque ces engagements étaient directement alignés sur l'une des cinq orientations stratégiques relatives à l'environnement. La vérification n'a pas mis en cause les activités et les projets qui n'appuient pas directement au moins un de ces engagements. Cette distinction s'est avérée très importante pour définir la portée de la vérification, vu la quantité et la diversité de projets environnementaux menés par la Ville. Sur le plan temporel, la vérification a visé la période allant de 2004 au printemps 2007.

Points forts sur le plan organisationnel

La vérification a permis de relever plusieurs points forts sur le plan organisationnel :

- La Ville a amorcé et, dans certains cas, achevé la mise en œuvre d'un grand nombre de politiques, de programmes et de projets environnementaux.
- Les membres du personnel municipal interviewés avaient à cœur et connaissaient bien les projets environnementaux de la Ville. La Ville a même lancé des programmes environnementaux qui vont au-delà des activités dictées par les engagements pris à cet égard.
- L'existence d'une division consacrée entièrement à la durabilité de l'environnement facilite l'élaboration, le perfectionnement, la mise en œuvre et le suivi continu du programme environnemental de la Ville. Au moment de la vérification, cette division collaborait avec le groupe de travail des gestionnaires municipaux en matière d'environnement à l'élaboration, pour les programmes environnementaux de la Ville, d'un modèle logique qui sera appuyé par des objectifs axés sur l'obtention de résultats ainsi que par des indicateurs de progrès. L'exercice devrait fournir un cadre de travail pour l'établissement des priorités, le suivi des progrès et la production de rapports.

Constatations

Constatations générales

Le personnel de la Ville gère en fonction des plans propres à chaque direction et des plans auxiliaires de gestion de la croissance, comme la Stratégie environnementale et le Plan directeur des espaces verts, et non en fonction des cinq engagements relatifs à l'environnement énoncés dans le PDM et le document *Une fenêtre sur Ottawa 20/20*. Aucun cadre de travail global n'existe pour faire le suivi de ces cinq engagements, ce qui rend difficile l'évaluation des progrès réalisés à cet égard à l'échelle municipale.

Dans l'ensemble, les membres du personnel interviewés ne s'accordent pas sur ce en quoi consistent les objectifs environnementaux de la Ville en matière de gestion de la croissance. Le personnel municipal ne perçoit pas les cinq engagements relatifs à l'environnement comme des principes directeurs et des objectifs qui sous-tendent les programmes environnementaux de la Ville. Ce manque de cohésion quant à la perception du rôle des engagements relatifs à l'environnement nuit grandement à la réalisation des engagements de la Ville. Il est nécessaire d'adopter une vision et des objectifs clairs avant même de penser à élaborer et à appliquer des plans de mise en œuvre ciblés ou à assurer le suivi des progrès et la production de rapports d'étape.

Bien que les plans auxiliaires et le Plan directeur municipal contiennent chacun des éléments d'un plan de mise en œuvre pour les programmes environnementaux de la Ville, il n'existe pas de stratégie ou de plan de mise en œuvre global pour les engagements relatifs à l'environnement. Étant donné que ces engagements visent un horizon à long terme, un plan de mise en œuvre doit prévoir les étapes et les activités logiques à mener d'ici 2020.

Les rôles et les responsabilités associés à la mise en œuvre d'activités visant à concrétiser les cinq engagements relatifs à l'environnement sont répartis entre plusieurs directions. Ils ne sont précisés dans aucun document et, dans plusieurs cas, ne sont pas clairement définis dans les stratégies et les plans auxiliaires.

Aucun système général n'est en place pour déterminer dans quelle mesure les cinq engagements d'ordre environnemental sont respectés. Les directions responsables de la mise en œuvre d'activités ou de projets concernant un ou plusieurs de ces engagements surveillent l'évolution de leurs propres initiatives, mais le font chacune à des degrés divers. Les suivis effectués à l'échelle des directions fournissent des données et des renseignements utiles, mais aucun rapport d'ensemble ne permet d'évaluer à l'échelle municipale les progrès réalisés au chapitre de la protection de l'environnement. En outre, les projets liés auxdits engagements ne font pas systématiquement l'objet de rapports au Conseil.

Au moment de la vérification, la Ville produisait des rapports sur à peine deux des cinq indicateurs de progrès au chapitre de l'environnement énoncés dans le document *Une fenêtre sur Ottawa 20/20*, les deux indicateurs en question étant inclus dans les fiches d'évaluation du Comité de la haute direction. En outre, la liste d'indicateurs que donne le document *Une fenêtre sur Ottawa 20/20* au chapitre de l'environnement devrait être élargie, car les cinq points qui la composent ne permettent pas d'évaluer à fond les progrès réalisés.

Clarté des engagements

La majorité des engagements relatifs à l'environnement sont formulés de façon claire et compréhensible. Toutefois, leur degré de précision varie grandement. Certains comprennent des mesures quantifiables en termes d'activités, mais aucun ne comporte de mesure précise des résultats. Le manque de précision de certains engagements pourrait empêcher la Ville de déterminer à quel moment ceux-ci seront remplis.

Quatre des cinq engagements relatifs à l'environnement représentent des solutions concrètes aux problèmes environnementaux auxquels la Ville doit faire face. Toutefois, l'engagement *Protéger l'eau de surface et l'eau souterraine* se résume à surveiller la qualité de l'eau. Il pourrait être élargi afin d'inclure l'élaboration et la mise en œuvre de politiques de protection de l'eau de surface et de l'eau souterraine. Il est à noter que la Stratégie environnementale traite en profondeur de la protection de l'eau de surface et de l'eau souterraine et a inspiré les mesures proposées dans le présent document pour la gestion des ressources, la prise en compte des facteurs environnementaux dans le processus décisionnel et l'inclusion des écosystèmes dans la planification et l'aménagement.

Bien que la Stratégie environnementale traite de la gestion des déchets solides tant sous l'angle de la planification stratégique que sous celui de la planification des programmes, aucun des engagements relatifs à l'environnement n'aborde directement la question de la gestion des déchets solides. Il s'agit d'une énorme lacune lorsqu'on sait l'importance de la gestion des déchets solides et l'engagement de la Ville à atteindre un taux de réacheminement de 60 p. 100 de tous déchets solides d'ici la fin de 2008. Si les cinq engagements relatifs à l'environnement constituent le programme ou la vision de la Ville en matière d'environnement, ils doivent refléter l'importance accordée par les autorités municipales à la gestion intégrée des déchets solides.

Plans auxiliaires

Tous les plans auxiliaires associés aux engagements environnementaux ont été élaborés ou sont en voie de l'être, aux quelques exceptions suivantes :

- Services culturels et Financement communautaire n'a pas élaboré de plan précis pour appuyer le sous-engagement « contribuer à la sauvegarde des espaces verts grâce à l'aménagement d'environnements verts et de jardins, à la création d'œuvres d'art terrestres, aussi bien qu'à la construction de sentiers de caractère artistique dans des corridors verts », qui se rapporte à l'engagement *Sauvegarder les espaces verts*.
- Bien que la Ville aborde la question de l'économie de l'énergie dans ses plans et stratégies liés à ses installations, à son parc automobile et à ses activités en matière de gestion des déchets, elle ne s'est toujours pas dotée d'une stratégie pour réduire sa consommation d'autres ressources dans le cadre de ses activités de fonctionnement. Au moment de la vérification, une étude sur l'utilisation de ressources au sein de la Ville était en cours, et ses résultats serviront de fondement à une telle stratégie.
- La Ville n'a pas élaboré de plan ou de stratégie pour encourager l'utilisation efficace des matières et des ressources au sein de la communauté.

Ressources

La Ville affecte actuellement des ressources considérables à des projets et programmes environnementaux, dont beaucoup appuient ses engagements relatifs à l'environnement. De manière générale, il semble que des ressources suffisantes existent pour concrétiser ces engagements, sous réserve du maintien des niveaux actuels de financement. Deux lacunes sur le plan du financement compromettent toutefois la capacité de la Ville à remplir ces engagements :

- le financement des activités précisées dans la Stratégie de gestion des eaux souterraines a été rayé du Plan financier à long terme;

- le financement demandé pour achever l'inventaire des ressources matérielles utilisées dans la communauté n'a pas été accordé dans les budgets de 2006 et de 2007.

En outre, en 2006, le Conseil a rejeté les demandes de financement suivantes :

- 580 000 \$ pour le programme d'amélioration de l'efficacité énergétique des bâtiments existants (fondé sur le modèle du programme Better Buildings de Toronto), dont 80 000 \$ pour pourvoir le nouveau poste de coordonnateur du programme;
- 160 000 \$ pour la sensibilisation du public à la qualité de l'air et au changement climatique;
- 276 000 \$ pour divers projets de petite envergure relatifs à la qualité de l'air et au changement climatique, comme la promotion des toits verts et la mise à l'essai, en partenariat avec RNCAN, du Programme d'encouragement pour les bâtiments commerciaux (projet pilote auquel la Ville et RNCAN auraient versé 80 000 \$ chacun).

Enfin, il convient de souligner que le financement des projets relatifs à la qualité de l'air et au changement climatique provient en grande partie de sources externes. D'autres fonds pourraient s'avérer nécessaires à mesure que la Ville précisera ce qu'elle entend mettre en œuvre pour appuyer ses engagements au chapitre de l'environnement.

Progrès à l'égard de chacun des engagements

La Ville a entrepris l'élaboration et, dans certains cas, achevé la mise en œuvre d'un grand nombre de politiques, de programmes et de projets environnementaux. Étant donné que les engagements relatifs à l'environnement sont à long terme (2020), la Ville a fait des progrès raisonnables vers leur concrétisation. Le tableau suivant résume où en est l'avancement à l'égard de chacun des volets de ces engagements. Chaque engagement est réparti en volets.

Engagements et sous-engagements	État			
	Non entrepris	À l'étape de la planification	En cours de réalisation	Achevé
Sauvegarder les espaces verts				
LA VILLE EXÉCUTERA LE PLAN DIRECTEUR DES ESPACES VERTS, EN VERTU DUQUEL ELLE RECENSERA ET CLASSERA TOUS LES ESPACES VERTS PARTICULIERS SUR SON TERRITOIRE				X
Les pratiques de gestion de l'utilisation des terres rurales seront centrées sur la protection des forêts, des terres humides, des aires naturelles, des espaces verts et de l'agriculture;			X	
La Ville conjuguera ses efforts à ceux des offices de protection et d'autres partenaires et élaborera une stratégie de gestion et de protection des forêts rurales et urbaines;			X	
Tant le Plan directeur des espaces verts que la Stratégie des forêts engloberont des politiques et des programmes d'accroissement et de protection de la biodiversité (SENV);			X	
Une place prépondérante faite aux arts contribuera également à la sauvegarde des espaces verts grâce à l'aménagement d'environnements verts et de jardins, à la création d'œuvres d'art terrestres, aussi bien qu'à la construction de sentiers de caractère artistique dans des corridors verts (PAP);		X		
Tenir compte des écosystèmes dans la planification et l'aménagement				
La Ville exécutera des plans de gestion des bassins et sous-bassins hydrographiques dans les secteurs prioritaires, tant urbains que ruraux, afin de relever des caractéristiques et des conditions environnementales;			X	
La Ville recommandera des moyens d'amortir l'effet des utilisations du sol actuelles et éventuelles;				X
On attendra des promoteurs qu'ils appliquent des principes d'« aménagement respectueux de la nature »;			X (avec réserves)	
Protéger l'eau de surface et l'eau souterraine				
Les politiques de protection de l'eau souterraine visent à assurer l'approvisionnement continu en eau potable en milieu rural, la consommation d'eau de surface salubre et son usage à des fins récréatives;			X	
La qualité de l'eau de surface sera surveillée dans le cadre du Programme de protection du milieu aquatique;				X (continu)
Le contrôle de la qualité de l'eau dans tous les secteurs de la ville passera par une planification qui tient compte des bassins hydrographiques [et] la Stratégie de gestion des eaux souterraines [ainsi qu'un modèle de l'environnement hydrographique (voir le point suivant)];			X	
Le contrôle de la qualité de l'eau dans tous les secteurs de la ville passera [outre les des deux moyens mentionnés au point précédent] par un modèle de protection du milieu aquatique.	X			
Améliorer la qualité de l'air et réduire les émissions de gaz à effet de serre				
Cerner et créer des projets pour :				
• les bâtiments;			X	
• les transports;			X	
• les déchets.			X	
Mettre en place un système pour effectuer le suivi des progrès vers la concrétisation de l'engagement, y compris :				
• tenir l'inventaire des émissions : o de gaz à effet de serre, o des principaux contaminants atmosphériques;				X
• recueillir des données de référence sur chacun des projets afin d'en évaluer les retombées au chapitre de la qualité de l'air et des émissions de gaz à effet de serre;		X		
• surveiller régulièrement les retombées de chacun des projets.	X			
Protéger et conserver nos ressources				
Cerner et mettre en œuvre des projets qui permettront à la Ville de réaliser les sous-engagements liés à cet engagement, c'est-à-dire :				
• faire un usage efficient des ressources matérielles et énergétiques;			X	
• encourager et faciliter l'usage efficient des ressources matérielles et énergétiques dans la communauté en général;			X	
• s'efforcer d'adopter des technologies de substitution qui réduisent la pollution atmosphérique;			X	
• établir des partenariats liés à l'adoption de technologies de substitution qui réduisent la pollution atmosphérique.			X	

Comme le montre le tableau, la Ville a adopté des mesures à l'égard de la plupart des volets des engagements relatifs à l'environnement. La vérification a toutefois relevé plusieurs domaines où des efforts additionnels devront être faits pour concrétiser entièrement certains éléments des engagements relatifs à l'environnement d'ici 2020 :

- Il faut établir un plan de mise en œuvre pour appuyer le sous-engagement qui consiste à « aménager des environnements verts et des jardins, créer des œuvres d'art terrestres, ainsi que construire des sentiers de caractère artistique dans des corridors verts ». L'énoncé de politique à ce chapitre est formulé en ces termes : « La Ville élaborera et mettra en œuvre une politique municipale détaillée sur l'art public qui se traduira : a) par l'intégration d'œuvres d'art permanentes dans les bâtiments municipaux, les espaces naturels ainsi que les structures et les lieux publics; b) par des efforts accrus en vue d'inclure l'art public dans tous les grands projets d'aménagement ou de réaménagement à Ottawa. » Le financement nécessaire à la concrétisation de la politique sur l'art public n'a toujours pas été approuvé.
- Peu d'efforts de sensibilisation ont été menés auprès des promoteurs pour les conscientiser au fait qu'on s'attend à les voir appliquer les principes d'« aménagement respectueux de la nature » à leurs projets; par ailleurs, il faut donner au personnel de la Ville responsable de l'examen des demandes d'aménagement les outils voulus pour s'assurer que ces principes sont systématiquement pris en considération dans le processus d'examen des demandes d'aménagement.
- Il faut clarifier le but de l'engagement à élaborer et à mettre en œuvre un modèle de protection du milieu aquatique.
- La Ville doit se doter d'un système pour recueillir systématiquement toutes les données et tous les renseignements dont elle a besoin pour mesurer et consigner dans des rapports les réductions réelles de la pollution de l'air et des émissions de gaz à effet de serre résultant des projets et initiatives importants conçus à cet effet. Gestion des biens immobiliers (GBI) et Services du parc automobile possèdent tous deux les données de référence nécessaires à l'évaluation des répercussions de leurs initiatives sur les émissions de gaz à effet de serre. Le rapport annuel de la Ville fait état de l'évolution des émissions totales, mais pas de l'incidence précise de chacune des initiatives. Les émissions ne sont pas mesurées directement : elles sont plutôt calculées en fonction de l'énergie consommée et des technologies employées.
- Il faut désigner des responsables et affecter des ressources pour l'élaboration et la mise en œuvre d'une stratégie visant à encourager l'usage efficient des ressources matérielles et énergétiques par la communauté en général.

