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Office of the Auditor General

DETAILED AUDIT REPORTS

2005

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AUDIT OF OVERTIME

2005 REPORT

Chapter 1

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Executive Summary

As in many other organizations, it is essential that overtime be managed in the most economically possible way. Overtime in many cases is a discretionary cost that must be properly authorized, recorded, approved and controlled. Employees are compensated for their overtime by payment, usually at a premium rate, or by authorized time off in lieu. Total overtime expenditures incurred citywide were approximately $36.9 million in 2004 and $36.8 million in 2005.

Objective

The audit objective is to assess the processes and practices in place at the City to authorize, approve, track, manage and control overtime.

Scope

The audit examined 2004 overtime incurred by the Fire Services Branch, the Utility Services Branch, and the Real Property Asset Management (RPAM) Branch. The analysis of overtime was based on areas that had a high volume of overtime during 2004, and which had not been examined during a previous 2002 audit conducted by the former Audit and Consulting Services Branch.

The three areas reviewed by the current audit account for $5.5 million, or approximately 15% of the total citywide overtime for 2004.

- Utility Services.. $2.0 million
- Fire Services.. 2.2 million
- Real Property Asset Management............... 1.3 million
    Total .... $5.5 million

We also asked management to report on their progress in implementing the recommendations from the 2002 Audit of Overtime Costs, conducted by the former Audit and Consulting Services Branch, and we reviewed the actual overtime expenditures in these areas.

Initially the scope of this review did not include any examination of processing of overtime by Payroll Division. However, as part of our work in Utility Services Branch, a small judgmental sample of Exception Leave Request/Time Reporting forms (ELR/TR), which are used to record overtime, on-call, leave, etc., was reviewed.

During the course of the audit, management informed us that they were not required to manage overtime as a line item, but rather that they were to manage to the total compensation envelope. Therefore, although we did not review the compensation envelope financial data, we have included this information for each branch and division.

Key Findings

We found that Fire Services Branch were over their overtime budget 1% in 2004 and under budget 5% in 2005. Real Property Asset Management (RPAM) Branch, actual expenditures were under their total planned 2004 and 2005 overtime budgets by 15% and 14% respectively. However, within both of the branches, we did find divisions that were exceeding their budget limits. For Utility Services, the Branch overspent their overtime budgets by 38% in 2004 and 35% in 2005.

A well-prepared budget can determine what is expected within an organization and help prepare its future. An effective budget is essential for setting standards for performance and for providing a tool to measure results against. Good management practices entail that budgets are properly forecasted and that performance is monitored and controlled against budgets. In some areas, we found that the controlling and monitoring of overtime expenditures against budgets needs to be improved.

Establishing a budget review process would be considered best practice. Checks and balances should be performed yearly to ensure that the operating budget remains valid and reflects the City's operations as much as possible. The budget is in reality management authority for expenditures and as such, management should be held accountable. A budget review process would provide an opportunity to reassess future plans and adjust the budget, if and as required.

Managers play a key role in managing overtime. In some of the areas we reviewed, we found that a greater commitment to mitigating the use of overtime should be made. We found that management practices were not adequate to ensure efficient and effective use of overtime. Management was found to use overtime to react to circumstances where proactive planning could have been more cost effective. At the time of our review, no formal policies or guidelines, to address overtime usage, had been established in the three branches reviewed.

The audit also identified instances where improvement to overtime authorization and approval was needed. In several areas, there was no formal delegation of authority for the authorization and approval of overtime. Consequently, we observed cases where overtime was approved by staff not authorized to do so. We found one case where an employee authorized, approved and submitted their own ELR/TR forms. This employee's practice of self-authorization of ELR/TR forms occurred for 20 months from March 2004 to the October 2005 and resulted in overtime and on-call compensation of approximately $41,800.

We also found areas where overtime could be better managed by changing shifts to better address operational requirements. In other cases, absenteeism was found to be a major source of overtime. Better management of absenteeism would reduce overtime. The

Office of the Auditor General will be conducting a detailed review of absenteeism in 2007.

Overall, we found management were not using the corporate financial system's full functionality to plan, monitor and manage overtime. Practices differed greatly across the corporation as to which reports were used, the consistency of receiving reports, and in some cases the source of the reports. In certain areas, management use an off-line system, such as Excel, to track overtime information. This represents a duplication of efforts as the appropriate information can be obtained from the corporate financial system.

The primary responsibility for properly completing and submitting ELR/TR forms is with the employee and the supervisor authorizing the form. However, it is also the responsibility of the Payroll Division to ensure controls are in place to ensure that forms that do not comply with the corporate guidelines and good management practices are not processed.

Based on our review of a limited judgmental sample of ELR/TR forms, we found issues relating to: employee self authorizing; submitting forms on behalf of subordinates; signing approval of forms by staff not authorized to do so; incomplete forms and "work-arounds" for information entered in the financial system. These examples are considered significant and warrant the attention of management to ensure all processing of ELR/TR forms comply with the established corporate guidelines and good management practices.

In the four areas covered by the 2002 Audit of Overtime Costs, conducted by the former Audit and Consulting Services Branch, management generally reported that they had implemented the recommendations of the audit. However, we found that in all the areas covered by the previous audit, overtime expenditures continue to be well over budget. Total expenditures in these areas in 2004 were $18.9 million, which was $7.8 million or 70% over the established budget. In 2005, total overtime expenditures were $19.6 million, which was $7.1 million or 57% over the established budget. Therefore the implementation made by management did not foster the changes anticipated by Council. Management in these areas should monitor and manage overtime within the limits of their established budget.

Overall Management Response – Corporate-wide

Management agrees with the overall spirit of the Auditor General's recommendations, although a number of the specific recommendations do not recognize the constraints of the City environment, particularly given the 24/7 nature of the front-line services examined in the audit and the requirements to manage with existing collective agreements. As the Auditor General Report states: " *in any organization, it is essential that overtime be managed in the most economical way. As such, the utilization of overtime is a fine balance between meeting service delivery needs,*

addressing appropriate staffing levels and using staff on overtime. Therefore, for every service line, there is an optimization point between the above three components."

Finding this optimal level must be done on a service-by-service basis given the significant differences among the services and the differing requirements of each service. While Management has specific issues with some of the individual findings and recommendations, Management agrees that there has not been a focused, corporate effort to manage overtime as effectively as possible. There is currently no consistent definition of the difference between discretionary and non-discretionary overtime in many services. Management agrees that clarity needs to be established in each service without delay keeping in mind our obligations under all of our collective agreements. In the first few years following amalgamation, when many services were understaffed and overtime was absolutely necessary to be able to fulfill our service obligations, management's focus was on stabilizing the organization and putting the basic human resources and financial systems in place. The City Manager will now undertake a comprehensive review of the management and control of overtime across the City. This review will include conducting a systematic analysis by service of alternative approaches to minimize overtime, including adjusting current hours of work, using part-time or temporary staff and improving scheduling, reviewing existing policies and procedures for overtime and evaluating the need for better management reports on overtime.

Management does not agree that overtime should be dealt with in isolation of the overall compensation budget. Overtime budgets should more accurately reflect actual spending, but continue to be managed as part of the total compensation envelope given both the 24/7 nature of many City services, the unpredictability of some significant service drivers (i.e. weather conditions, infrastructure failure like water mains or traffic lights, etc) and the hiring freezes that have been put in place over the past three years. All of these factors need to be managed within the total compensation envelope to continue to provide front-line services where and when they are needed.