Recommandations et réponses de la direction

Recommandation 1

Que la direction examine les engagements relatifs à l'environnement pour déterminer s'ils traduisent avec exactitude la vision et les objectifs de la Ville en matière d'environnement et qu'elle les révise au besoin.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les engagements pris par la Ville au chapitre de l'environnement font déjà l'objet d'une réévaluation dans le cadre de la révision de la Stratégie environnementale. L'exercice a débuté par la publication du répertoire *Pour une ville plus verte* en septembre 2007 et se terminera au dernier trimestre de 2009.

La direction souhaite d'abord établir une distinction importante. Dans l'ébauche du rapport de vérification, on peut lire que « Le personnel de la Ville gère en fonction des plans propres à chaque direction et des plans connexes de gestion de la croissance, comme la Stratégie environnementale et le Plan directeur des espaces verts, et non en fonction des cinq engagements relatifs à l'environnement énoncés dans le Plan directeur municipal et le document *Une fenêtre sur Ottawa 20/20*. » Cette information est, dans les faits, correcte; toutefois, il est erroné de laisser entendre que le document *Une fenêtre sur Ottawa 20/20* constitue en soi un énoncé de principes. Les plans de gestion de la croissance et les autres plans auxiliaires représentent les seuls documents de politique pertinents du Conseil en fonction desquels le personnel est tenu d'orienter sa gestion. Le document *Une fenêtre sur Ottawa 20/20* a été rédigé pour donner au grand public un aperçu de la Stratégie Ottawa 20/20 à titre d'information et a été reçu par le Conseil en avril 2003.

Les grandes lignes assorties à chacun des principes de la Stratégie Ottawa 20/20 ont par la suite été intégrées au Plan directeur municipal de 2006 à titre d'orientations stratégiques. Or, leur utilisation dans le Plan directeur municipal ne supprime ni les engagements, plus complets, ni les décisions en matière de priorités énoncés dans les plans de gestion de la croissance, lesquels ont été approuvés par le Conseil à titre de documents de politique au terme d'une vaste consultation publique.

Recommandation 2

Que la direction élabore, pour appuyer la concrétisation de la vision et des objectifs de la Ville en matière d'environnement, un modèle logique précisant :

- a) les effets escomptés sur l'environnement (à long, à moyen et immédiat);
- b) les activités précises et leur résultat pour atteindre les objectifs fixés et les effets escomptés sur l'environnement. Les activités devraient être assorties d'un délai prescrit, et chaque mesure devrait s'insérer dans un échéancier à respecter pour atteindre les objectifs d'ici 2020 (feuille de route de la mise en œuvre).

Réponse de la direction

La direction est d'accord avec cette recommandation.

Le groupe de travail sur l'environnement, une équipe de cadres réunissant des directeurs de programmes environnementaux et présidée par le commissaire de l'environnement de la Ville (la directrice municipale adjointe de Service de l'urbanisme, du transport en commun et de l'environnement), s'affaire déjà à

concevoir un modèle logique. Une première version du modèle, qui tiendra compte des activités, des rendements et des résultats, devrait être achevée d'ici la fin de 2008. Une feuille de route sera créée en 2010 pour la mise en œuvre, une fois achevée la révision de la Stratégie environnementale, et sera présentée au nouveau Conseil en 2011.

Recommandation 3

Que la direction continue de renforcer la convergence du Plan directeur municipal et des autres plans et stratégies pour appuyer les engagements relatifs à l'environnement à mesure qu'elle les révisera, notamment en établissant des liens directs avec les cinq engagements.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La Ville a réalisé des progrès raisonnables vers la concrétisation de ses engagements au chapitre de l'environnement. La direction profitera de la mise à jour annuelle du Plan stratégique de la Ville ainsi que du réexamen des plans de gestion de la croissance liés à la Stratégie Ottawa 20/20 pour mieux faire correspondre ces documents aux engagements révisés relatifs à l'environnement. Pour ce faire, elle veillera notamment à y inclure des renvois directs aux engagements en question.

Recommandation 4

Que la direction veille à ce que le Plan directeur inclue les mesures prioritaires nécessaires au respect des engagements relatifs à l'environnement.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les engagements relatifs à l'environnement sont déjà reproduits dans le Plan directeur. La direction veillera à ce que le Conseil municipal soit informé de la nécessité d'ajouter, à l'occasion de la mise à jour annuelle du Plan stratégique de la Ville, toute autre mesure prioritaire nécessaire au respect de ces engagements. La date de la mise à jour du Plan stratégique de la Ville n'avait pas encore été arrêtée au moment de rédiger la présente réponse.

Recommandation 5

Que la direction communique les engagements de la Ville au chapitre de l'environnement à toutes les directions et à tous les membres du personnel responsables de la mise en œuvre de programmes et d'initiatives afin d'élaborer un entendement commun de ces engagements, leur lien avec les stratégies et les plans environnementaux de la Ville et la façon dont les activités des directions contribuent à leur réalisation.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Cette mesure est déjà en cours par l'entremise du groupe de travail sur l'environnement, composé du commissaire de l'environnement de la Ville ainsi que des directeurs de diverses directions municipales dont les activités ont une incidence importante sur l'environnement. Subséquemment, la révision de la Stratégie environnementale et la création du modèle logique (à laquelle participeront les directeurs et le personnel dont ils ont la responsabilité) permettront de passer en revue les engagements de la Ville au chapitre de l'environnement, ainsi que la façon dont les activités des diverses directions contribuent à leur réalisation. Le modèle logique sera mis au point d'ici la fin de 2008 et la révision de la Stratégie environnementale sera achevée au dernier trimestre de 2009.

Recommandation 6

Que la direction ajoute un nouvel engagement qui consiste à réduire la quantité de déchets envoyés à la décharge par les résidents et les entreprises d'Ottawa de manière à assurer une concordance entre les engagements de la Ville au chapitre de l'environnement et ses autres engagements prioritaires.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Le Conseil municipal a approuvé un objectif de réacheminement de 60 p. 100 pour l'enlèvement des ordures ménagères résidentielles. Une stratégie est également en élaboration pour les secteurs industriel, commercial et institutionnel (ICI). L'objectif de réacheminement pourrait être mis davantage en évidence dans les engagements de la Ville au chapitre de l'environnement. Ceci sera appliqué à l'occasion de la révision de la Stratégie environnementale, en 2008-2009.

Recommandation 7

Que la direction établisse et communique des objectifs et des cibles spécifiques, mesurables, appropriés, réalistes et limités dans le temps pour chacun des engagements d'ordre environnemental.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Des objectifs et des cibles ont été établis dans plusieurs domaines, y compris les espaces verts, la réduction des émissions de gaz à effet de serre, le réacheminement des déchets, le couvert forestier et la part modale du transport en commun. Lorsque ces cibles sont fondées sur le progrès de l'ensemble de la communauté, il faut reconnaître que les programmes et les projets de la Ville pourraient, à eux seuls, s'avérer insuffisants pour les atteindre, auquel cas les programmes et les engagements des autres paliers de gouvernement, ainsi que les choix des particuliers,

pourraient constituer un facteur crucial. Les objectifs et les cibles seront continuellement établis et perfectionnés à mesure que les engagements de la Ville au chapitre de l'environnement seront revus et confirmés à l'occasion de la révision de la Stratégie environnementale en 2008-2009, à la version révisée de laquelle ils seront intégrés.

Recommandation 8

Que la direction définisse et documente les rôles et les responsabilités associés à l'exécution des engagements d'ordre environnemental, de même qu'à la mise en œuvre des projets prévus dans les stratégies et les plans auxiliaires.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les rôles et les responsabilités sont habituellement répartis selon la hiérarchie des services, le service assurant la prestation du programme ou du service étant l'entité responsable. Il sera possible de définir plus clairement les rôles et les responsabilités dans le cadre de l'élaboration du modèle logique, puis de les confirmer ou de les modifier au besoin lors de la révision de la Stratégie environnementale en 2008-2009. En outre, ils seront réexaminés chaque fois qu'un plan ou une stratégie verra le jour ou sera révisé, et à l'occasion de tout remaniement des unités de travail municipales.

Recommandation 9

Que la direction détermine, dans le cadre du plan de mise en œuvre de la Stratégie 20/20, les ressources nécessaires à l'adoption des mesures qui permettront de concrétiser les engagements de la Ville au chapitre de l'environnement.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La détermination des besoins ponctuels et continus en termes de ressources et leur prise en considération dans le processus budgétaire annuel ainsi que dans le Plan financier à long terme se poursuivront. Toute nouvelle initiative découlant de la feuille de route qui sera préparée pour régir la mise en œuvre sera intégrée au Plan financier à long terme. La feuille de route sera achevée en 2010 et présentée au nouveau Conseil municipal en 2011.

Recommandation 10

Que la direction mette au point une stratégie d'évaluation des progrès et de présentation de rapports et qu'elle charge le personnel de lui soumettre des rapports sur les indicateurs énoncés dans le document *Une fenêtre sur Ottawa 20/20*.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Comme il a été mentionné précédemment, il importe d'établir une distinction entre les documents de politique (c.-à-d. Plan officiel et Stratégie environnementale) et les documents d'information (comme *Une fenêtre sur Ottawa 20/20*). En outre, comme le précise le document *Une fenêtre sur Ottawa 20/20*, les indicateurs fournis ne sont que des exemples, bien qu'ils soient considérés comme des outils permettant effectivement d'évaluer si la communauté progresse vers la durabilité.

Les cinq indicateurs en question sont les suivants :

- taux annuel d'utilisation du transport en commun (total et par habitant);
- volume des émissions de gaz à effet de serre par habitant;
- déchets solides par habitant – volume et pourcentage destinés à la décharge plutôt qu'au recyclage ou au compostage;
- densité des habitations et assortiment des utilisations dans les plans de lotissements construits;
- résultats d'analyse d'échantillons d'eau de puits.

La plupart de ces indicateurs font déjà l'objet de rapports, quoique dans des documents distincts. L'utilisation du transport en commun et la gestion des déchets solides sont traitées dans le Rapport annuel de la Ville d'Ottawa, tandis que les données sur la densité des habitations et l'assortiment des utilisations du sol sont analysées dans le Rapport annuel sur le développement.

En décembre 2007, la Division de la durabilité de l'environnement a présenté au Conseil les résultats d'un inventaire des émissions de gaz à effet de serre attribuables à l'administration municipale et aux résidents d'Ottawa pour l'année 2004. Les émissions de gaz à effet de serre ne feront l'objet d'un rapport que tous les quatre ou cinq ans, car il en coûterait trop cher pour recueillir les renseignements chaque année. L'accent sera mis sur les émissions totales plutôt que sur les émissions par habitant puisque la cible que s'est donnée le Conseil consiste à réduire le volume absolu des émissions et non à en réduire l'intensité.

Le personnel rédigera un rapport sur les résultats d'analyse des échantillons d'eau de puits en fonction des données déjà mises à sa disposition sur les puits d'Ottawa faisant partie du Réseau provincial de contrôle des eaux souterraines. Les données provinciales feront l'objet d'un rapport en 2008. En outre, le personnel collaborera avec Services de technologie de l'information pour rendre disponibles, d'une manière qui respecte les dispositions de la *Loi sur l'accès à l'information municipale et la protection de la vie privée*, les résultats compilés d'analyse d'échantillons d'eau de puits privés communiqués par le ministère de la Santé. L'utilité de la communication de ces données sera réévaluée une fois publiés les rapports de 2009 et de 2010.

Une stratégie d'évaluation des progrès et de présentation de rapports sera élaborée en 2008 par le groupe de travail sur l'environnement, en collaboration avec la

Division de la mesure du rendement, et mise au point au début de 2010, c'est-à-dire une fois que la Stratégie environnementale révisée aura été approuvée en 2009.

Recommandation 11

Que la direction veille à ce que la stratégie d'évaluation des progrès et de présentation de rapports s'harmonise avec le modèle logique et comprenne un éventail élargi d'indicateurs clés pour effectuer le suivi des progrès à l'égard des cinq engagements relatifs à l'environnement, et qu'elle intègre ces indicateurs clés aux fiches d'évaluation du Comité de la haute direction.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Encore une fois, il importe d'établir une distinction entre les documents de politique (c.-à-d. Plan officiel et Stratégie environnementale) et les documents d'information (comme *Une fenêtre sur Ottawa 20/20*). Le modèle logique sera élaboré en se fondant sur la Stratégie environnementale et sur plusieurs plans auxiliaires, ce qui constitue la première étape à franchir pour définir un ensemble élargi d'indicateurs du progrès de la Ville à l'égard des engagements d'ordre environnemental. Cette démarche permettra de s'assurer que la stratégie d'évaluation des progrès et de présentation de rapports s'harmonise avec le modèle logique. La première version du modèle logique sera prête d'ici la fin de 2008. Si la Ville modifie ses engagements d'ordre environnemental dans le cadre de la révision de la Stratégie environnementale, le modèle logique sera révisé en conséquence. À mesure que les données et les résultats associés aux indicateurs clés deviendront disponibles, la Division de la mesure du rendement les intégrera, ainsi que les analyses connexes, au cadre municipal pour la préparation de rapports de rendement, et il en sera notamment fait mention annuellement et trimestriellement dans le Rapport annuel de la Ville ou le rapport trimestriel sur le rendement soumis au Conseil, selon ce qu'il convient.

Recommandation 12

Que la direction établisse des processus et des procédures et désigne des responsables pour le suivi des progrès et la présentation de rapports à l'égard des cinq engagements relatifs à l'environnement.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les processus, procédures et responsabilités liés au suivi de certains indicateurs (p. ex., taux d'utilisation du transport en commun et densité des nouveaux aménagements résidentiels) sont déjà en place et donnent de bons résultats. Dans d'autres cas, tels que le couvert forestier et les émissions de gaz à effet de serre, des mesures de référence ont été recueillies. À mesure que de nouveaux indicateurs seront déterminés (principalement au cours de l'élaboration du modèle logique en

2008), les processus qui assureront la collecte des données nécessaires à leur suivi seront établis et les responsables de cette collecte seront désignés. La responsabilité concernant la reddition de comptes sera quant à elle précisée dans la stratégie d'évaluation des progrès et de présentation des rapports, dont l'achèvement est prévu tôt en 2010.

Recommandation 13

Que la Direction des services culturels et du financement communautaire élabore un plan de mise en œuvre pour appuyer le sous-engagement qui consiste à « aménager des environnements verts et des jardins, créer des œuvres d'art terrestres, ainsi que construire des sentiers de caractère artistique dans des corridors verts » et qu'elle mette au point une méthodologie pour l'examen systématique des projets dont la valeur excède 2 millions de dollars afin de cerner les possibilités d'y intégrer de l'art public.

Réponse de la direction

La direction est d'accord avec cette recommandation.

L'application de cette recommandation nécessite au préalable que soient examinées et harmonisées l'ensemble des politiques en matière d'art public des anciennes municipalités qui forment aujourd'hui la Ville d'Ottawa. L'élaboration et la mise en œuvre d'une nouvelle politique sur l'art public est également au programme du Plan pour les arts et le patrimoine d'Ottawa 20/20. En août 2007, un rapport proposant des fonds pour appuyer l'élaboration d'une politique a été présenté au Conseil municipal, mais n'a pas été approuvé. Des ressources additionnelles de 50 000 \$ sont nécessaires pour l'élaboration et la mise en œuvre d'une politique sur l'art public qui tienne compte des pratiques exemplaires les plus récentes en matière de durabilité de l'environnement et d'art public en général, y compris en ce qui a trait aux critères et à la méthodologie employés pour déterminer les projets auxquels seront intégrés des éléments d'art public. Sous réserve des crédits budgétaires votés par le Conseil en 2009, un comité directeur interservices sera formé en mars 2009 et chargé de proposer au Conseil municipal, d'ici juin 2010, une politique sur l'art public pour la Ville d'Ottawa.

Recommandation 14

Que la direction crée et fournisse au personnel responsable de l'examen des demandes d'aménagement les outils voulus pour s'assurer que les principes d'« aménagement respectueux de la nature » sont systématiquement pris en considération dans le processus d'examen des demandes d'aménagement ainsi que pour permettre la collecte de données et de renseignements liés à l'application de ces principes, et qu'elle utilise ces résultats pour déterminer les activités de sensibilisation les mieux adaptées aux promoteurs.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Afin d'accorder une plus grande importance aux principes d'« aménagement respectueux de la nature » dans le processus d'évaluation des demandes d'aménagement, le personnel entend constituer, au moyen d'outils existants, une trousse à l'intention de la Ville et de l'industrie de l'aménagement pour faciliter la préparation et l'évaluation des demandes d'aménagement. Cette trousse sera utilisée dans le processus de consultation préalable ainsi qu'aux stades embryonnaires des propositions d'aménagement, avant la préparation de plans de conception détaillés. De nombreux éléments de la trousse (liste de vérification en matière d'aménagement durable, examen des lignes directrices relatives aux études sur les répercussions environnementales, lignes directrices sur la conception des voies naturelles) font déjà partie du programme de travail de 2008.

Les politiques du Plan officiel préparent la voie à l'examen des demandes d'aménagement. Une trousse enrichie servant de complément au Plan officiel comprendra les lignes directrices approuvées par le Conseil à l'égard des études requises ainsi que des outils améliorés pour la mise en œuvre, ce qui pourrait inclure règlements et budgets. Cette trousse viendra appuyer l'examen environnemental intégré des demandes d'aménagement décrit à la sous-section 4.7.1 du Plan officiel. Elle englobera les outils existants, tels que les lignes directrices relatives aux études sur les répercussions environnementales, qui seront révisées en 2008 et présentées au Conseil au deuxième trimestre de 2009, de même que les nouvelles lignes directrices sur la conception des voies naturelles, qui seront achevées au plus tard au deuxième trimestre de 2009. Le personnel examinera les avantages et la faisabilité d'adopter un règlement sur la modification de l'emplacement d'ici le troisième trimestre de 2008. La trousse comprendra une liste de vérification en matière d'aménagement durable, à partir de laquelle seront évaluées les demandes d'aménagement. Cette liste s'insère dans un programme à grande portée de promotion des bâtiments écologiques sur lequel le Comité de l'urbanisme et de l'environnement se penchera en janvier 2008. La trousse sera constituée à partir des ressources existantes.

La liste de vérification en matière d'aménagement durable sera achevée d'ici le quatrième trimestre de 2008 et servira à évaluer dans quelle mesure les diverses solutions d'aménagement auront été intégrées. Cette évaluation se fera à titre de projet pilote en 2008, puis se poursuivra de manière continue une fois que la liste de vérification aura officiellement été approuvée, au quatrième trimestre de 2008. Elle sera effectuée au moyen des ressources humaines dont disposent la Division de la durabilité de l'environnement et la Direction de l'urbanisme.

L'industrie de l'aménagement comptera parmi les intervenants qui participeront à la révision et à l'élaboration des lignes directrices et de la liste de vérification en matière d'aménagement durable. L'évaluation en fonction de la liste de vérification

permettra de déterminer d'autres mesures de sensibilisation à mettre en œuvre auprès de l'industrie. La sensibilisation visera principalement à faire valoir les pratiques exemplaires et les modèles d'aménagement durable, et comportera des séances d'information sur certaines pratiques en matière d'aménagement « respectueux de la nature » ou durable (comme la préservation des arbres, la conception des voies naturelles et les toits verts).

Recommandation 15

Que la direction précise l'engagement à *Protéger l'eau de surface et l'eau souterraine*, clarifie l'engagement à utiliser un modèle de protection du milieu aquatique et cerne les mesures à prendre pour respecter l'esprit de l'engagement initial.

Réponse de la direction

La direction est d'accord avec cette recommandation.

L'administration municipale déploie beaucoup d'efforts pour protéger l'eau de surface et l'eau souterraine, que ce soit par une planification qui tient compte des sous-bassins hydrographiques, les projets de restauration des cours d'eau, l'élaboration et la mise en œuvre de la Stratégie de gestion du bassin hydrographique du Bas-Rideau, la création d'une Stratégie de gestion des eaux pluviales, le programme de subventions pour l'assainissement de l'eau en milieu rural, les études sur les ressources en eau souterraine dans les villages, les ateliers éducatifs et l'appui de programmes de partenariat comme le Festival de l'eau pour enfants. La protection de l'eau de surface et de l'eau souterraine qui alimentent les réseaux municipaux d'eau potable fait l'objet d'un grand nombre d'études par l'entremise du programme Drinking Water Source Protection, mandaté par la Province. Le personnel de la Ville participe directement à ces études et l'administration municipale sera appelée à jouer un rôle de plus en plus important à mesure que le processus passera de l'étape de l'évaluation technique à l'étape de la planification. La possibilité de rendre l'engagement en matière de protection de l'eau de surface et de l'eau souterraine plus visible et plus précis sera examinée lorsque la Stratégie environnementale sera révisée en 2008-2009. L'engagement à créer un modèle de protection du milieu aquatique sera clarifié et les mesures requises pour le concrétiser seront définies.

Recommandation 16

Que la direction affecte des ressources adéquates pour appuyer la mise en œuvre de la Stratégie de gestion des eaux souterraines.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La mise en œuvre de la Stratégie de gestion des eaux souterraines comporte deux volets : les activités existantes et les activités proposées. Les dépenses associées aux activités existantes de gestion de l'eau souterraine varient d'une année à l'autre, la

moyenne ayant été de 230 000 \$ par année entre 2001 et 2006. Toute autorisation de dépense à ce chapitre pourra être utilisée d'ici la fin de 2008, ce qui portera la demande de financement annuel à 230 000 \$ à compter de 2009.

La Stratégie de gestion des eaux souterraines propose que la Ville entreprenne de nouvelles activités, dont certaines, comme l'évaluation et la surveillance de l'utilisation de l'eau souterraine, chevauchent les initiatives du programme Drinking Water Source Protection. Des comités de protection des sources d'eau potable ont récemment été constitués. Leur première tâche consiste à préparer un mandat d'ici octobre 2008. Si, comme on l'espère, la formulation du mandat clarifie ce qui sera réalisé (et financé) dans le cadre du programme Drinking Water Source Protection et ce qui doit venir d'initiatives locales, le personnel pourra alors indiquer quelles ressources il faudra prévoir dans le budget de 2009 pour financer les activités proposées dans la Stratégie de gestion des eaux souterraines.

En outre, le personnel de la Ville consacre déjà beaucoup de temps au programme Drinking Water Source Protection et sera appelé à en consacrer davantage encore compte tenu de la création des comités de protection des sources d'eau potable et de la préparation subséquente du mandat, sans oublier l'obligation de répondre aux signalements qui pourraient être affichés sur le Registre environnemental. Cette charge de travail pourrait croître au point de nécessiter des ressources supplémentaires en personnel.

Recommandation 17

Que la direction mette sur pied un système pour recueillir les données et l'information qui permettront de mesurer et de consigner dans des rapports les réductions de la pollution de l'air et des émissions de gaz à effet de serre attribuables à des projets d'envergure conçus à cette fin.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Services du parc automobile recueille des données et des renseignements sur les émissions du parc automobile depuis 2002 et présente systématiquement une Stratégie de réduction des émissions du parc automobile à chacun des mandats du Conseil. Des améliorations sont apportées à mesure que de nouveaux outils sont mis au point, comme l'instrument analytique GHGenius de RNCAN qui permet de modéliser les réductions de gaz à effet de serre selon divers scénarios de transport routier. Services du parc automobile continuera à perfectionner les méthodes employées pour mesurer les émissions du parc automobile conformément aux priorités du Conseil et en rendre compte.

Le projet d'autobus hybrides diesels-électriques comporte une phase de validation pendant laquelle sera confirmé le rendement réel des véhicules comparativement au rendement estimé. Gestion des biens immobiliers peut aussi surveiller les réductions

de la consommation énergétique et les réductions connexes des émissions de gaz à effet de serre découlant de ses projets et initiatives les plus importants.

Le groupe de travail sur l'environnement mettra sur pied, d'ici le quatrième trimestre de 2008, un système qui permettra de s'assurer que les réductions d'émissions qui résultent des projets et initiatives d'envergure sont mesurées (en fonction de l'énergie consommée et des technologies employées) et consignées.

Recommandation 18

Que la direction désigne des responsables et affecte des ressources pour l'élaboration et la mise en œuvre d'une stratégie visant à encourager et à faciliter l'usage efficient des ressources matérielles et énergétiques dans la communauté en général.

Réponse de la direction

La direction est d'accord avec cette recommandation.

En ce moment, la sensibilisation de la communauté se fait en fonction de programmes distincts, notamment le réacheminement des déchets, la valorisation de l'eau, l'interdiction de la marche au ralenti des véhicules et l'économie de l'énergie (par l'entremise d'Hydro Ottawa). La Division de la durabilité de l'environnement travaille en outre à concevoir d'autres programmes de sensibilisation sur les moyens de rendre un bâtiment écologique (pour le secteur privé) et sur l'intendance des terres. La feuille de route de la mise en œuvre, qui sera achevée en 2010 et présentée au nouveau Conseil en 2011, prévoira une méthode uniforme pour inciter la communauté à respecter davantage l'environnement.

Recommandation 19

Que la direction formule des engagements précis concernant l'adoption de solutions technologiques et la conclusion de partenariats pour améliorer la qualité de l'air et qu'elle les intègre aux plans et stratégies auxiliaires d'Ottawa 20/20.

Réponse de la direction

La direction n'est pas d'accord avec cette recommandation.

L'ébauche du rapport de vérification énumère des exemples de solutions technologiques utilisées par la Ville et donne une liste de plus d'une demi-page de partenariats conclus dans ce domaine, avec le secteur privé comme avec des organismes gouvernementaux ou sans but lucratif. Toutefois, rien ne prouve que des engagements précis visant l'adoption de solutions technologiques ou l'établissement de partenariats donneraient de meilleurs résultats ni n'indique que les progrès de la Ville dans ce domaine laissent à désirer. On ne peut prédire quelles nouvelles technologies verront le jour ni quelles possibilités de partenariats se présenteront. Par exemple, le personnel de la Ville n'aurait pu prévoir l'invention de la technologie actuellement mise à l'essai par Plasco. En outre, même si la Ville a, par le passé, mené des projets sur l'économie d'énergie en partenariat avec Hydro Ottawa, les initiatives

d'économie d'énergie auxquelles travaillaient les services d'électricité régionaux relèvent maintenant toutes de l'Office de l'électricité de l'Ontario. Des engagements précis sur l'adoption de solutions technologiques et l'établissement de partenariats risqueraient fort de devoir être révisés au gré de l'émergence de nouvelles possibilités et de l'évolution des circonstances. Les exigences procédurales qui en résulteraient ne présentent pas d'avantages compensatoires. La direction reconnaît toutefois l'opportunité d'intégrer aux plans et stratégies auxiliaires d'Ottawa 20/20, à mesure qu'elles se présentent, les nouvelles technologies et les nouvelles possibilités de partenariats pour lesquelles une entente pourrait être conclue et qui contribueraient grandement à améliorer la qualité de l'air.

Conclusion

La Ville a amorcé et, dans certains cas, achevé la mise en œuvre d'un grand nombre de politiques, de programmes et de projets environnementaux. Bien que beaucoup de ces initiatives contribuent à la réalisation des engagements d'ordre environnemental énoncés dans le document *Une fenêtre sur Ottawa 20/20 – La Stratégie de gestion de la croissance d'Ottawa* et le Plan directeur de la Ville, le personnel de la Ville gère en fonction des plans propres à chaque direction et des plans auxiliaires de gestion de la croissance, et non en fonction des cinq engagements relatifs à l'environnement. La Ville ne s'est pas dotée d'un cadre de gestion pour appuyer la concrétisation de ses engagements à cet égard. Or, l'absence d'un tel cadre qui serait assorti d'un modèle logique, d'une matrice des rôles et des responsabilités ainsi que d'une stratégie d'évaluation des progrès et de présentation de rapports pourrait compromettre la capacité de la Ville à réaliser ses engagements à long terme au chapitre de l'environnement.