Council has set a target for reduced overtime expenditures of $3.5 million in the 2006 Budget. Management will identify savings towards that target through the review described above.

Key Recommendations

RECOMMENDATION 1

In order to better monitor and manage overtime, Fire Services Branch (Fire Suppression – Urban Fire Fighting Division) should:

- **Review their staffing practice of requiring a captain for each platoon of each station in order to reduce overtime.**

Management Response

Management disagrees with this recommendation. This recommendation cannot be implemented at this time since it is a requirement under the collective agreement. Section 5:10 of the Collective Agreement dictates that a Captain shall be in charge at each Station on every shift. Should a Captain not be available an eligible acting Captain may be put in place.

In 2004, Captains in the Ottawa Fire Service incurred an average of 14.75 days of sick leave, in 2005 the number is 18.42. However, the dollars spent on overtime to address this were reduced from $452,000 to $187,000 because management took action to promote Captains and Lieutenants ahead of time as retirements became known and improved scheduling of vacation and sick leave management.

Management has challenged the union on its interpretation of the collective agreement (currently at arbitration) which if successful will result in further reduction of overtime costs. (Also reference below the efforts made under the AIP that are addressing this audit concern.)

- **Adopt a more aggressive attendance initiative and aim to decrease its usage of sick leave days in particular at the captain's level and higher.**

Management Response

Management agrees with the intent of this recommendation. However, Management has already implemented a very aggressive approach with its Attendance Management Program.

An Attendance Improvement Program Managers' position has recently been finalized and will be going to Job Evaluation mid-December for final rating and will subsequently be posted. The position has been filled in an acting capacity since September 2003. Over the past two years the program has been developed in conjunction with the Corporate Program. Subsequently absenteeism has been reduced from 15.88 days per year to 10.68 days per year since the Attendance Improvement Program was implemented 2 years ago.

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- **Addresses the time-lapse by members in submitting the required leave/overtime form in order to insure the corporate financial system information is timely and accuracy.**

  Management Response

  Management agrees with this recommendation. This will be addressed before Q3 2006.

- **Stop maintaining an Excel sub-system and, monitor, control and report on total Branch absences and overtime using the corporate financial system.**

  Management Response

  Management is deferring its response to this recommendation. The comprehensive review will examine the best reporting methods in each service. The Excel sub-system for overtime is used for analytical purposes to determine why overtime is being used. It tracks the reasons for overtime and the SAP system only tracks the use of overtime by cost center for budget and accounting purposes.

- **Provide additional training, as required, on the corporate financial system to facilitate the monitoring and controlling of staff overtime and absences.**

  Management Response

  Management agrees with this recommendation. This will be implemented during Q2 2006.

RECOMMENDATION 2

That Fire Services Branch (Prevention, Training, Special Operations and Communications) monitor and manage overtime within the limits of established budget including the following:

- **Start using the corporate financial system's full functionalities to monitor, control and report on total Branch overtime and leave as well as overtime and leave by employee.**

  Management Response

  Management agrees with this recommendation.

- **Address the time-lapse of members to submit the required leave/overtime form in order to insure the corporate financial system information accuracy.**

Management Response

Management agrees with this recommendation. The comprehensive review will need to establish reasonable timelines given the large contingent of staff operating from a large number of decentralized stations there are time lapses experienced with respect to the time for the form to make its way from the station back to Administration and collect all the necessary signatures.

- **Explore the possibility of modifying the collective agreement to alter Fire Prevention staff work/shift schedule to reflect job requirements, as is the practice in other areas within the Fire Services Branch.**

Management Response

Management agrees with this recommendation. The comprehensive review will assist in determining the optimal levels of overtime for this service.

- **Review its work assignment, and if required train additional resources, to ensure that there is a sufficient pool of resources with the necessary skills to do repairs during regular working hours to the extent possible.**

Management Response

Management agrees with the intent of this recommendation. However, Management has been addressing the situation by getting as much of this work done on shift as possible.

Fire Services Branch - General Management Comment:

As a technicality, OFS is of the position that the shift premium (budgeted at $753,408 in 2004 with actual expenditures of $700,051) should be backed out of the overtime cost centre. Shift premium is set out in the collective agreement and applies to firefighters who are regularly scheduled (one must actually be at work to qualify) and who work on a statutory holiday as part of the normal shift rotation. The shift premium has long since been negotiated into the collective agreement and is a standard form of payment to fire fighters across the Province. It is not a discretionary item or one that can be mitigated or reduced unless negotiated out of the collective agreement. The shift premium element is clearly not overtime.

If the shift premium is backed out of the overtime cost centre, the OFS will have actually under spent its 2004 overtime budget by one (1%) percent.

RECOMMENDATION 3

That the Customer Services and Operational Support Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

Management Response

Management agrees with this recommendation. The Financial Support Unit will adjust the line items in the overall compensation budget to better reflect actual spending, as was indicated during the 2006 Budget process. However, it should be noted that, given the 24/7 nature of this City services and the unpredictability of some significant service drivers, Management will continue to work within the total compensation envelope to continue to provide front-line services where and when they are needed. The overtime review will help determine where efficiencies can be found within this line item.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

Management Response

Management agrees with this recommendation. Efforts will be made in documenting and analyzing the relationship between FTEs, overtime and service levels.

- **For employees using the MMS-ITX system, ensure a 3-way match at time of approval for overtime – work order, time sheet, and ELR/TR form.**

Management Response

Management agrees with this recommendation. The recommendation mirrors the procedure already in place to approve and sign off overtime.

- **For employees not using the MMS-ITX system, ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

Management Response

Management agrees with this recommendation.

- **Review shifts on a regular and ongoing basis to ensure most effective use of overtime.**

Management Response

Management agrees with this recommendation.

- **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

  Management Response

  The delegation of authority is already delegated to the appropriate operational level. Management will formalize and document the current procedure.

- **Formalize Service Level Agreements between Divisions as to what activities can be performed on overtime.**

  Management Response

  Management agrees with the recommendation. Service level agreements exist but are not formalized. The division has been formalizing these agreements since early 2005 and will continue this process.

- **Review and update First Response Manual on a regular and ongoing basis. Include specific guidelines as to which situations need immediate response and which can be deferred.**

  Management Response

  Management agrees with the recommendation. The First Response Manual, developed 3 years ago, already includes specific guidelines to that effect. These guidelines will be reviewed and updated in 2006.

- **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users and reconcile the data to MMS-ITX to ensure high levels or data integrity.**

  Management Response

  Management agrees with this recommendation. Since early 2005, a data quality assurance plan is being developed. Data reconciliation between SAP and ITX-MMS is included on this project work plan.

- **Explore the opportunity to have one point of data entry with next MMS system to reduce data entry workload and data entry errors.**

Management Response

Management agrees with this recommendation.

RECOMMENDATION 4

That the Wastewater & Drainage Services Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

  Management Response

  Management agrees with this recommendation. Overtime will be specifically monitored and managed as part of the overall budget review process.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

  Management Response

  Management agrees with this recommendation. Overtime budget will be analysed as part of the comprehensive overtime review, then reviewed and adjusted as part of the annual budgeting process.

- **For employees using the MMS-ITX and MMS-SAP systems, ensure work orders and ELR/TR forms are matched at time of approval.**

  Management Response

  Management agrees with this recommendation. This will be incorporated into documented procedures.

- **For employees not using the MMS systems, ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

  Management Response

  Management agrees with this recommendation. This has already been directed to staff and will be incorporated into documented procedures.

- **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

Management Response

Management agrees with this recommendation. This will be incorporated into new procedures.