Le personnel de la Ville a déclaré que l'élaboration d'un modèle logique pour les programmes environnementaux avait récemment été entreprise. Cet exercice devrait fournir un cadre de travail qui facilitera l'établissement d'objectifs axés sur des résultats, le suivi des progrès et la présentation de rapports.

Compte tenu que les engagements relatifs à l'environnement sont à long terme et doivent être respectés intégralement d'ici 2020, la Ville a fait des progrès raisonnables vers leur concrétisation, même si l'amélioration observée est attribuable à des initiatives propres aux divers services plutôt qu'à une stratégie ponctuelle. La présente vérification a permis de relever plusieurs domaines où des efforts additionnels devront être fournis pour respecter entièrement d'ici 2020 les engagements pris à l'égard de la protection de l'environnement.

Remerciements

Nous tenons à remercier la direction de sa bienveillante collaboration et de l'aide qu'elle a apportée à l'équipe de vérification.

1 INTRODUCTION

The Audit of the Environmental Commitments in the Ottawa 20/20 Growth Management Strategy was included in the 2007 Audit Plan of the Office of the Auditor General, first presented to Council in December 2004.

2 BACKGROUND

In June 2001, the City of Ottawa held a Smart Growth Summit with a focus on development that enhances the quality of life in communities, complements ecosystem functioning, and uses tax revenues wisely. As a result of this Summit, City Council formulated seven principles to guide subsequent planning activity by the City. The seven principles are:

1. A caring and inclusive City;
2. A creative City, rich in heritage, unique in identity;
3. A green and environmentally sensitive City;
4. A City of distinct, liveable communities;
5. An innovative City where prosperity is shared amongst all;
6. A responsible and responsive City; and,
7. A healthy and active City.

It should be noted that the environmental principle “a green and environmentally sensitive City” was not part of the original set of principles proposed by the City, but was added in response to high levels of public demand.

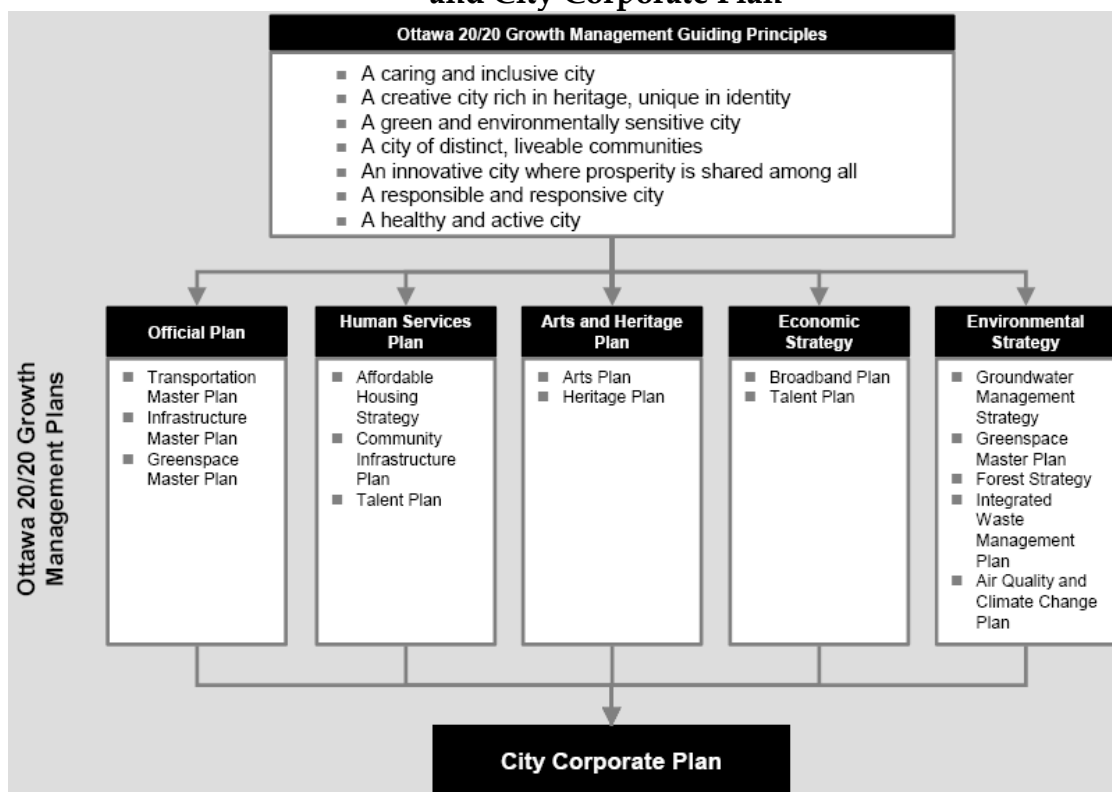
In the spring of 2003, *Window on Ottawa 20/20 – Ottawa’s Growth Management Strategy (GMS)*, was presented to Council for information. This document further refined the seven principles contained in the GMS to provide more specific objectives for each. In this document, the environmental principle of “a green and environmentally sensitive City” was backed by five more specific environmental commitments. These environmental commitments are as follows:

1. Preserve greenspace ;
2. Strengthen ecosystem planning and design ;
3. Protect surface and groundwater ;
4. Improve air quality and reduce greenhouse gas emissions ; and,
5. Protect and conserve our resources.

Window on Ottawa 20/20 also committed the City to develop a Corporate Plan that outlines medium-term (three-year) priorities describing how the City proposes to realize its vision.

On September 28, 2005, Council approved the first City Corporate Plan (CCP). In the CCP, these same five commitments are presented as “20/20 Strategic Directions” and form the City’s “Environmental Agenda” for 2006-2009. Throughout this report the terms “environmental commitments” or “commitments” are used to describe these five elements of the Environmental Agenda. The CCP provides direction on how to achieve priorities within the context of Ottawa 20/20. It also illustrates the relationship between growth management plans and the CCP, as shown in Figure 1 below.

Figure 1 - Relationship Between Ottawa 20/20, Growth Management Plans, and City Corporate Plan



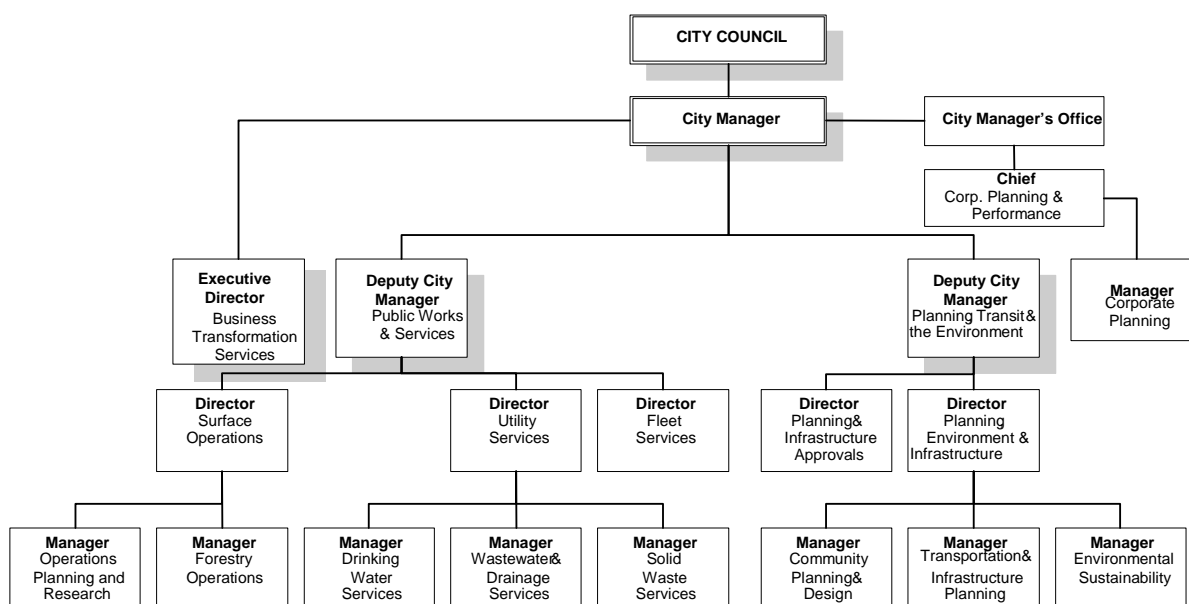
Those plans that most directly support the environmental commitments are the:

- Official Plan and its three supporting plans;
- Environmental Strategy and its supporting plans and strategies;
- City Corporate Plan; and,
- Arts and Heritage Plan (to a lesser extent).

The City has introduced an annual balanced scorecard process to monitor and report on implementation of City programs and it continues to expand and refine its performance measures for inclusion in the scorecard.

Responsibilities for implementing, monitoring and reporting on progress rest with a number of City branches and departments that are involved to varying degrees in the delivery of the environmental commitments. Figure 2 below identifies the key senior management positions responsible for implementing elements of the environmental commitments at the time of the audit.

Figure 2 - Organization of City departments and branches contributing to the delivery of the environmental commitments



The Environmental Sustainability Division plays a central coordination and integration function for environmental initiatives within the City. This is a relatively new division, created to bring together environmental policy functions previously distributed across a number of City departments. The intention to create the division was announced during the 2004 budget process; the proposed division structure was approved by the City Manager in the fall of 2005; and the Division received partial funding in the 2006 budget. While the majority of positions in this Division have been created and filled, as of December 2006, this Division included 16 positions, of which 6 were vacant. The Environmental Management budget was \$1.547 million in 2005, \$1.415 million in 2006 and \$1.687 million in 2007.

3 AUDIT OBJECTIVES, SCOPE AND APPROACH

3.1 Audit Purpose and Objectives

The purpose of the audit was to provide an independent and objective assessment of the City's capacity to meet the environmental commitments outlined in the *Window on*

Ottawa 20/20 - Growth Management Strategy document and the Environmental Agenda as described in the CCP and assess its progress to date towards these commitments.

Specific audit objectives were twofold:

1. Determine the City's management capacity related to each of the five environmental commitments, including whether:
 - the commitments are well-defined and articulated;
 - roles and responsibilities for achieving these commitments have been established and communicated;
 - plans have been established to meet these commitments;
 - adequate resources have been assigned to meet them;
 - a system is in place to monitor progress towards these commitments on a regular basis; and,
 - appropriate information is being reported to Council.
2. Determine whether progress to date towards the environmental commitments is reasonable and the City appears on track to meet these commitments by 2020.

3.2 Audit Scope

The scope of the audit included an examination of activities and initiatives related to each of the five environmental commitments contained in the *Window on Ottawa 20/20* and the Environmental Agenda for the City. The audit included an examination of activities and initiatives related to environmental commitments contained in supporting plans and strategies where these commitments directly aligned with one of the five environmental commitments.

The audit did not examine other environmental activities and initiatives that did not directly support one or more of the environmental commitments. This was an important boundary to the audit, given the large number and range of environmental initiatives underway at the City. The temporal scope of the audit was for the period 2004 to the spring of 2007.

The audit focused on City activities. Interviewees included a broad range of City staff. While a number of the initiatives are undertaken in association with partners, the audit did not include interviews with external partners.

Due to the difficulties associated with isolating budget requests and actual allocations across all divisions over multiple years, the audit relied on interview evidence related to adequacy of resources, supplemented by a review of funding allocations to related initiatives where readily available.

3.3 Audit Approach

The audit was completed in accordance with CSA Standard CAN/CSA-ISO 19011:03, *Guidelines for quality and/or environmental management systems auditing* and followed the City of Ottawa Office of the Auditor General (OAG) standard audit methodology.

4 ORGANIZATIONAL STRENGTHS

The City has begun and, in some cases, completed a large number of environmental policies, programs and initiatives. City staff interviewed were knowledgeable of and committed to the City's environmental initiatives. Although City staff manages to their individual branch plans and supporting growth management plans and not to the environmental commitments, a fair degree of alignment can be made between the broad intentions of the environmental commitments, and the supporting plans and strategies. In addition, the City has initiated environmental programs that are beyond the scope of activities defined by the environmental commitments.

The existence of a designated Division for Environmental Sustainability facilitates the continued development, refinement, implementation and monitoring of the City's environmental agenda. At the time of the audit, this Division was working with the City Managers' Environmental Working Group to develop a logic model for the City's environmental programs, which will be supported by outcome-based objectives and performance measures. This work is expected to provide a framework to guide future priority setting and performance monitoring and reporting.

5 FINDINGS, RECOMMENDATIONS AND MANAGEMENT RESPONSES

This report presents the audit findings in two main sections: Section 5.1 presents audit findings related to the City's management capacity to deliver on its environmental commitments. Section 5.2 presents audit findings related to each of the five environmental commitments, including an assessment of the City's progress towards each commitment and any further commitment-specific findings.

5.1 Management Capacity Findings

The audit assessed the City's management capacity related to each of the five environmental commitments, including whether:

- the commitments are well-defined and articulated;
- roles and responsibilities for achieving these commitments have been established and communicated;
- plans have been established to meet these commitments;
- adequate resources have been assigned to meet them;

- a system is in place to monitor progress towards these commitments on a regular basis; and,
- appropriate information is being reported to Council.

5.1.1 Overall Findings

City staff does not perceive the five environmental commitments as the guiding principles and objectives of the City's environmental programs. Rather, these commitments are seen as a summary of existing or planned initiatives that were compiled for public presentation. Staff did not demonstrate a common understanding of what constituted the City's environmental growth management objectives: some interviewees cited the Environmental Strategy as the guiding document for the City's environmental programs; others indicated that the growth management strategy was a compilation of the *Window on 20/20 – Ottawa's Growth Management Strategy*, its supporting plans (as presented in Figure 1) and the City Corporate Plan.

This inconsistent understanding of the role of the environmental commitments as they relate to branch and departmental activities, and to the City's overall environmental vision, is a significant barrier to the City's achievement of these commitments. Clarity of vision and objectives is a pre-requisite for developing and executing focused implementation plans, and monitoring and reporting on progress.

While the supporting plans and the City Corporate Plan each contain elements of an implementation plan for the City's environmental programs, there is no overall implementation plan or strategy for the environmental commitments. Recognizing the long timeframe for these commitments, an implementation plan is required to lay out the logical steps and activities required to achieve the commitments within measured blocks of time between the present and 2020.

City staff manages to their individual branch plans and to the supporting growth management plans, such as the Environmental Strategy and the Greenspace Master Plan and not to the environmental commitments. There is no broader monitoring framework in place for the five environmental commitments, which impedes tracking of the City's overall progress towards these commitments.

The Environmental Sustainability Division, working with the City Managers' Environmental Working Group, had begun development of a logic model for environmental programs at the time of the audit. This work is intended to facilitate and inform development of outcome-based objectives, monitoring and reporting.

Recommendation 1

That management review the environmental commitments to determine whether these accurately convey the City's environmental vision and objectives and revise them as required.

Management Response

Management agrees with the recommendation.

The City's environmental commitments are already under review as part of the review of the City's Environmental Strategy. The review began with the publication of the Getting Greener directory in September 2007 and will be completed in Q4 2009.

There is an important distinction that must be made up front in this audit response. The draft Audit Report stated that "City staff manages to their individual branch plans and to the supporting growth management plans, such as the Environmental Strategy and the Greenspace Master Plan, and not to the environmental commitments as outlined in the City Corporate Plan and the Window on Ottawa 20/20 document." This is factually correct however, what is incorrect is the idea that the Window on Ottawa 20/20 document is itself a policy document. The growth management plans and other supporting plans are the relevant Council's policy documents to which staff should be and are managing. The Window on Ottawa 20/20 document was written as an overview of Ottawa 20/20 for general public information and was received by Council in April 2003.

The subheadings from the pages for each Ottawa 20/20 principle were later incorporated as strategic directions in the 2006 City Corporate Plan. However, their use in the City Corporate Plan does not supersede the more complete commitments and decisions on priorities in the growth management plans, which were approved by Council as policy documents after extensive public consultation.

Recommendation 2

That management develop a logic model to support achievement of the City's environmental vision and objectives and that this logic model include:

- a) Desired environmental outcomes (long-term, medium-term and immediate); and,**
- b) Specific activities and their outputs to achieve the environmental objectives and desired outcomes. Activities should be for a prescribed period, with an indication of what actions will be required in each time period to achieve the objectives by 2020 (i.e., an implementation roadmap).**

Management Response

Management agrees with the recommendation.

The Environment Working Group, a senior level team consisting of directors of environmental programs, chaired by City's Environmental Commissioner (the Deputy City Manager for Planning, Transit and the Environment), has already begun

work on developing a logic model. Development of an initial logic model will include activities, outputs and outcomes and is expected to be completed by end of Q4 2008. An implementation roadmap will be completed in 2010, after the Environmental Strategy review has been completed, and will be presented to the new Council in 2011.

Recommendation 3

That management continue to strengthen the alignment across the Corporate Plan, and other plans and strategies in support of the environmental commitments as they are revised, including drawing direct linkages to the five commitments.

Management Response

Management agrees with the recommendation.

The City has made reasonable progress towards achieving all of its environmental commitments. Management will use the annual refresh of the City Strategic Plan as well as the reviews of the Ottawa 20/20 growth management plans to strengthen the alignment of the Strategic Plan and other plans and strategies with the City's environmental commitments as revised. This will include direct linkages to the commitments.

Recommendation 4

That management ensure the Corporate Plan includes priority actions required to implement the environmental commitments.

Management Response

Management agrees with the recommendation.

Environmental commitments are already captured in the Corporate Plan. Management will ensure that City Council is provided with information on any additional priority actions required to implement its environmental commitments as part of the annual refresh of the City Strategic Plan. The timing of the refresh of the City Strategic Plan had not been determined at the time of this response.

Recommendation 5

That management communicate the City's environmental commitments to all branches and staff responsible for implementing environmental programs and initiatives to develop a common understanding of the City's environmental commitments, how they relate to the environmental strategies and plans within the City, and how the branches' activities support their achievement.

Management Response

Management agrees with the recommendation.

This effort is already underway via the Environment Working Group, which is composed of the City's Environmental Commissioner and directors of various City branches whose mandates have a significant environmental impact. Going forward, both the review of the Environmental Strategy and the development of the logic model (which will involve both the Directors and their staff) will be used to review and discuss the City's environmental commitments, and how the activities of various branches support their achievement. Development of the logic model will be completed by end of Q4 2008. The review of the Environmental Strategy will be completed in Q4 2009.

5.1.2 Clarity of Commitments

The majority of environmental commitments in the *Window on Ottawa 20/20* document are clearly worded and understandable. One component of the *Protect surface and groundwater* commitment was not well understood: "...and a Water Environment Model will be used to improve water quality monitoring for all areas of the City." City staff were not familiar with this terminology or were uncertain what was intended by the phrase "a Water Environment Model" (see Section 5.2.3 for further discussion and associated recommendation).

Four of the five environmental commitments address environmental challenges facing the City in a meaningful way. The *Protect surface and groundwater* commitment, however, includes only a commitment related to monitoring water quality. While it acknowledges the importance of groundwater and surface water protection policies and practices, it does not include a specific commitment related to the development or implementation of such policies. This is a notable gap in this environmental commitment (see Section 5.2.3 for further discussion and associated recommendation). It should be noted that the Environmental Strategy does discuss protection of surface- and groundwater at length and this is part of the actions under *Manage resources, Incorporate environmental factors into decision-making and Ecosystem approach* commitments contained in this document.

While the Environmental Strategy discusses solid waste management both in terms of strategic planning and program planning, none of the environmental commitments directly addresses solid waste management. Given the importance of solid waste management and the City's commitment to achieve a diversion rate of 60% of all solid waste by the end of 2008, consistent with the provincial target, this is a notable gap in the environmental commitments. If the commitments provide the environmental vision for the City, then these commitments should communicate the importance of integrated solid waste management in the City.

The specificity of the commitments varies substantially. While a number of the commitments include activity-based measures that can be tracked (for example, a

commitment to develop a specific plan, such as the Greenspace Master Plan), none of the commitments includes specific outcome measures. The lack of specificity of certain commitments could prevent the City from determining when the commitment has been achieved. For example, the *Improve air quality and reduce greenhouse gas emissions* commitment states, "The City will commit to efficient material and energy resource use in its own operations and will encourage and facilitate similar practices within the wider community. The City will work towards adopting alternative technologies that result in cleaner air." While supporting strategies provide more specific objectives and targets for some of the environmental commitments, the City has not established and communicated specific, measurable, actionable, and time-bound objectives and targets for each of the environmental commitments.

Many City staff members with responsibility for achieving specific environmental commitments were aware that the *Window on Ottawa 20/20* document contains environmental commitments, but were unfamiliar with the specific details of these commitments. Upon reviewing the environmental commitments relevant to their work, staff demonstrated an understanding of how the commitment related to their area of work and which parts of their work contributed to implementing the commitment. This low level of familiarity with the environmental commitments indicates that these commitments have not been broadly communicated to City staff as the City's guiding environmental commitments.

Recommendation 6

That management include a new environmental commitment to reduce the amount of waste that Ottawa residents and businesses send to landfill to align the environmental commitments with the City's existing commitment priorities.

Management Response

Management agrees with the recommendation.

City Council has approved a 60% diversion target for residential waste collection. Work is also underway on an ICI (Industrial, Commercial and Institutional) strategy. This diversion target can be featured more prominently in the City's environmental commitments. This will be addressed during the review of the Environmental Strategy in 2008-09.

Recommendation 7

That management establish and communicate specific, measurable, actionable, relevant and time-bound objectives and targets for each of the environmental commitments.

Management Response

Management agrees with the recommendation.

Objectives and targets have been established in a number of areas including provision of greenspace, greenhouse gas emission reduction, waste diversion, tree cover, and transit modal split. When these targets are based on community progress, it must be recognized that City programs and initiatives may not be able to achieve these targets on their own. Programs and commitments from other levels of government, as well as individual choices, may also be critical success factors for meeting community targets. Continued setting and refinement of objectives and targets will occur as the City's environmental commitments are reviewed and confirmed, during the review of the Environmental Strategy in 2008-09 and contained in the revised Environmental Strategy.

5.1.3 Roles and Responsibilities

Roles and responsibilities for implementing activities related to the environmental commitments are spread across a number of branches (see Section 1). Specific roles and responsibilities are not documented for the five environmental commitments and, in many cases, are not clearly defined in supporting strategies and plans. While in some cases, responsibility for developing supporting plans and strategies was assigned to a specific branch (for example, Fleet Services Branch is responsible for developing and implementing the Fleet Emission Reduction Strategy; and the Utility Services Branch is responsible for the Integrated Waste Management Plan), roles and responsibilities for implementing specific initiatives in support of the five environmental commitments have not been documented.

Recommendation 8

That management define and document roles and responsibilities for implementing the environmental commitments, as well as for implementing initiatives contained in supporting strategies and plans.

Management Response

Management agrees with the recommendation.

Roles and responsibilities have traditionally followed departmental lines, where the department delivering the program and service is the one responsible. Going forward, there is the opportunity to further define roles and responsibilities as part of the logic model development, and confirmed, or revised as needed during the review of the Environmental Strategy in 2008-09. It will also be reviewed on an ongoing basis as various other plans and strategies are developed, or reviewed, or when City work units are re-organized.

5.1.4 Supporting Plans and Resources

With few exceptions, all supporting plans relating to the environmental commitments and sub-commitments have either been developed or are in the process of being developed. Supporting plans that have not yet been developed include:

-
- Cultural Services and Community Funding has not developed a specific plan to support the *Preserve greenspace* sub-commitment to “contribute to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors.”
 - While the City addresses efficient energy use in plans and strategies related to its buildings, fleet and waste management activities, it has not yet developed a strategy to reduce consumption of other materials within City operations. At the time of the audit, a study on material usage within the City was underway, the results of which will inform such a strategy.
 - The City has not detailed a plan or strategy to encourage and facilitate efficient material and resource use in the broader community.

More detail regarding these supporting plans and associated recommendations are presented in Sections 5.2.1 and 5.2.5.

Substantial resources are currently dedicated to environmental initiatives and programs at the City, many of which support the environmental commitments. Broadly speaking, it appears that sufficient resources are available to implement the environmental commitments, provided current levels of funding are maintained. Two specific areas were identified where lack of funding may jeopardize the City’s ability to meet its environmental commitments:

- Funding for activities detailed in the Groundwater Management Strategy was eliminated in the Long Range Financial Plan; and,
- Funding requests to support completion of an inventory of material resource use in the community were denied in the 2006 and 2007 budgets.

In addition to these areas, Council rejected requests in 2006 to fund the following:

- \$580,000 for Existing Buildings Energy Retrofit Program (based on Toronto Better Buildings Program example), including \$80,000 for new 2006 position of Buildings Program Coordinator;
- \$160,000 for Public Outreach for Air Quality and Climate Change; and,
- \$276,000 for a variety of smaller air quality and climate change initiatives, such as promoting green roofs and partnering with NRCan on a Commercial Buildings Incentive Program pilot project (\$80,000 each from the City and NRCan).

Finally, it should be noted that most of the funding to support air quality and climate change has been obtained from external sources. As the City identifies specific actions

to be implemented over time in support of these environmental commitments, new funding may be required.

Recommendations related to funding of these initiatives are provided under Section 5.2.3 and 5.2.5.

Recommendation 9

That management identify resource requirements for actions required to implement the environmental commitments as part of the Ottawa 20/20 implementation plan.

Management Response

Management agrees with the recommendation.

Required and ongoing resources will continue to be identified and input into the annual budget process and the Long Range Financial Plan. Any new initiatives identified as a result of the implementation roadmap will be incorporated into the Long Range Financial Plan. The implementation roadmap will be completed in 2010, and will be presented to the new Council in 2011.

5.1.5 Monitoring and Reporting

There is no overarching system in place to track progress against the five environmental commitments. Branches responsible for implementing activities or initiatives related to one or more of the commitments monitor progress related to their own specific initiatives to varying degrees. While branch-level monitoring provides some useful data and information, there is no corporate-level roll-up to assess overall progress related to the environmental commitments. There is no systematic reporting to Council on initiatives related to these environmental commitments.

At the time of the audit, the City's balanced scorecard reporting system included only two indicators related to the environmental commitments:

- Transit – conventional transit ridership and monthly conventional transit rider ship; and,
- Solid waste – total tonnes of residential waste recycled and total tonnes of residential waste landfilled per quarter.

The *Window on Ottawa 20/20* document (Section 5, page 36) identified a larger suite of indicators to be used to measure progress:

- Annual transit ridership (total and per capita);
- Greenhouse gas emissions per capita;
- Solid waste per capita – volume and % landfill versus recycled or composted;

-
- Residential densities and mix in plans of subdivision built; and,
 - Results of well water sample testing.

While these indicators provide data and information required to monitor progress towards specific environmental commitments, they are insufficient to assess progress relative to all five of the commitments; for example, none of the identified indicators relates to the *Preserve greenspace* commitment.

The Environmental Sustainability Group prepares an annual update of the City of Ottawa's Environmental Initiatives, which commenced in 2006. This update is presented to the City Manager and includes some information that relates to the environmental commitments. In 2007, this update will be more substantial than the 2006 update, and it will be produced as a formal City publication.

Recommendation 10

That management develop a performance measurement and reporting strategy and direct staff to report on the performance indicators identified in the *Window on Ottawa 20/20* document.

Management Response

Management agrees with the recommendation.

As stated earlier, it is important to distinguish between the policy documents (i.e., Official Plan, and Environmental Strategy) and the summary document (*Window on Ottawa*). As noted in the *Window on Ottawa 20/20* document, these indicators are only examples but are considered to be valid indicators of whether the community is moving toward sustainability.

The five identified indicators are:

- Annual transit ridership (total and per capita);
- Greenhouse gas emissions per capita;
- Solid waste per capita – volume and % landfill versus recycled or composted;
- Residential densities and mix in plans of subdivision built; and,
- Results of well water sample testing.

Currently, most of these indicators are reported, although not in one document. The transit ridership and solid waste indicators are reported in the City of Ottawa Annual Report. The residential densities and mix data is reported in the Annual Development Review.

The Environmental Sustainability division in December 2007, brought to Council the results of an inventory of greenhouse gas emissions, both corporate and community,

for 2004. Greenhouse gas emissions will be reported at four or five year intervals, as the information is too expensive to collect on an annual basis. The focus will be on total emissions rather than emissions per capita as Council's target is for an absolute reduction in emissions rather than an intensity target.

Staff will report on well water sample testing based on the data currently available from the Provincial Groundwater Monitoring Network locations in the City of Ottawa. The provincial data will be reported in 2008. In addition, staff will work with IT Services to make available compiled results from the tests of private well water samples received from the Ministry of Health, in a way that respects the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA). The usefulness of this data will be reviewed after two years of reporting (2009 and 2010).