- **Complete and formalize the "Guidelines for Overtime Call-Outs". Include specific guidelines as to which situations need immediate response and which can be deferred.**

  Management Response

  Management agrees with this recommendation. This will be incorporated into documented procedures.

- **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users and reconcile the data to MMS-ITX and MMS-SAP to ensure high levels of data integrity.**

  Management Response

  Management agrees with this recommendation. Reconciliation of SAP Financial with MMS will form part of the monthly budget review.

- **Explore the opportunity to have one point of data entry with next MMS system to reduce data entry workload and data entry errors.**

  Management Response

  Management agrees with this recommendation. The ability to link the replacement for ITX MMS to the SAP payroll system will be requested in the new system requirements. It should be noted that the responsibility for this project is with the Corporate IT group in effecting this system linkage.

RECOMMENDATION 5

That the Solid Waste Services Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

  Management Response

  Management agrees with this recommendation. The Branch has requested an adjustment to the overtime line item and regular reporting of both compensation and overtime line items for management review.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

  <u>Management Response</u>

  Management agrees with this recommendation. The work schedule review was undertaken in 2005 and a new rotating start time has been implemented as of August 2005 to attempt to optimize resources to operational demands from incoming waste. This process will be reviewed when the staff compliment is filled.

- **Review resource levels at Landfill Operations and identify more optimal work schedules to reduce levels of overtime.**

  <u>Management Response</u>

  Works schedules were revised in 2005 with rotating start times to ensure optimal use of staff. Solid Waste Disposal has yet to be fully staffed which affects the full effectiveness of the work schedule.

- **For Landfill Operations, implement more rigorous processes and controls for authorizing and approving overtime.**

  <u>Management Response</u>

  Management have already implemented written instruction to Supervisors and Program Managers regarding authorization for sign off of overtime. The Manager is signing off on all overtime for the Solid Waste Disposal Section until the Program Manager position is filled.

- **Ensure corporate standards are met with regard to completing and submitting ELR/TR forms.**

  <u>Management Response</u>

  Management agrees with this recommendation. Solid Waste Disposal staff have already received a training refresher session on the completion of ELR/TR forms.

- **Ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

  <u>Management Response</u>

  Management agrees with this recommendation. ELR/TR forms are now being completed with the rationale for overtime.

■ **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

Management Response

Management agrees with this recommendation. A formal documented process will be developed detailing delegated authority including staff in an "acting" role.

■ **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users. For Waste Collection Operations, reconcile the data to the Excel database ensure high levels of data integrity.**

Management Response

Management agrees with this recommendation. A process will be put into effect in 2006.

■ **Consider revising practice of letting Waste Collectors leave early.**

Management Response

The In-house Waste Collection Group was created to prepare a competitive bid for solid waste collection with an In-house Bid Team in a Public/Private Competitive Service Bid in 1998. The financial success of the Public Sector In-house Waste Collection Group in a competitive waste management industry is attributed to management's ability to retain good employees and provide efficient and effective services. The Solid Waste Administrative Services Collection Division has delivered over $1.7 million dollars of accumulated additional savings over the past 7 years of service provision. Waste Collection staff have provided a tendered bid on the basis of a staff wage rate that is linked to the waste industry standards, rather than the higher CUPE 503 Heavy Equipment Operator wage rates. Our working conditions, effectiveness, and reduced costs in delivery service have provided efficiency and value to the residents of Ottawa throughout this service delivery timeframe.

Waste Collection Services operates consistent with the private sector and industry practices of ensuring that the team completes the entire pick-up zone each day. If a crew completes their route early, they are reassigned to other locations until the entire daily route of solid waste and recycling pick-up is complete.

The existing procedures have not generated any additional overtime to complete the daily solid waste pick-up.

RECOMMENDATION 6

In order to better monitor and manage overtime, Real Property Asset Management, Program Properties Division, should:

- **Continue its efforts to monitor and manage overtime within the limits of their established overtime budget.**

- **Require that staff provide a rationale and justification on the daily Maintenance Activity Sheets as to the reason for any overtime claimed.**

Management Response

The comprehensive review will examine the best reporting methods in each service. The input of the Maintenance Activity Sheets is driven numerically with fixed codes assigned to the leave types. Incidence reporting parallels the time sheet process whereby a "reason" is documented, approved, and reported with respect to overtime and on call usage. Continued emphasis will be placed on this information source for the purposes of overtime management.

RECOMMENDATION 7

In order to better monitor and manage overtime, Real Property Asset Management Branch, Venture Property, should:

- **Require that staff provide a rationale and justification on the daily Maintenance Activity Sheets as to the reason for any overtime claimed.**

- **Require that staff (OC Transpo Facility) sign the daily Maintenance Activity Sheets and that any use of signature stamp be stopped.**

Management Response

Management agrees with this recommendation. The two operational supervisors will be directed to process and approve overtime paperwork using their signature versus a signature stamp. Follow up by the data input personnel to monitor compliance will commence immediately.

Management Comment -- Real Property Asset Management - with respect to Corporate Security overtime

Transit Operations as part of the 2004 budget, identified under the Opportunity Log Business Process Review (item TW5.2) a savings of $260,000 and a reduction of 4.5 FTE's under the heading "Initiate alternative security services of City facilities used by Transit Services". This required that Corporate Security take over this function. This initiative was approved by City Council. The reduction in FTE's came into effect in June of 2004. Corporate Security received Bridge Financing to cover the 6 months

of cost for the 4.5 staff being let go. The costs included regular compensation and any overtime that they incurred. This is where the $12,000 comes from. The bottom line is that Corporate Security would not have incurred this expense (which was covered by bridge financing) except for this transfer. Since this change, there has not been any overtime charges in Corporate Security (and there will not be as all the staff are MPE).

RECOMMENDATION 8

That Payroll Division ensure appropriate controls are in place for processing of all ELR/TR forms including:

- **Ensure appropriate authorization is present.**

Management Response

Although there was a limited audit sample, Payroll has and will be taking action to expand its control procedures. The time/leave forms have been revised to incorporate a designated area where authorizing supervisors or managers will print their name and title. This will aid in the identification of signatures. In addition, Payroll will prepare a current list of managers and supervisors who are authorized to sign time/leave forms as a further control measure.

- **Ensure incomplete, or ELR/TR forms with errors, are not accepted and returned to the Client Group for complete information before processing.**

Management Response

In the past, an informal process was used to return timesheets that were not complete. Although the audit found few forms with missing information and some of that information was not significant (eg. missing the date of signature of the employee), adjustments will be made in payroll procedures. In the future, a more formal approach will be implemented. Forms that are not completed properly will be returned to the relevant area for correction with an explanation of why the form is being returned. Due to the volume of forms (Payroll processes approximately 400,000 lines of data entry per year), minor changes will continue to be made further to telephone conversations with the authorized supervisor / manager.

- **In cases where the system will not accept the data being entered (e.g., on-call time being claimed on the same dates as annual leave, IPP, or time off in lieu), Data Entry Clerks should not create "work-arounds" by entering the time on different dates.**

Management Response

There are situations where on-call pay may be claimed while an employee is on leave. This would include situations where an employee has a specific skill set or emergency situations. As the system does not currently allow the entry of this time, it is necessary to do "work-arounds". In the future, the City will investigate the feasibility of adjusting the pay system to allow the entry of this legitimate time.

Payroll Division – General Management Comment

Management agrees that the sample of ELR/TR forms used in this audit was not statistically representative and therefore no reliable conclusions can be drawn based on this sample regarding Payroll's data entry processes.

RECOMMENDATION 9

For the areas covered in the 2002 Audit of Overtime Costs (Transit Services, Fleet Maintenance, Paramedic Services and Surface Operations), Management should monitor and manage overtime expenditures within the limits of their established budgets.

Management Response

Management agrees with this recommendation. Management acknowledges that the budgeting for overtime has been flawed, and that overtime budgets should have been revised to more closely reflect actual requirements.

Management has taken aggressive attendance management measures in each of these service areas, as indicated by the Auditor General, and will continue to monitor and manage attendance to help keep overtime as low as possible. It should be noted, however, that these are 24/7 on the street services and overtime will continue to be a necessary part of operations for a number of reasons: overtime must be paid to those who provide service on statutory holidays and to those who respond to emergency/weather-related situations. These are services that must be provided so, when the City has hiring freezes in effect the service is provided by existing staff working overtime. In some cases, as in Paramedic Services and Transit Services, overtime is accrued for contracted services that the City receives revenues for. In Transit Services, the 2004 KPMG Transit Operator Establishment Review stated that within limits (total work hours), overtime is more cost effective than straight time for the City, because benefits are not paid on overtime wages.

The comprehensive review will help identify the optimal levels of overtime in these areas and budgets will reflect those levels.

CORPORATE-WIDE RECOMMENDATIONS

As a result of findings in this audit, we are able to make some general recommendations that would apply on a corporate-wide basis. These recommendations are as follows:

RECOMMENDATION 10

Departments should better monitor and manage overtime within the limits of their established overtime budget. This would include modification of shifts to address expected workload, better management of absenteeism, and an active budget review process.

Management Response

Management agrees with this recommendation.

Management will establish clear protocols around the specific criteria for overtime on a service-by-service basis, and this will be part of the comprehensive review. Overtime budgets will continue to be managed as part of the overall compensation budget, rather than as a single line item. Overtime is generally not viewed in isolation of the overall compensation budget and it is management's view that it should not be viewed in isolation given both the 24/7 nature of many City services, the unpredictability of some significant service drivers (i.e. weather conditions, infrastructure failure like water mains or traffic lights, etc) and the hiring freezes that have been put in place over the past three years. All of these factors are managed within the total compensation envelope to continue to provide front-line services where and when they are needed.

RECOMMENDATION 11

Departments should utilize the corporate financial system's full functionalities to monitor, control, and reduce total overtime as well as individual employee overtime and that where required, staff be provided with additional training. In addition, that any use or maintenance of sub-systems other than the corporate financial system should be discontinued. In order to ensure the corporate financial system's information accuracy, Departments should address the time lapse of employees submitting the required leave/overtime forms.

Management Response

Management agrees with the intent of this recommendation.

This will be part of the comprehensive review. Given the number of different facilities, however, management expects that there will always be some time lapse in many services. The review will address methods of minimizing that lapse.

RECOMMENDATION 12

That Employee Services develop clear policies and guidelines regarding the management of overtime.

Management Response

Management agrees with the intent of this recommendation.

However, management believes most policies and guidelines will be developed on a service-by-service basis rather than a corporate basis given the number of operational variables between branches eg. service commitments, staffing and budget levels and applicable collective agreements.

Acknowledgements

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

Résumé

Comme dans beaucoup d'autres organisations, il est essentiel de gérer les heures supplémentaires de la façon la plus économique possible. Dans bien des cas, les heures supplémentaires sont un coût discrétionnaire qu'il faut correctement autoriser, consigner, approuver et contrôler. Les employés sont rémunérés pour leurs heures supplémentaires, généralement à un taux majoré, ou ils peuvent obtenir une absence autorisée. Le total des dépenses en heures supplémentaires de la Ville se chiffrait environ à 36,9 millions de dollars en 2004 et à 36,8 millions de dollars en 2005.

Objectif

La vérification a pour objectif d'évaluer les procédures et les pratiques d'autorisation, d'approbation, de suivi, de gestion et de contrôle des heures supplémentaires de la Ville.

Portée

La vérification portait sur les heures supplémentaires autorisées en 2004 par la Direction du service des incendies, la Direction des services publics et la Direction de la gestion des actifs et des biens immobiliers (GABI). L'analyse des heures supplémentaires visait les secteurs qui affichaient un nombre considérable d'heures supplémentaires en 2004 et qui n'avaient fait l'objet d'aucun examen lors de la vérification précédente réalisée par l'ancien Service de vérification et de consultation en 2002.

Les trois secteurs examinés par la présente vérification totalisaient 5,5 millions de dollars, soit environ 15 % du total des heures supplémentaires de la Ville en 2004.

- Services publics .... 2,0 millions de dollars
- Service des incendies .... 2,2 millions de dollars
- Gestion des actifs et des biens immobiliers <u>1,3 million de dollars</u>
  - Total .... 5,5 millions de dollars

Nous avons également demandé à la direction de nous donner un compte rendu de la mise en œuvre des recommandations de la vérification des dépenses en heures supplémentaires de 2002, réalisée par l'ancien Service de vérification et de consultation, et nous avons examiné les dépenses en heures supplémentaires réelles dans ces secteurs.

À l'origine, la portée de cette vérification ne prévoyait aucun examen du traitement des heures supplémentaires par l'Administration de la paie. Toutefois, dans le cadre de notre travail à la Direction des services publics, nous avons examiné un petit échantillon discrétionnaire de formulaires de Demande de congé/Déclaration du temps pour les employés d'exception (DC/DTEE) qui servent à consigner notamment les heures supplémentaires, le travail sur demande et les congés.

Pendant la vérification, la direction nous a avisés qu'elle n'avait pas à gérer les heures supplémentaires comme un poste, mais qu'elle administrait plutôt l'ensemble de l'enveloppe de la rémunération. Par conséquent, même si nous n'avions pas à examiner les données financières de l'enveloppe de la rémunération, nous avons inclus ces renseignements pour chaque direction et division.

Principales constatations

Nous avons découvert que la Direction du service des incendies avait dépassé son budget de 1 % en 2004 et qu'elle avait dépensé 95 % de son budget en 2005. Les dépenses réelles de la Direction de la gestion des actifs et des biens immobiliers (GABI) étaient inférieures aux budgets prévus pour les heures supplémentaires en 2004 et en 2005 de 15 % et de 14 % respectivement. Toutefois, dans ces deux directions, nous avons découvert des divisions qui dépassaient leurs limites budgétaires. La Direction des services publics a dépassé ses budgets pour les heures supplémentaires de 38 % en 2004 et de 35 % en 2005.

Un budget bien établi peut déterminer les attentes d'une organisation et l'aider à préparer son avenir. Un budget efficace est essentiel à la définition des normes de rendement et il peut servir d'outil d'évaluation des résultats. De bonnes pratiques de gestion supposent l'établissement de budgets précis ainsi que la surveillance et le contrôle du rendement à l'aide de ces budgets. Dans certains secteurs, il faudrait améliorer la surveillance et le contrôle des dépenses en heures supplémentaires à l'aide des budgets.

La mise en place d'une procédure d'examen budgétaire constituerait une pratique exemplaire. Des vérifications devraient être faites annuellement pour garantir, dans la mesure du possible, la validité du budget de fonctionnement et sa conformité aux activités de la Ville. En fait, le budget représente l'autorité de la direction en ce qui a trait aux dépenses; ainsi, la direction doit en être tenue responsable. Une procédure d'examen budgétaire favoriserait la réévaluation des plans et l'ajustement du budget selon les besoins.