A performance measurement and reporting strategy will be developed by the Environment Working Group working with Corporate Performance Measurement Reporting division during 2008 and finalized in early 2010 after approval of the Environmental Strategy in 2009.

Recommendation 11

That management ensure the performance measurement and reporting strategy aligns with the logic model and includes a broader set of Key Performance Indicators (KPI) to track progress against all five of the environmental commitments. These KPIs should be integrated into the Executive Management Committee Scorecard process.

Management Response

Management agrees with the recommendation.

As stated earlier, it is important to distinguish between the policy documents (i.e., Official Plan, and Environmental Strategy) and the summary document (Window on Ottawa). Further development of the logic model will draw on the Environmental Strategy and a number of supporting plans and will be the first step in developing a broader set of key performance indicators against the City's environmental commitments. This will ensure that the performance measurement and reporting strategy aligns with the logic model. Initial development of the logic model will be completed by end of Q4 2008. If the Environmental Strategy review results in changes to the City's environmental commitments, the logic model will be revisited. As the data and results for the key performance indicators become available, the Corporate Performance Measurement and Reporting division will incorporate this information, and accompanying analysis, into the Corporate Performance Reporting Framework, including annual and quarterly reporting through the Annual Report and the Quarterly Performance Report to Council, as appropriate.

Recommendation 12

That management establish processes and procedures and assign responsibility for monitoring and reporting on progress related to the five environmental commitments.

Management Response

Management agrees with the recommendation.

The processes, procedures and responsibilities for monitoring some indicators, (e.g., transit ridership and density of new residential development) are already in place and functioning well. In other cases, such as urban tree canopy and greenhouse gas emissions, baseline measures have been collected. As additional indicators are agreed to (primarily through the logic model development in 2008), the necessary processes to collect the needed data will be established and responsibility for data collection assigned. Responsibility for reporting will be determined as part of the performance measurement and reporting strategy, which will be finalized in early 2010.

5.2 Findings Specific to Each Environmental Commitment

The following section presents commitment-specific audit findings, including an assessment of the progress made to date towards meeting each environmental commitment. Our assessment of progress reflects the long-term nature of the commitments. At the time of the audit, the City had 13 years within which to meet the commitments fully.

Each of the following sections begins with a reproduction of the environmental commitment, followed by a table showing progress against each of the specific commitments and sub-commitments and any additional findings.

5.2.1 Preserve Greenspace

"The City will undertake a Greenspace Master Plan to identify and characterize all of the individual greenspaces in the City. A key objective will be to identify those greenspaces that are - or could be - physically connected. Rural land use management practices will be centered on the protection of forests, wetlands, natural areas, greenspace and agriculture. The City will work with Conservation Authorities and other partners to develop a Forest Strategy to manage and protect the rural and urban forest. Both the Greenspace Master Plan and Forest Strategy will include policies and programs to enhance and protect our biodiversity. A vibrant focus on the arts will also contribute to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors." Window on Ottawa 20/20 – Ottawa's Growth Management Strategy

This commitment includes a number of specific sub-commitments, many of which are activity-based. Table 1, below, presents a summary of progress related to each component of this commitment.

Table 1 - Summary of Progress Towards the Preserve Greenspace Commitment

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
Undertake a Greenspace Master Plan to identify and characterize all of the individual greenspaces in the City.				X	Greenspace Master Plan was approved in 2006.
Rural land use management practices will be centered on the protection of forests, wetlands, natural areas, greenspace and agriculture.			X		The Official Plan (OP) is a primary implementation mechanism for this commitment, as it identifies and delineates designated areas for protection or modified practices (e.g., agricultural resources, natural environment areas, rural natural features, significant wetlands). Under the OP review, the City is completing a review of the Natural Heritage System to ensure alignment with the Provincial Policy Statement. Outreach on rural land use management practices is another important component of this sub-commitment. A small number of programs are currently in place with outreach components, some of which are delivered by partners (e.g., Rural Clean Water Program administered by Conservation Authorities). In 2007, funding was approved to create and staff a Stewardship Coordinator position, and a Forester position. Once these positions are filled, they will play a role toward implementing this sub-commitment.
Work with Conservation Authorities and other partners to develop a Forest Strategy to manage and protect the rural and urban forest.			X		A draft forest strategy for forests not on City lands exists. Finalization was deliberately put on hold until the vacant forester position in Environmental Sustainability is staffed (position was posted at the time of the audit). Resource Management plans for the majority of City forests exist. These plans, along with designations under the Official Plan, and the Greenspace Master Plan, collectively work to maintain habitat.
Both the Greenspace Master Plan and Forest Strategy will include policies and programs to enhance and protect our biodiversity (EnvS).			X		The OP policies and designations protect biodiversity. The Greenspace Master Plan contains policies and initiatives that aim at protecting green space which provides habitat. Resource management plans in support of the Forest Strategy identify protected areas, rare species and habitat in forests, and manage the surrounding forest to protect them. A Task Force of the Environmental Advisory Committee was established in early 2007 to prepare a draft Biodiversity Strategy, and work is currently underway.
A vibrant focus on the arts will also contribute to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors (AHP).		X			CPS has developed an Arts and Heritage Plan, and a public arts policy that relates to this commitment, but has not developed a specific plan to ensure its work systematically contributes to this commitment. It was noted that a number of public art projects that have been planned or implemented broadly relate to this commitment.

The City has developed and is implementing a number of plans and policies designed to preserve greenspace. The Greenspace Master Plan was approved in 2006, and activities related to three of the remaining sub-commitments are in progress. Recognizing the long-term nature of the commitment, the City's progress to date appears reasonable, with one notable exception. The Cultural Services and Community Funding Branch in the Community and Protective Services Department (CPS), has not developed a specific plan to ensure its work systematically "contribute[s] to the preservation of greenspace by establishing creative green environments and gardens, land art, and art pathways that follow green corridors." The Policy Statement in this areas reads, "The City will develop and implement a comprehensive municipal public

art policy that results in: a) the integration of permanent, site-specific works of art into municipal buildings, natural places, public spaces and structures; and b) expanded partnered efforts to integrate public art into all major, new and redevelopment projects in Ottawa.” Funding has not yet been approved to complete this public art policy. While several CPS activities that broadly relate to this commitment were underway at the time of the audit,¹ a more systematic approach is required.

The 2006 – 2009 City Corporate Plan includes several environmental agenda commitments related to preserving greenspace. It commits the City to the conservation of natural areas, greenspaces and linkages, and the conservation of plant life, but does not include any related environmental actions. A clearer alignment between actions identified in the City Corporate Plan and the environmental commitments is required in this area.

Branches responsible for implementing initiatives related to this commitment monitor progress related to their own initiatives to varying degrees. Existing branch/departmental monitoring activities related to elements of the *Preserve greenspace* commitment include:

- Review/progress updates on priority projects under the Arts and Heritage Plan and an assessment of priorities every three years;
- Systematic review of the Greenspace Master Plan every five years;
- Review/progress updates on priority projects within the Cultural Services and Community Funding Branch;
- Report on the number of trees planted under the Forest Strategy²; and,
- Reporting of % greenspace in the Annual Report (hectares of parkland).

At the time of the audit, some branches (such as Surface Operations) were in the process of determining performance indicators to submit to the City’s balanced scorecard reporting system, while others had not yet done so. While branch-level monitoring provides some useful data and information, there is no corporate-level roll-up to assess overall progress related to this commitment, and there is no systematic reporting to Council on initiatives related to the Preserve Greenspace commitment.

Recommendation 13

That Cultural Services and Community Funding develop an implementation plan to support the sub-commitment to “establish creative green environments and gardens,

¹ The Visual Arts Policy requires that 1% of project costs for projects greater than \$2 million in value be made available for public art. Because of capacity issues, there is no systematic process in place to ensure this policy is consistently applied.

² It was reported that this indicator will be incorporated in the City’s balanced scorecard in future periods, but it had not yet been included at the time of the audit.

land art, and art pathways that follow green corridors” and that this branch develop a methodology for systematic review of projects greater than \$2 million in value to identify opportunities to include a public art component.

Management Response

Management agrees with the recommendation.

A comprehensive review and harmonization of the City’s various pre-amalgamation public art policies is needed in order to implement this recommendation. The development and implementation of a new Public Art Policy was also identified in the Ottawa 20/20 Arts and Heritage Plan. Recently, funds to support the development of a new policy were identified in a report to City Council in August 2007 but the report was not approved. Additional resources in the amount of \$50,000 are required to develop and implement a Public Art Policy that would incorporate recent best practices relating to environmental sustainability and public art in general, including criteria and methodology for identifying the projects that would include a public art component. Subject to Council 2009 budget approval, an inter-departmental Steering Committee will be established in March 2009, and will report back to City Council by June 2010 with a proposed Public Art Policy for the City of Ottawa.

5.2.2 Strengthen Ecosystem Planning and Design

“The City will undertake watershed and sub-watershed plans in priority areas, both urban and rural, in order to identify environmental features and conditions and recommend measures to mitigate the impacts of existing and proposed land-use activities. Development proponents will be expected to use "design with nature" principles, meaning that developments will be designed to maintain and use natural characteristics and features of a site, and provide protection of adjacent natural areas.” Window on Ottawa 20/20 – Ottawa’s Growth Management Strategy

This commitment includes an activity-based commitment for the City to develop watershed and sub-watershed plans in priority areas, and establishes an expectation for how development proponents will behave. Table 2, below, presents a summary of progress related to each component of this commitment.

Table 2 - Summary of Progress Towards the Strengthen ecosystem planning and design Commitment

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
Undertake watershed and sub-watershed plans in priority areas, both urban and rural, in order to identify environmental features and conditions.			X		Two watershed strategies have been completed (Lower Rideau, and Carp River). A significant number of watershed/sub-watershed plans are in progress or have been approved by City Council. Additional sub-watershed plans will be developed on a priority basis, in accordance with the policies presented in the Official Plan. These strategies identify environmental features and conditions and recommend measures to mitigate the impacts of existing and proposed land-use activities.
Recommend measures to mitigate the impacts of existing and proposed land-use activities.				X	The Official Plan (OP) contains a policy that states “The City will implement the recommendations of the plan where it has the ability to do so through existing programs, the development review process, sub-watershed plans, environmental management plans, and other mechanisms and will encourage other parties to do the same”. City staff indicate that the recommended mitigation measures are implemented through the development proposal review process.
Development proponents will be expected to use "design with nature" principles.		X	X*		The OP elaborates on the specifics of design with nature principles, and provides supporting policies that are to be applied in the review of development application proposals. The City does not have supporting processes or tools in place to ensure that relevant policies are systematically considered in the review process; however, interviewees were confident that a thorough review of development applications is conducted despite the lack of such a tool. Ultimate achievement of this commitment requires cooperation and participation by external stakeholders (i.e., the developers’ community), who have not been explicitly made aware of the City’s expectations regarding “design with nature” principles.

*Qualified: In our assessment, the commitment related to development proponents is both in planning and in progress.

The City has made good progress in developing watershed and sub-watershed plans in priority areas. Watershed strategies have been completed for the two principal watersheds within the City: the Lower Rideau and Carp River. No additional watershed plans are required within the City; all remaining planning will be completed at the sub-watershed level. The City has a process in place to identify priority areas requiring sub-watershed plans, taking into account such factors as the environmental condition of the natural system, development pressure, changing land-use activities and community support. Resources assigned to watershed planning appear reasonable.

A number of development application review policies and processes have been incorporated within the Official Plan to protect and integrate existing ecosystems into development design. These processes include requirements to complete environmental impact statements, tree preservation and protection plans, wellhead protection plans, groundwater impact assessments, erosion and sediment control plans, and stormwater site management plans, among others. However, no tools (e.g., checklists) are in use to ensure these policies and design with nature principles are consistently considered in the application review process.

Additional work will be required between now and 2020 to ensure development proponents understand and consistently apply “design with nature principles”. To

date, the City has conducted only limited outreach to development proponents, with a reliance on the proponents to follow the process requirements identified in the Official Plan. Additional outreach and engagement with this community will support several of the environmental commitments.

There is no overarching system in place to track progress against this environmental commitment. Branches responsible for implementing activities related to this commitment monitor progress related to their own initiatives to varying degrees. Existing monitoring activities include:

- The capture and presentation of the status of watershed and sub-watershed studies in the City Geographic Information System (GIS);
- A systematic review of Ottawa 20/20 supporting plans and strategies in line with the 5-year review of the Official Plan. This review addresses if:
 - The assumptions in the plan are still valid;
 - The policy priorities are still valid;
 - Relevant legislation has changed;
 - Policies in the plan are being carried out; and,
 - Policies have had the desired outcome.

No data or information is collected to determine the degree to which development proponents use “design with nature principles.” All watershed and sub-watershed plans are presented to Council for approval. Beyond this, there is no systematic reporting to Council on initiatives related to the Ecosystem Planning commitment.

Recommendation 14

That management develop and provide tools to application review staff to ensure that “design with nature principles” are systematically considered in the application review process, and to allow collection of data and information related to the application of these principles and that management use these results to determine what targeted outreach activities are required for members of the developers’ community.

Management Response

Management agrees with the recommendation.

In order to advance the “design with nature principles” within the application review process, staff intends to compile a toolkit, elements of which already exist, for the City and the development industry to use in preparing and reviewing applications. This toolkit will be used in the pre-consultation and at the formative stages of development proposals, prior to design concepts becoming entrenched. Many elements of the toolkit (sustainable development checklist, review of EIS

guidelines, development of natural channel design guidelines) are already in the 2008 work program.

The Official Plan incorporates policies that set the stage for development review. A strengthened toolkit to support the Official Plan will include Council approved guidelines for required studies and improved tools for implementation, possibly including regulations and budgets. This toolkit will be used to support the Integrated Environmental Review to assess development applications as described in Section 4.7.1 of the Official Plan. The kit will incorporate existing tools, such as the Environmental Impact Statement guidelines that will be reviewed in 2008 and brought to Council in Q2 2009. It will also include new natural channel design guidelines to be completed by Q2 2009. Staff will complete an examination of the value and feasibility of a Site Alteration by-law by Q3 2008. The toolkit will include a sustainable design checklist to be used when evaluating applications. This checklist is part of a larger green building promotion program that was presented to Planning and Environment Committee for consideration in January 2008. The checklist will be completed by Q4 2008. Development of the toolkit will be done using existing resources.

The sustainable design checklist will be used to track, the degree to which various design measures are achieved. Tracking will be implemented on a pilot basis in 2008 and on an ongoing basis after formal approval of the checklist in Q4 2008. This will be done using existing staff resources within the Environmental Sustainability division and the Planning branch.