Les gestionnaires jouent un rôle prédominant dans l'administration des heures supplémentaires. Dans certains secteurs examinés, nous avons découvert qu'il serait souhaitable de réduire le recours aux heures supplémentaires. Nous avons constaté que les pratiques de gestion ne garantissaient pas l'utilisation efficace des heures supplémentaires. La direction avait recours aux heures supplémentaires en réaction à des circonstances pour lesquelles une planification proactive aurait pu être plus économique. Au moment de notre examen, les trois directions visées n'avaient encore adopté aucune politique ou directive officielle sur les heures supplémentaires.

La vérification a également recensé des situations exigeant une amélioration de l'autorisation des heures supplémentaires. Dans plusieurs secteurs, il n'y avait aucune délégation officielle des pouvoirs d'autorisation des heures supplémentaires. Par

conséquent, nous avons découvert des cas où les heures supplémentaires avaient été autorisées par des employés ne détenant aucun de ces pouvoirs. Dans l'un de ces cas, un employé a autorisé et soumis lui-même ses propres formulaires DC/DTEE. L'autorisation personnelle des formulaires DC/DTEE par cet employé a duré 20 mois, soit de mars 2004 à octobre 2005, et entraîné le paiement d'environ 41 800 $ en heures supplémentaires et en travail sur demande.

Nous avons également observé des secteurs où une modification des quarts de travail pour mieux répondre aux besoins opérationnels améliorerait la gestion des heures supplémentaires. Dans d'autres cas, l'absentéisme était une cause importante du recours aux heures supplémentaires. Une meilleure gestion de l'absentéisme réduirait les heures supplémentaires. Le Bureau du vérificateur général réalisera un examen approfondi de l'absentéisme en 2007.

Dans l'ensemble, nous avons constaté que la direction n'utilisait pas pleinement les fonctions de planification, de surveillance et de gestion des heures supplémentaires du système financier de la Ville. Les pratiques relatives aux rapports à utiliser, à la réception uniforme des rapports et, dans certains cas, à la source des rapports diffèrent grandement dans l'ensemble de l'organisation. Dans certains secteurs, la direction utilise un sous-système, comme Excel, pour faire le suivi des renseignements sur les heures supplémentaires. Il s'agit là d'un dédoublement des efforts, puisque les renseignements pertinents se trouvent dans le système financier de la Ville.

La responsabilité première de la préparation et de la présentation des formulaires DC/DTEE revient à l'employé et au superviseur qui autorise le formulaire. Toutefois, il incombe à l'Administration de la paie de veiller à la mise en œuvre de contrôles annulant le traitement des formulaires non conformes aux bonnes pratiques de gestion et aux directives de la Ville.

Selon notre examen de l'échantillon discrétionnaire restreint de formulaires DC/DTEE, nous avons découvert des problèmes comme l'autorisation de formulaires par l'employé faisant la demande, l'envoi de formulaires pour des subalternes, l'approbation de formulaires par des employés non autorisés à les signer, des formulaires incomplets et des « solutions de rechange » pour les renseignements du système financier de la Ville. Ces exemples sont jugés significatifs et méritent l'attention de la direction pour s'assurer que le traitement des formulaires DC/DTEE respecte les bonnes pratiques de gestion et les directives de la Ville.

Dans les quatre secteurs ayant fait l'objet de la vérification des dépenses en heures supplémentaires réalisées en 2002 par l'ancien Service de vérification et de consultation, la direction a généralement rapporté qu'elle avait mis en œuvre les recommandations de la vérification. Toutefois, selon nos observations, tous les secteurs visés par la vérification précédente ont continué à dépasser considérablement le budget des dépenses en heures supplémentaires. Le total des dépenses dans ce secteur en 2004 était de 18,9

millions de dollars, ce qui représente un dépassement de 7,8 millions de dollars ou de 70 % du budget établi. En 2005, le total des dépenses se chiffrait à 19,6 millions de dollars, ce qui signifie un dépassement de 7,1 millions de dollars ou de 57 % du budget établi. Par conséquent, les mesures adoptées par la direction n'ont pas produit les changements attendus par le Conseil. Dans ces secteurs, la direction devrait surveiller et gérer les heures supplémentaires à l'intérieur des limites budgétaires prévues.

Commentaires généraux pour l'ensemble de la Ville

La direction est d'accord avec l'esprit général des recommandations du vérificateur général, même si un certain nombre de ces recommandations ne tiennent pas compte des contraintes de l'environnement municipal, particulièrement de la prestation en tout temps des services de première ligne examinés lors de la vérification et les exigences de la gestion avec les conventions collectives existantes. Selon le rapport du vérificateur général, *dans chaque organisation, il est essentiel de gérer les heures supplémentaires de la manière la plus économique possible. Par conséquent, l'utilisation des heures supplémentaires exige un équilibre satisfaisant entre la satisfaction des besoins en matière de prestation de services, la détermination des niveaux de dotation nécessaires et l'utilisation des employés qui font des heures supplémentaires. Par conséquent, pour chaque secteur de service, il existe un point d'équilibre optimal entre ces trois composantes.*

La détermination de ce point d'équilibre doit être faite pour chacun des services étant donné les différences considérables entre eux et les exigences propres à chacun. Bien que la direction ait quelques problèmes précis avec certaines conclusions et recommandations, elle reconnaît que la Ville n'a consacré aucun effort exclusivement pour améliorer la gestion des heures supplémentaires. Il n'existe actuellement aucune définition uniforme de la différence entre les heures supplémentaires discrétionnaires et non discrétionnaires dans bien des services. La direction convient qu'il faut faire des clarifications sans tarder dans chaque service et qu'il ne faut pas oublier nos engagements en vertu des conventions collectives. Lors des premières années de la fusion, époque où beaucoup de services ne disposaient pas du personnel requis et les heures supplémentaires étaient absolument nécessaires à la prestation des services obligatoires, la direction s'est concentrée sur la stabilisation de l'organisation et la mise en place de systèmes de base pour les ressources humaines et les finances. Le directeur des services municipaux procédera maintenant à un examen approfondi de la gestion et du contrôle des heures supplémentaires pour l'ensemble de la Ville. Cet examen comprendra une analyse systématique des solutions de rechange de chaque service afin de réduire au minimum les heures supplémentaires, ce qui comprend l'ajustement des heures de travail, l'utilisateur d'employés temporaire ou à temps partiel, l'amélioration des horaires, la révision des politiques et des procédures existantes sur les heures supplémentaires ainsi que l'évaluation du caractère essentiel de la production de meilleurs rapports de gestion sur les heures supplémentaires.

Principales recommandations

<u>RECOMMANDATION 1</u>

Dans le but de mieux surveiller et gérer les heures supplémentaires, la Direction du service des incendies (Extinction des incendies – Division de la lutte contre les incendies en milieu urbain) devrait prendre les mesures suivantes.

- **Revoir la pratique de dotation exigeant un capitaine pour chaque peloton de chaque caserne dans le but de réduire les heures supplémentaires.**

<u>Réponse de la direction</u>

La direction est en désaccord avec cette recommandation. Cette recommandation ne peut pas être mise en œuvre pour l'instant puisqu'il s'agit d'une exigence de la convention collective. Selon le paragraphe 5:10 de la convention collective, chaque caserne doit avoir un capitaine en service, et ce, pour chaque quart de travail. Si aucun capitaine n'est disponible, il faut confier cette tâche à un capitaine intérimaire admissible.

En 2004, les capitaines du Service des incendies d'Ottawa ont pris en moyenne 14,75 jours de congé de maladie; en 2005, ce nombre était de 18,42. Toutefois, les sommes consacrées aux heures supplémentaires pour s'occuper de ce problème ont diminué de 452 000 $ à 187 000 $ parce que la direction a promu des capitaines et des lieutenants plus tôt que prévu à mesure que les départs à la retraite étaient connus et qu'elle a amélioré la planification des vacances et la gestion des congés de maladie.

La direction a également contesté l'interprétation syndicale de la convention collective (en cours d'arbitrage); une victoire permettrait de réduire davantage les dépenses en heures supplémentaires. (Vous trouverez aussi ci-dessous des références aux efforts faites dans le cadre du Programme de réduction de l'absentéisme [PRA] qui s'attaque à la préoccupation de cette vérification.)

- **Adopter une initiative plus dynamique quant aux présences dont l'objectif est de réduire le recours aux congés de maladie, particulièrement pour les capitaines et autres niveaux supérieurs.**

<u>Réponse de la direction</u>

La direction est d'accord avec le but de cette recommandation. Toutefois, la direction a déjà mis en œuvre une approche très énergique avec son programme de gestion des présences.

Un poste de gestionnaire du PRA a été préparé et il fera l'objet d'une évaluation d'emploi vers la mi-décembre pour être coté définitivement et affiché par la suite. Le poste a été pourvu de façon intérimaire depuis septembre 2003. Au cours des deux dernières années, le programme a été élaboré de concert avec le Programme de la

Ville. L'absentéisme a diminué de 15,88 jours à 10,68 jours par année depuis la mise en œuvre du PRA il y a deux ans.

- **Éliminer le moment pris par les employés pour soumettre leur formulaire obligatoire de demande de congé ou d'heures supplémentaires pour garantir la pertinence et l'exactitude des renseignements du système financier de la Ville.**

  Réponse de la direction

  La direction est en accord avec cette recommandation. Elle sera mise en œuvre avant le troisième trimestre de 2006.

- **Cesser l'utilisation d'un sous-système Excel et se servir du système financier de la Ville pour surveiller, contrôler et consigner le total des absences et des heures supplémentaires de la direction.**

  Réponse de la direction

  La direction a remis à plus tard sa réponse à cette recommandation. L'examen complet analysera les meilleures méthodes de production de rapports dans chaque service. Le sous-système Excel sert à des fins d'analyse pour savoir pourquoi on avait recours à des heures supplémentaires. Il consigne les raisons des heures supplémentaires, alors que le système SAP fait uniquement le suivi de l'utilisation des heures supplémentaires par centre de coûts à des fins budgétaires et comptables.

- **Selon les besoins, offrir de la formation additionnelle sur le système financier de la Ville en vue de faciliter la surveillance et le contrôle des heures supplémentaires et des absences du personnel.**

  Réponse de la direction

  La direction est en accord avec cette recommandation. Cette recommandation sera mise en œuvre pendant le deuxième trimestre de 2006.

RECOMMANDATION 2

La Direction du service des incendies (Prévention, Formation, Opérations spéciales et Communications) devrait surveiller et gérer les heures supplémentaires dans les limites de son budget et prendre les mesures suivantes.

- **Commencer à utiliser toutes les fonctions du système financier de la Ville pour surveiller, contrôler et consigner les congés et les heures supplémentaires de la Direction ainsi que les heures supplémentaires et les congés pour chaque employé.**

Réponse de la direction

La direction est en accord avec cette recommandation.

- **Éliminer le délais de temps pris par les employés pour soumettre leur formulaire obligatoire de demande de congé ou d'heures supplémentaires pour garantir l'exactitude des renseignements du système financier de la Ville.**

Réponse de la direction

La direction est en accord avec cette recommandation. L'examen détaillé devrait fixer des délais raisonnables étant donné le nombre important d'employés travaillant dans beaucoup de postes décentralisés, qui cause des retards dans l'envoi du formulaire du poste à l'Administration et l'obtention des signatures nécessaires.

- **Envisager la modification de la convention collective pour changer le calendrier de travail et des postes de la prévention des incendies pour satisfaire aux exigences de l'emploi, comme c'est déjà le cas dans d'autres secteurs de la Direction du service des incendies.**

Réponse de la direction

La direction est en accord avec cette recommandation. L'examen détaillé précisera les niveaux optimaux d'heures supplémentaires pour ce service.

- **Revoir les affectations du personnel et, au besoin, former des ressources additionnelles pour s'assurer qu'il existe un ensemble de ressources possédant les compétences nécessaires pour faire des réparations pendant les heures de travail ordinaires dans la mesure du possible.**

Réponse de la direction

La direction est d'accord avec le but de cette recommandation. Toutefois, la direction a tenté de résoudre ce problème en accomplissant le plus de tâches possible pendant les quarts de travail.

Direction du service des incendies — Commentaires généraux de la direction

D'un point de vue technique, le Service des incendies d'Ottawa croit qu'il faut retirer la prime de quart (évaluée à 753 408 $ en 2004 avec des dépenses réelles de 700 051 $) du centre de coûts des heures supplémentaires. La prime de quart est fixée dans la convention collective et s'applique aux pompiers à horaire régulier (il faut être au travail pour être admissible) ou qui travaille pendant un congé férié dans le cadre de la rotation ordinaire des quarts. La prime de quart a été incluse il y a longtemps dans la convention collective et elle constitue une forme de paiement standard pour les pompiers de la province. Il ne s'agit pas d'un élément qui est discrétionnaire ou facile à diminuer sans d'abord l'enlever par négociation de la convention collective. La prime de quart n'est manifestement pas des heures supplémentaires.

Si la prime de quart est retirée du centre de coûts des heures supplémentaires, alors le Service des incendies d'Ottawa aura réellement dépensé 99 % de son budget 2004 pour les heures supplémentaires.

RECOMMANDATION 3

La Division des services à la clientèle et du soutien opérationnel de la Direction des services publics devrait prendre les mesures suivantes.

- **Surveiller et gérer les heures supplémentaires dans les limites du budget établi à cet effet, et ce, indépendamment de l'enveloppe de la rémunération.**

Réponse de la direction

La direction est en accord avec cette recommandation. L'Unité du soutien financier ajustera les postes dans le budget global de la rémunération de façon à ce qu'ils reflètent plus fidèlement les dépenses réelles, tel qu'on l'a indiqué au cours du processus budgétaire de 2006. Cependant, étant donné que ces services municipaux sont offerts en tout temps et que certains facteurs de service importants sont imprévisibles, il est à noter que la direction continuera de travailler dans les limites de l'enveloppe totale de la rémunération afin de continuer d'offrir des services de première ligne à l'endroit et au moment où ils sont nécessaires. L'examen des heures supplémentaires aidera à déterminer où il est possible de réaliser des gains d'efficacité dans ce poste.

- **Réaliser un examen approfondi du budget des heures supplémentaire chaque année, avec les niveaux d'équivalent temps plein (ETP) et de service, pour respecter les dépenses en heures supplémentaires prévues et optimales.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation. Des efforts seront faits pour documenter et analyser les liens entre les ETP, les heures supplémentaires et les niveaux de service.

- **Les employés qui utilisent le système MMS-ITX doivent veiller à une correspondance en trois points au moment de l'approbation des heures supplémentaires – ordre de travail, feuille de temps et formulaire DC/DTEE.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation. La recommandation reflète la procédure déjà en place pour l'approbation et la signature des heures supplémentaires.