The development industry will be among the stakeholders engaged in the review and development of the guidelines and the sustainable development checklist. Tracking against the sustainable development checklist will be used to target additional outreach to the industry. This outreach will focus on promotion of best practices and developments that demonstrate sustainable design, as well as information sessions on specific “design with nature” or sustainable design practices (such as tree preservation, natural channel design, and green roofs).

5.2.3 Protect Surface and Groundwater

“Policies to protect groundwater help to ensure potable water in rural areas while clean surface water is used for both drinking and recreation. Monitoring of surface water quality will be carried out through the Water Environment Protection program. Watershed planning, a Groundwater Management Strategy and a Water Environment Model will be used to improve water quality monitoring for all areas of the City.” Window on Ottawa 20/20 - Ottawa’s Growth Management Strategy

The scope of this commitment is narrow, with an exclusive focus on monitoring and no specific commitments related to implementation of groundwater and surface water protection policies and practices. While the first sentence of the commitment refers to

the role that groundwater protection policies play, it does not commit the City to specific action in this area. Improving monitoring is only one of several objectives stemming from improved planning and management. As discussed in Section 5.1.2, this is a notable flaw in this environmental commitment that should be addressed. Table 3, below, presents a summary of progress related to each component of this commitment.

Table 3 - Summary of Progress Towards the Protect Surface and Groundwater Commitment

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
Policies to protect groundwater help to ensure potable water in rural areas while clean surface water is used for both drinking and recreation.			X		<p>Note that this statement does not commit the City to specific action, but rather states the purpose of groundwater protection policies. A number of policies in the Official Plan aim at the protection of surface and groundwater. These policies and related initiatives include:</p> <ul style="list-style-type: none"> • 4.7.5 Protection of Groundwater resources: Sub-watershed plans now bring in groundwater (was not always the case); • 4.8.2: Wellhead protection studies completed and led to development of a protection by-law that was dismissed because of a similar emerging provincial requirement. Provincial legislation (<i>Clean Water Act</i>) was passed and requirements under that legislation are currently being developed; • 2.4.4: A groundwater management strategy was developed; and, • 4.4.1.2: A guide on how to conduct servicing studies referenced in this section of the OP is almost complete. <p>On Surface Water:</p> <ul style="list-style-type: none"> • 4.7.3 is being implemented (Erosion Prevention and Protection of Surface Water); and, • 4.7.6 policies are being implemented (Stormwater Management). <p>On Stormwater (Infrastructure MP):</p> <ul style="list-style-type: none"> • Development of the Stormwater Management Strategy is ongoing, and is scheduled to be completed by the end of 2008.
Monitoring of surface water quality will be carried out through the Water Environment Protection program.				X	The water environment protection program has been implemented and surface water quality monitoring is ongoing in 3 rivers and 22 creeks. Water testing is carried out by Utility Services in City-owned laboratories. This is an ongoing initiative.
Watershed planning, [and] a Groundwater Management Strategy [in addition to Water Environment Model assessed below] will be used to improve water quality monitoring for all areas of the City.			X		<p>Two watershed strategies have been completed (Lower Rideau, and Carp River). A significant number of watershed/sub-watershed plans are in progress or have been approved by City Council (see Table 2, above). Additional sub-watershed plans will be developed on a priority basis, in accordance with the policies presented in the Official Plan.</p> <p>A groundwater management strategy was developed and approved in 2003. Note that no funding has been allocated to its implementation in the Long-Range Financial Plan over the next five years.</p>
A Water Environment Model [in addition to two listed components above] will be used to improve water quality monitoring for all areas of the City.	X				There is no consistent understanding of what was intended by the term "Water Environment Model".

While the commitment does not commit the City to specific action in the area of groundwater protection policies, the City has developed and is implementing a number of policies designed to protect groundwater and surface water quality, including:

-
- The Water Environment Protection Program (which predates the amalgamated City) and the Groundwater Management Strategy which was developed and approved in 2003;
 - A number of policies in the Official Plan aim at the protection of surface and groundwater;
 - A storm water management strategy was under development at the time of the audit (anticipated completion date is the end of 2008);
 - The Environmental Strategy contains a number of commitments that relate to the protection of surface and groundwater;
 - The Environmental Agenda and specific actions in the City Corporate Plan 2006 - 2009 contain commitments directly relevant to this Ottawa 20/20 commitment; and,
 - Utility Services (now Water and Wastewater Services) is leading the definition of Intake Protection Zones for water intake from the Ottawa River. Other City staff are participating in working groups related to drinking water source protection processes.

The City's surface water quality monitoring program is a mature program with stable funding. City staff also reported that initiatives are underway to develop an integrated water quality monitoring system for the City on a watershed/sub-watershed basis.

The audit identified two gaps in the City's progress towards implementation of this environmental commitment:

1. Funding for activities detailed in the Groundwater Management Strategy was eliminated in the 2007 Long-Range Financial Plan. This lack of resources may jeopardize the City's ability to implement the strategy.
2. City staff were not familiar with the term "a Water Environment Model" and were uncertain what was intended by inclusion of this term in this commitment. One staff member provided a draft discussion paper dated May 29, 2002, regarding the Water Environment Model and, upon review of the paper, reported that elements of the Water Environment Model had largely been achieved through work completed or underway as part of the Lower Rideau Watershed Strategy. Further examination may be required to determine what was intended by this sub-commitment and if further action is required.

Branches responsible for implementing activities related to this commitment monitor progress related to their own initiatives to varying degrees. Existing monitoring initiatives that support the environmental commitment include:

- Annual reports to Council on water loss and water efficiency, special reports, continuous reporting and status updates to the Planning and Environment Committee on the planning and implementing of specific initiatives;
- Systematic review of Ottawa 20/20 supporting plans and strategies; and,
- Surface water quality monitoring data are included in a number of regulatory submissions. A surface water quality report was expected to go to the Planning and Environment Committee in August 2007.

Some information related to the *Protect surface and groundwater* commitment is reported to Committees and Council. Water quality monitoring results are reported regularly to the Planning and Environment Committee and to the Province of Ontario. As mentioned earlier, the Environmental Sustainability Division reports on activities through the annual update of the City of Ottawa's Environmental Initiatives, which was initiated in 2006; this update includes some information relevant to this commitment. There is currently no reporting on implementation of the Groundwater Management Strategy because staff are awaiting finalization of relevant provincial policies and regulations on source protection.

Recommendation 15

That management revise the *Protect surface and groundwater* commitment to include a specific commitment related to protection of ground and surface water, and that it clarify the commitment to use a Water Environment Model and determine what action may be required to meet the spirit of this original commitment.

Management Response

Management agrees with the recommendation.

The municipality is doing a great deal to protect surface and ground water, including sub watershed planning, stream restoration projects, development and implementation of the Lower Rideau Watershed Strategy, development of a Stormwater Management Strategy, the Rural Clean Water grant program, groundwater capacity studies in villages, educational workshops and support of programs with partners such as the Children's Water Festival. Protection of surface and groundwater that is the source for municipal drinking water systems is receiving a great deal of study through the provincially directed Drinking Water Source Protection program. City staff is participating directly in these studies and municipal involvement will increase as the process moves from the technical assessment to the planning stage. A more visible and specific commitment to the protection of surface and groundwater will be considered in the review of the Environmental Strategy in 2008-09. The commitment to develop a Water Environment Model will be clarified and the appropriate action identified.

Recommendation 16

That management assign adequate resources to support implementation of the groundwater management strategy.

Management Response

Management agrees with the recommendation.

Implementation of the Groundwater Management Strategy has two components: existing activities and proposed new activities. Spending on existing groundwater activities varies from year to year and averaged \$230,000 per year between 2001 and 2006. All existing authority for this purpose may be utilized by the end of 2008, resulting in a requirement for \$230,000 in annual funding beginning in 2009.

The Groundwater Management Strategy included a proposal for the City to undertake new activities, some of which, such as groundwater use assessments and monitoring, overlap with initiatives under Drinking Water Source Protection. Source Protection Committees have recently been appointed. Their first task is to prepare a Terms of Reference by October 2008. If, as hoped, the preparation of Terms of Reference clarifies what will be accomplished (and funded) through the Drinking Water Source Protection process and what needs to be a local initiative, staff will be able to advise on the resource requirements to fund the new activities in the Groundwater Management Strategy in the 2009 budget requests.

In addition, the City staff commitment to the Drinking Water Source Protection process is already significant and is expected to increase with the formation of Source Protection Committees and the subsequent preparation of Terms of Reference, as well as the requirement to prepare responses to anticipated postings on the Environmental Bill of Rights registry. This workload may reach a point where additional staff resources are required.

5.2.4 Improve Air Quality and Reduce Greenhouse Gas Emissions

“The City will undertake a variety of initiatives to improve air quality and reduce energy consumption in three main sectors: buildings, transportation and waste. Reducing our energy consumption will lead to a positive impact on our air quality and reduce the City's contribution to global greenhouse gas emissions.” Window on Ottawa 20/20 – Ottawa's Growth Management Strategy

This commitment identifies three priority areas where the City will focus its efforts to improve air quality and reduce greenhouse gas emissions: buildings, transportation, and waste. While the wording of this commitment is quite broad (i.e., it commits to undertake a variety of initiatives), it is specifically supported by the *Air Quality and Climate Change Master Plan*, which provides more specific targets and commitments. Table 4 below presents a summary of progress related to each component of this commitment (buildings, transportation, and waste). It also includes summary comments related to baseline data and monitoring systems in place to track the

effectiveness of specific initiatives, since data measurement and reporting systems will be required to determine if the City is improving air quality and reducing greenhouse gas emissions.

Table 4 - Summary of Progress Towards the Improve Air Quality and Reduce Greenhouse Gas Emissions Commitment

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
Initiatives have been identified and developed for:					
Buildings			X		<p>Developed and implemented initiatives include:</p> <ul style="list-style-type: none"> - Green Buildings Policy; - Hosted Green Roofs development workshop in early 2004; - In-kind support to EnviroCentre that completes home energy audits for residential dwellings; - Energy Awareness Task Force (to improve energy awareness among operating staff); - Building Automation Task Force (to develop standards for automation to conserve energy); - Changes to zoning by-law to allow for solar collectors and parking requirements; - Green roof on Britannia Water Treatment plant; - \$70 k allocated to pilot project to finance building energy retrofits. Remove barrier to long-term payback issues. (This initiative was in the planning stage at the time of the audit.);Energy management using alternative sources of energy at the Robert O. Pickard Environmental Center (ROPEC), and Lemieux Island and Britannia Water Purification Plants.
Transportation			X		<p>Developed and implemented initiatives include:</p> <ul style="list-style-type: none"> - Vehicle anti-idling campaign; - Commuter Challenge; - International Walk to School Day; - Car Free Day; - TravelWise community grants; - TravelWise Program and Awards; - Active and Safe Routes to School; - The Bruce Timmermans Cycling Awards; - Community based Transportation Demand Management toolkit; - Eco-pass; - Testing City vehicles for compliance with Ontario's Drive Clean Program; - Keeping up-to-date with technological advancements relating to fuels; - Postponing re-fuelling of vehicles until dark; - Vehicle detection recording and campaign with Federal government grant; and, - Budget 2007 approval of funds to begin using biodiesel in the transit fleet. <p>Plans, strategies and by-laws:</p> <ul style="list-style-type: none"> - Transportation Master Plan; - Transportation Demand Management (TDM) (under development at the time of the audit); - Fleet Emissions Reduction Strategy (FERS); - Anti-idling by-law; - Procurement strategy to buy fuel efficient vehicles and cleaner fuels (E10); and, - Smog and Heat Action Plan (transportation component). <p>Under Fleet Emission Reduction Strategy:</p> <ul style="list-style-type: none"> - Fleet replacement; - Preventive maintenance; - Anti-idling; - Oil analysis to prevent needless oil changes; and, - Oil specifications. <p>Purchasing fleet vehicles:</p> <ul style="list-style-type: none"> - Fuel economy; - Mostly environmentally driven; and,

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
					- Business case approach to buying hybrids.
Waste			X		Initiatives include: - Implementation of Integrated Waste Management Master Plan (IWMMP); - Launched "Rethink Garbage" campaign in 2006; - Revised the Household Hazardous Waste (HHW) program to include 10 mobile depot events; - Reduced bag limit to 3 items per week effective January 2007; - Introduced "Yellow Bag" program for Non-Residential Establishments (NRE); - Commenced IC&I 3R Study and Phase 1 consultation completed; - Trail Road Gas to Electrical Energy Project (5MW); and, - Demonstration project with Plasco Energy Group for 85 tonne per day gasification facility.
There is a system in place to monitor progress towards achievement of the commitment, including:					
<ul style="list-style-type: none"> • Emissions inventory for: <ul style="list-style-type: none"> ○ GHG's; and ○ Criteria Air Contaminants. 				X	A Greenhouse Gas (GHG) and Criteria Air Contaminants (CAC) Emission Inventory was completed in 2007 (based on 2004 data). The inventory provides a detailed database of regional pollution sources, their emissions, and emission rates. It also provides an inventory of City sources of GHG and CAC.
Baseline data for each initiative to provide a basis for assessing the air quality and GHG emissions impact of the initiative.		X			Over the near term, the City intends to establish a baseline for emissions of GHGs and CACs based on the data gathered from the air emissions inventory. This will be completed for building, transportation and waste sectors. In some cases, the City is already tracking some data year-over-year such as RPAM Utility Management using energy consumption data from its facilities. It is unclear if these data are being used for baseline purposes as a means of performance reporting.
Regular monitoring of the impact of each initiative.	X				There is little evidence of regular monitoring of the impact on air quality of the initiatives in any of the three sectors, with one exception: there is evidence that the Energy Reduction Program for City facilities tracks CO2 (kg) saved by retrofits.

Air quality and climate change are addressed in a number of City plans and strategies, including the:

- Official Plan;
- Air Quality and Climate Change Master Plan;
- Transportation Master Plan;
- Integrated Waste Management Master Plan;
- Smog and Heat Action Plan;
- Fleet Emissions Reduction Strategy;
- Transportation Demand Management Strategy (currently under development);
- Environmental Strategy; and,
- 2006 - 2009 City Corporate Plan.

The City has developed and implemented numerous initiatives to support this environmental commitment and is making good progress towards this commitment in all three sectors: buildings, transportation and waste.

In 1991, the (former) City of Ottawa committed to a greenhouse gas emissions reduction target for City operations of 20% below the 1990 level by the year 2005. The City's Air Quality and Climate Change Plan for the amalgamated City maintained this initial commitment in 2003 but extended the time horizon, committing to achieve the 20% reduction by the year 2007. At that time, the City also adopted a future target to achieve a 20% reduction in greenhouse gas emissions within the community (that is, not just for corporate emissions) by 2012. The City had plans to set future targets for air emissions and greenhouse gas reduction in 2007. By the end of 2004, the City's corporate greenhouse gas emissions were estimated to be 24% below 1990 levels, thereby exceeding the City's corporate target. Community-wide emissions were estimated to be 4% above 1990 levels, indicating substantial reductions will be required to meet the 2012 community target.

When the City approves an initiative that is expected to have a significant reduction in air emissions and/or greenhouse gas emissions, there is no system in place to ensure the City measures and reports on the actual emission reductions associated with the project. For projects of a certain size and emissions reduction potential, the City should collect baseline air emissions and greenhouse gas data before the project begins, and then again after the project has been fully implemented. Both RPAM and Fleet have baseline data required to assess the greenhouse gas emissions impact of their initiatives. The impact on total emissions is reported in the Annual Report, but not the specific impact of the initiatives. Emissions are not measured directly; they are calculated as a function of energy consumption and technology. While there are some projects for which the City has collected these data³, it is not a common practice.

Branches responsible for implementing activities or initiatives related to this commitment monitor progress related to their own initiatives to varying degrees. Existing monitoring of initiatives that support the environmental commitment include:

- Air emissions monitoring through the air emissions inventory (based on 2004 data);
- Review/progress updates on priority projects with the Branch/Department;
- Special report on power generation, and status updates to the Planning and Environment Committee on the planning and implementing of initiatives related to buildings, transportation and waste; and,
- Reporting on the percentage of waste diverted from landfill in a given calendar year.

³ For example, Real Property and Asset Management (RPAM) tracks the greenhouse gas emissions saved by building retrofits (reported in terms of avoided kilograms of carbon dioxide equivalents); the City measures and tracks the impact of biodiesel and ethanol use in the City's fleet; and the City tracks the impact of waste management initiatives against established program or branch-level outcomes.

While branch-level monitoring provides some useful data (for example, building specific energy consumption) and information (for example, progress status of initiatives), there is no corporate-level roll-up to assess overall progress related to this commitment.

The Environmental Sustainability Branch's annual update reports on the status of the initiatives related to this environmental commitment, including building and operational energy-efficiency initiatives and waste reduction initiatives that will lead to cleaner air. The individual branches with responsibility under this commitment also report to Council on specific programs, initiatives and activities related to air quality and the reduction of greenhouse gas emissions.

Recommendation 17

That management develop a system to collect the data and information required to measure and report on the actual air and greenhouse gas emission reductions resulting from significant projects/initiatives designed to improve air quality and/or reduce greenhouse gas emissions.

Management Response

Management agrees with the recommendation.

Fleet Services has collected data and information regarding fleet emissions since 2002 and systematically presents a Fleet Emissions Reduction Strategy to Council every term. Improvements have been made as new tools have become available such as NRCan's GHGenius analytical tool that permits modeling of greenhouse gas (GHG) reductions for various on-road transportation scenarios. Fleet Services will continue to refine methods to measure and report on fleet emissions in accordance with Council priorities.

The Diesel Electric Hybrid Bus project includes a validation phase to confirm actual performance of the bus compared to estimates. Similarly Real Property Asset Management is able to track the reductions in energy consumption and associated reductions in GHG emissions from their significant projects/initiatives.

The Environment Working Group will put in place a system by Q4 2008 to ensure that the emissions reductions resulting from significant projects/initiatives are measured (based on fuel consumption and technology) and reported.

5.2.5 Protect and Conserve Our Resources

“Efficient use of material resources, such as energy, water, chemicals, paper and other tangible commodities throughout the City and the community, can result in significant environmental benefits and economic savings. The City will commit to efficient material and energy resource use in its own operations and will encourage and facilitate similar practices within the wider community. The City will work towards adopting alternative technologies that result in cleaner

air. Partnerships will be a key part of this program.” Window on Ottawa 20/20 - Ottawa’s Growth Management Strategy

This commitment states the City will work to use energy and other materials (such as water, chemicals, paper and other commodities) more efficiently, and will encourage Ottawa residents and businesses to do the same. The wording of this commitment is very broad and, while other plans contain a number of related initiatives, there is no supporting strategy that establishes more specific commitments. This will render it difficult to know whether the commitment has been met by 2020. The final portion of the commitment related to alternative technologies and partnerships for cleaner air might be more appropriately included in the commitment to *Improve air quality and reduce greenhouse gas emissions*. Table 5, below, presents a summary of progress related to each component of this commitment.

Table 5 - Summary of Progress Towards the Protect and conserve our resources Commitment

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
Plans have been established to identify and implement initiatives identified in the commitment. The City has taken initiatives that allow it to:					
Demonstrate efficient use of material and energy resources in its own operations.			X		<p>Energy The City has developed an Energy Awareness Task Force. However, no policy has been developed on energy procurement or conservation.</p> <p>Fleet:</p> <ul style="list-style-type: none"> - Oil/products... procurement policy; - Using products with less VOCs; and, - New garage built for 2009 will be LEED certified. <p>Utility Services:</p> <ul style="list-style-type: none"> - Wastewater plant generates more than 30% of its own energy for its operations; - Water loss initiative to find and correct leaks in the system reduced losses by 9% in first year; - River-driven power system at pumping station provides half the required power to distribute water; - Business-line organization/alignment has improved effectiveness / efficiency / leverage to do more with what they have; and, - Developed servicing standards.
Encourage and facilitate efficient use of material and energy resources in the wider community.			X		<p>The following initiatives encourage and facilitate the efficient use of material and energy resources in the community:</p> <ul style="list-style-type: none"> - Vehicle anti-idling campaign; - Commuter Challenge; - International Walk to School Day; - Car Free Day; - TravelWise community grants; - TravelWise Program and Awards; - Active and Safe Routes to School; - The Bruce Timmermans Cycling Awards; and, - Community-based Transportation Demand Management toolkit; <p>Fleet:</p> <ul style="list-style-type: none"> - Participate in Environment Day activities; - Demonstrate hybrid buses and biofuels; and, - Educate and advertise in the community. <p>Utility Services:</p>

Sub-Commitment	Status				Comments
	No action	In planning	In progress	Completed	
					<ul style="list-style-type: none"> - ReThink garbage campaign enhances public education focused on “rethinking” behaviours and habits; - Protecting / conserving landfill using technology to extend its life. Optimization to delay landfill end-of-life; and, - Water efficiency program for community to decrease peak loading at plants. Also focuses on supply- and demand-side management.
Work towards adopting alternative technologies that result in cleaner air.			X		<p>Examples of work completed towards adopting alternative technologies that result in cleaner air include:</p> <ul style="list-style-type: none"> - Introduction of hybrid diesel-electric bus technology into the transit fleet; - Biodiesel, fuel switching (use of E10) and ethanol-blended gasoline; - Solar panels used on trucks to provide power for flashing lights (prevents idling); - Trail Rd. gas-electricity conversion project produces renewable “green” power from converting the landfill gas into 5 (MWh) of power; and, - Plasco plasma gasification technology used for the project produces energy from waste as a by-product of plasma gasification.
Establish partnerships related to the adoption of alternative technologies that result in cleaner air.			X		<p>Numerous partnerships related to the adoption of alternative clean air technologies exist, including:</p> <p>Energy Ottawa</p> <ul style="list-style-type: none"> - Initiating the Trail Road landfill gas-electricity conversion project, in partnership with Energy Ottawa and the Province. <p>Industry</p> <ul style="list-style-type: none"> - Partnership with Plasco to produce energy from waste as a by-product of plasma gasification. <p>EnviroCentre</p> <ul style="list-style-type: none"> - Offers measurement equipment for home energy audits; and, - Provides home energy audits and promotes the use of efficient appliances and alternative transportation modes. <p>Natural Resources Canada</p> <ul style="list-style-type: none"> - Assessing environmental benefits of products; - Fleet challenge; and, - Air quality monitoring. <p>National Research Council</p> <ul style="list-style-type: none"> - Fumes; off-gassing on buses; and, - Ethanol-diesel research with Canadian Renewable Fuels Association. <p>Federation of Canadian Municipalities</p> <ul style="list-style-type: none"> - Partially funded hybrid buses trial; and, - GeoConnections air quality monitoring using satellite data. <p>Federal and Provincial Government</p> <ul style="list-style-type: none"> - Allowing City to use air monitoring equipment for 15 month pilot project. <p>Utility Services</p> <ul style="list-style-type: none"> - Hydro Ottawa & Energy Ottawa for energy conservation projects; - Conservation Authorities (EA’s for drainage basins); - Plasco (City hosts site; sharing tipping fees); - Industry: funding from suppliers for videos for Re-Think garbage campaign; and, - Commercial: Household hazardous waste take back program (see website under garbage).

A number of plans and strategies have been established, or are in the process of being developed, to support this environmental commitment, including the:

- Official Plan;

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- Air Quality and Climate Change Management Plan;
 - Transportation Master Plan;
 - Integrated Waste Management Master Plan;
 - Fleet Emissions Reduction Strategy;
 - Environmental Strategy; and,
 - 2006 - 2009 City Corporate Plan.

The number and progress of initiatives are strong in the areas of waste management and fleet management; however, with the wide variety of operational areas at the City, there is greater opportunity to protect and conserve resources across the organization. At the time of the audit, City staff was conducting an inventory of material and resource consumption at the City, and was also in the process of developing a Green Procurement Policy. Both of these initiatives were scheduled to be completed by the end of 2007. These steps will provide important building blocks for future efforts in this area.

Additional effort will be required between now and 2020 to meet the community portion of this commitment. While a number of transportation-related initiatives and, to a lesser degree, waste and water reduction initiatives have been undertaken, there is no evidence of a broader corporate-wide strategy to encourage and facilitate efficient use of material and resources within the wider community. Responsibility for extending this commitment to the community has not been assigned. Funding requests made in the 2006 and 2007 budgets to support completion of an inventory of resource consumption in the community were not approved by Council. Development and implementation of this strategy will require resources.

Commitments and targets related to the protection and conservation of resources in City operations and in the wider community can be found in various plans (Official Plan, Environment Strategy, Air Quality and Climate Change Plan, Transportation Master Plan, and Corporate Plan). However, commitments and targets related to the adoption of alternative technologies that result in cleaner air, and partnerships related to the adoption of alternative technology, were not consistently found across supporting plans and strategies or specifically mentioned in the Corporate Plan. Alternative technologies, including the use of biodiesel fuel and landfill gas generation are currently operating or being tested by the City and partnerships for energy efficiency initiatives are currently being established with Energy Ottawa and EnviroCentre.

Branches responsible for implementing activities or initiatives related to this commitment monitor progress related to their own initiatives to varying degrees. Monitoring activities include:

- Annual reports, special reports, continuous reporting, and status updates to the Planning and Environment Committee on the planning and implementing of initiatives related to energy efficiency, transportation, alternative technology and waste reduction;
- Systematic review of the plans and strategies that support the 20/20 commitment; and,
- Reporting in the Annual Report of the outcome of conservation programs to reduce resource consumption and minimize environmental impact at the City.

At the time of the audit, information related to this commitment was not included in the City's balanced scorecard reporting system. While branch-level monitoring provides some useful data and information, there is no corporate-level roll-up to assess overall progress related to this commitment.

The Environmental Sustainability Division's annual update provides limited information to Council on some initiatives related to this environmental commitment, including building and operational energy-efficiency initiatives and waste reduction initiatives that will lead to cleaner air. The individual branches with responsibility under this commitment also report to Council on specific programs, initiatives and activities related to air quality and the reduction of greenhouse gas emissions.

Recommendation 18

That management assign responsibility and resources to develop and implement a strategy to encourage and facilitate efficient use of material and energy resources within the wider community.

Management Response

Management agrees with the recommendation.

Currently, community outreach occurs as a component of individual programs such as waste diversion, water efficiency, anti-idling, and energy conservation through Hydro Ottawa. Other outreach programs related to green building measures in the private sector and land stewardship are under development in the Environmental Sustainability Division. A more integrated approach to encouraging more environmental responsibility in the community will be done as part of the implementation roadmap. The roadmap will be completed in 2010, and will be presented to the new Council in 2011.

Recommendation 19

That management develop specific commitments on the adoption of alternative technologies and partnerships that result in clean air and integrate them into Ottawa 20/20 supporting plans and strategies.

Management Response

Management disagrees with the recommendation.

The draft Audit Report lists examples of alternative technologies used by the City and more than half a page of partnerships in this area, including both the private sector, non-profit and government agencies. However, there is no evidence that specific commitments on the adoption of alternative technologies or partnerships would lead to better outcomes or that the City's progress in this area is deficient. It is not possible to know what new technologies may be developed or what partnership opportunities will arise. As examples, City staff would not have identified the technology being tested by Plasco in advance. While the City has partnered with Hydro Ottawa on energy conservation initiatives in the past, the energy conservation initiatives that local hydro authorities were developing and implementing have now been centralized with the Ontario Power Authority. Specific advance commitments to the adoption of alternative technologies and partnerships are likely to lead to the need for revisions as new opportunities are identified and circumstances change. This creates process requirements with no offsetting benefit. Management agrees that as new technologies and partners are identified, where agreements can be reached that yield significant air quality benefits, these initiatives should be integrated into Ottawa 20/20 supporting plans and strategic initiatives.

6 CONCLUSION

The City has begun and, in some cases, completed a large number of environmental policies, programs and initiatives. While many of these initiatives can be seen as aligning with the environmental commitments contained in the *Window on Ottawa 20/20 – Growth Management Strategy* and the CCP, City staff manages to their individual branch plans and to the supporting growth management plans and not to the environmental commitments. The City has not developed a management framework to support achievement of the environmental commitments. The lack of a management framework that includes a logic model, a roles and responsibilities matrix, and a performance measurement and reporting strategy could impede the City's ability to achieve its long-term environmental commitments.

City staff reported that work had recently been initiated to develop a logic model for environmental programs. This work should provide a framework to facilitate development of outcome-based objectives, monitoring and reporting.

Recognizing that the environmental commitments are long-term commitments that are to be achieved by 2020, the City has made reasonable progress towards achieving all of them, albeit via department-specific initiatives rather than a strategy to target the environmental commitments explicitly. This audit has identified several areas where

additional effort will be required to achieve certain elements of the environmental commitments by 2020.

7 ACKNOWLEDGEMENT

We wish to express our appreciation for the cooperation and assistance afforded the audit team by management.