- **Les employés qui n'utilisent pas le système MMS-ITX doivent s'assurer que le formulaire DC/DTEE contient suffisamment de renseignements sur les heures supplémentaires travaillées.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation.

- **Revoir les quarts de travail périodiquement et continuellement pour garantir une utilisation efficace des heures supplémentaires.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation.

- **Officialiser la délégation des pouvoirs au niveau opérationnel pertinent qui peut autoriser des heures supplémentaires.**

  <u>**Réponse de la direction**</u>

  Les pouvoirs sont déjà délégués au niveau opérationnel pertinent. La direction officialisera et documentera la procédure existante.

- **Officialiser les accords sur les niveaux de service entre les divisions pour savoir quelles tâches accomplir pendant les heures supplémentaires.**

Réponse de la direction

La direction est en accord avec cette recommandation. Les accords sur les niveaux de service existent, mais ils ne sont pas officialisés. La Division officialise ces accords depuis le début de 2005 et continuera de le faire.

- **Revoir et mettre à jour périodiquement et continuellement le Guide de première réponse. Cela comprend des directives précises sur les situations nécessitant une intervention immédiate et celles qui n'en ont pas besoin.**

Réponse de la direction

La direction est en accord avec cette recommandation. Le Guide de première réponse, élaboré il y a trois ans, comprend déjà des lignes directrices précises à cet effet. Ces dernières seront examinées et mises à jour en 2006.

- **Revoir chaque mois les données sur les heures supplémentaires contenues dans le système financier de la Ville pour connaître les personnes faisant beaucoup d'heures supplémentaires et rapprocher les données du système MMS-ITX afin de garantir de hauts niveaux d'intégrité pour les données.**

Réponse de la direction

La direction est en accord avec cette recommandation. Un plan de contrôle de la qualité des données a été mis en place depuis le début de 2005. Ce projet de plan de travail prévoit le rapprochement des données des systèmes SAP et MMS-ITX.

- **Envisager le recours à un point de saisie unique des données pour le nouveau système MMS afin de réduire les erreurs de saisie des données et la charge de travail connexe.**

Réponse de la direction

La direction est en accord avec cette recommandation.

RECOMMANDATION 4

La Division des services de drainage et de traitement des eaux usées de la Direction des services publics devrait prendre les mesures suivantes.

- **Surveiller et gérer les heures supplémentaires dans les limites du budget établi à cet effet, et ce, indépendamment de l'enveloppe de la rémunération.**

<u>Réponse de la direction</u>

La direction est en accord avec cette recommandation. Les heures supplémentaires feront l'objet d'une surveillance et d'une gestion particulières dans le cadre de la procédure globale d'examen budgétaire.

- **Réaliser un examen approfondi du budget des heures supplémentaire chaque année, avec les niveaux d'équivalent temps plein (ETP) et de service, pour respecter les dépenses en heures supplémentaires prévues et optimales.**

<u>Réponse de la direction</u>

La direction est en accord avec cette recommandation. Le budget des heures supplémentaires sera analysé lors de la procédure budgétaire annuelle et ajusté en conséquence.

- **Les employés qui utilisent le système MMS-ITX doivent veiller à la correspondance entre les ordres de travail et les formulaires DC/DTEE au moment de l'approbation.**

<u>Réponse de la direction</u>

La direction est en accord avec cette recommandation. Cette recommandation sera intégrée dans les procédures documentées.

- **Les employés qui n'utilisent pas le système MMS doivent s'assurer que le formulaire DC/DTEE contient suffisamment de renseignements sur les heures supplémentaires travaillées.**

<u>Réponse de la direction</u>

La direction est en accord avec cette recommandation. Cette recommandation a déjà été transmise au personnel et elle sera intégrée dans les procédures documentées.

- **Officialiser la délégation des pouvoirs au niveau opérationnel pertinent qui peut autoriser des heures supplémentaires.**

<u>Réponse de la direction</u>

La direction est en accord avec cette recommandation. Cette recommandation sera intégrée dans les nouvelles procédures.

- **Terminer et officialiser les directives sur les heures supplémentaires. Cela comprend des directives précises sur les situations nécessitant une intervention immédiate et celles qui n'en ont pas besoin.**

Réponse de la direction

La direction est en accord avec cette recommandation. Cette recommandation sera intégrée dans les procédures documentées.

- **Revoir chaque mois les données sur les heures supplémentaires contenues dans le système financier de la Ville pour connaître les personnes faisant beaucoup d'heures supplémentaires et rapprocher les données du système MMS-ITX afin de garantir de hauts niveaux d'intégrité pour les données.**

  Réponse de la direction

  La direction est en accord avec cette recommandation. Le rapprochement des données financières des systèmes SAP et MMS fera partie de l'examen budgétaire mensuel.

- **Envisager le recours à un point de saisie unique des données pour le nouveau système MMS afin de réduire les erreurs de saisie des données et la charge de travail connexe.**

  Réponse de la direction

  La direction est en accord avec cette recommandation. La capacité d'établir un lien entre le système MMS-ITX et le système d'administration de la paie de SAP fera partie des exigences du nouveau système. La responsabilité de ce projet est confiée au groupe de la technologie de l'information de la Ville qui s'occupera de l'établissement des liens du système.

RECOMMANDATION 5

La Division des services de gestion des déchets solides de la Direction des services publics devrait prendre les mesures suivantes.

- **Surveiller et gérer les heures supplémentaires dans les limites du budget établi à cet effet, et ce, indépendamment de l'enveloppe de la rémunération.**

  Réponse de la direction

  La direction est en accord avec cette recommandation. La Direction a demandé un ajustement du poste des heures supplémentaires et la soumission de rapports périodiques sur les postes de la rémunération et des heures supplémentaires à l'examen de la direction.

- **Réaliser un examen approfondi du budget des heures supplémentaires chaque année, avec les niveaux d'équivalent temps plein (ETP) et de service, pour respecter les dépenses en heures supplémentaires prévues et optimales.**

Réponse de la direction

La direction est en accord avec cette recommandation. L'examen de l'horaire de travail a été entrepris en 2005, et une nouvelle heure de début rotative a été instaurée en août 2005 pour tenter d'optimiser les ressources selon les demandes opérationnelles des déchets entrants. Cette procédure sera révisée quand le personnel sera nommé.

- **Examiner les niveaux des ressources des Opérations liées aux décharges et déterminer les meilleurs horaires de travail pour réduire les heures supplémentaires.**

Réponse de la direction

Les horaires de travail ont été révisés en 2005, et des heures de début rotatives ont été instaurées pour optimiser l'utilisation du personnel. Les postes de l'élimination des déchets solides n'ont pas encore été pourvus, ce qui réduit l'efficacité globale de l'horaire de travail.

- **Pour les Opérations liées aux décharges, mettre en œuvre des procédures et des contrôles plus rigoureux d'autorisation des heures supplémentaires.**

Réponse de la direction

La direction a déjà distribué une directive écrite aux superviseurs et aux gestionnaires de programme sur l'autorisation des heures supplémentaires. Le gestionnaire signe toutes les demandes d'heures supplémentaires de la section de l'élimination des déchets solides jusqu'à la nomination d'un gestionnaire de programme.

- **Veiller au respect des normes de la Ville concernant la préparation et la soumission des formulaires DC/DTEE.**

Réponse de la direction

La direction est en accord avec cette recommandation. Le personnel de l'élimination des déchets solides a déjà reçu un cours de perfectionnement sur la préparation des formulaires DC/DTEE.

- **S'assurer que le formulaire DC/DTEE contient suffisamment de renseignements sur les heures supplémentaires travaillées.**

Réponse de la direction

La direction est en accord avec cette recommandation. Les formulaires DC/DTEE doivent désormais préciser la raison de la demande d'heures supplémentaires.

- **Officialiser la délégation des pouvoirs au niveau opérationnel pertinent qui peut autoriser des heures supplémentaires.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation. Une procédure officielle documentée sera élaborée pour préciser les pouvoirs délégués, ce qui comprend le personnel « intérimaire ».

- **Revoir chaque mois les données sur les heures supplémentaires contenues dans le système financier de la Ville pour connaître les personnes faisant beaucoup d'heures supplémentaires. Pour les activités de collecte des déchets, rapprocher les données à l'aide de la base de données Excel pour garantir de hauts niveaux d'intégrité pour les données.**

  <u>**Réponse de la direction**</u>

  La direction est en accord avec cette recommandation. Une procédure sera mise en œuvre en 2006.

- **Revoir la pratique autorisant le départ des éboueurs avant l'heure prévue.**

  <u>**Réponse de la direction**</u>

  Le Groupe de collecte des déchets par la Ville a été mis sur pied dans le but de préparer une soumission concurrentielle pour la collecte des déchets solides avec une équipe de soumission interne dans le cadre d'une soumission de service concurrentielle publique-privée en 1998. La réussite financière du Groupe interne de collecte des déchets du secteur public dans l'industrie concurrentielle de la gestion des déchets s'explique par la capacité de la direction de retenir les bons employés et d'offrir des services efficaces. La Division des services de gestion des déchets solides a amassé des économies de plus de 1,7 million de dollars au cours des sept dernières années de service. Le personnel de la collecte des déchets a présenté une soumission qui est fondée sur le taux de rémunération des employés associé aux normes de l'industrie de la gestion des déchets au lieu de s'appuyer sur le taux de salaire plus élevé d'un opérateur d'équipement lourd du SCFP 503. Nos conditions de travail, notre efficacité et nos coûts réduits de prestation des services ont fait augmenter le rendement et la valeur pour les résidents d'Ottawa, et ce, pour l'ensemble de la période de prestation des services.

  Les Services de collecte des déchets respectent les pratiques du secteur privé et de l'industrie visant à s'assurer que l'équipe couvre la totalité de la zone de collecte chaque jour. Si une autre équipe a déjà complété le parcours, alors elle est réaffectée ailleurs jusqu'à l'achèvement complet du parcours quotidien de collecte des déchets et du recyclage.

Les procédures existantes n'ont exigé aucune heure supplémentaire additionnelle pour terminer la collecte quotidienne des déchets solides.

RECOMMANDATION 6

Dans le but de mieux surveiller et gérer les heures supplémentaires, la Gestion des biens immobiliers, Division des biens assignés aux programmes, devrait prendre les mesures suivantes.

- **Surveiller et gérer les heures supplémentaires dans les limites du budget établi à cet effet, et ce, indépendamment de l'enveloppe de la rémunération.**

- **Obliger le personnel à justifier les heures supplémentaires demandées sur les feuilles d'activités d'entretien quotidiennes.**

Réponse de la direction

L'examen complet analysera les meilleures méthodes de production de rapports dans chaque service. Les données des feuilles d'activités d'entretien sont traitées de façon numérique avec les codes fixes assignés aux types de congés. Le rapport sur les incidences complète la procédure des feuilles de temps qui permet de consigner, d'approuver et de signaler la raison du recours aux heures supplémentaires ou au travail sur demande. L'accent sera toujours mis sur cette source d'information aux fins de la gestion des heures supplémentaires.

RECOMMANDATION 7

Dans le but de mieux surveiller et gérer les heures supplémentaires, la Gestion des biens immobiliers, Biens à risque, devrait prendre les mesures suivantes.

- **Obliger le personnel à justifier les heures supplémentaires demandées sur les feuilles d'activités d'entretien quotidiennes.**

- **Demander au personnel (installations d'OC Transpo) de signer les feuilles d'activités d'entretien quotidiennes et cesser l'utilisation du timbre de signature.**

Réponse de la direction

La direction est en accord avec cette recommandation. Les deux superviseurs opérationnels devront désormais traiter et autoriser les documents sur les heures supplémentaires en les signant plutôt qu'en utilisant un timbre de signature. Le suivi du personnel de la saisie des données commencera immédiatement dans le but de garantir la conformité.

Commentaires de la Direction de la gestion des biens immobiliers sur les heures supplémentaires de la Sécurité municipale

Les opérations du transport en commun, dans le cadre du budget 2004, ont fixé lors de l'examen des procédures opérationnelles du registre des occasions dégagées (point TW5.2) des économies de 260 000 $ et une réduction de 4,5 ETP pour l'élément concernant la mise en place de services de sécurité de rechange dans les installations de la Ville utilisées par le Transport en commun. Cette fonction a été récupérée par la Sécurité municipale. Cette initiative a été approuvée par le Conseil. La réduction des ETP est entrée en vigueur en juin 2004. La Sécurité municipale a reçu un financement provisoire afin de couvrir les coûts du départ des 4,5 ETP pendant six mois. Ces coûts comprenaient la rémunération ordinaire et les heures supplémentaires travaillées. Voilà ce qui explique les 12 000 $. La Sécurité municipale n'aurait pas eu à payer ces dépenses (couverte par le financement provisoire) s'il n'y avait pas eu de transfert. Depuis cette modification, il n'y a pas eu de coûts liés aux heures supplémentaires au sein de la Sécurité municipale (et il n'y en aura pas puisque tous les employés font partie du GEDP).

RECOMMANDATION 8

L'Administration de la paie devrait vérifier que des contrôles adéquats sont en place pour le traitement des formulaires DC/DTEE.

- **S'assurer de la présence d'une autorisation valide.**

Réponse de la direction

L'échantillon vérifié était petit, mais l'Administration de la paie a pris, et prendra encore, des mesures pour étendre ses procédures de contrôle. Les formulaires de temps et de congé ont été révisés afin d'y inclure une zone spéciale ou les superviseurs et les gestionnaires autorisés peuvent inscrire leur nom et leur titre. Cela facilitera l'identification des signatures. De plus, l'Administration de la paie prévoit une autre mesure de contrôle, soit la préparation d'une liste à jour des gestionnaires et des superviseurs autorisés à signer des formulaires de temps et de congé.

- **Refuser les formulaires DC/DTEE qui sont incomplets ou qui comportent des erreurs et les retourner au groupe de clients pour obtenir les renseignements manquants avant le traitement.**

Réponse de la direction

Par le passé, il existait une procédure informelle de retour des feuilles de temps incomplètes. La vérification n'a découvert que quelques formulaires avec des renseignements incomplets ou non significatifs (p. ex. absence de la date de signature de l'employé), mais des modifications seront quand même apportées aux procédures de l'Administration de la paie. À l'avenir, une approche plus officielle sera mise en

œuvre. Les formulaires incomplets seront retournés au secteur pertinent avec une explication afin d'y être corrigés. Étant donné le volume de formulaires (l'Administration de la paie traite environ 400 000 lignes de saisie de données par année), d'autres changements mineurs seront faits à la suite de conversations téléphoniques avec le superviseur ou le gestionnaire autorisé.

- **Quand le système n'accepte pas les données saisies (p. ex. travail sur demande exigé pour des dates identiques à celles du congé annuel, compensation pour congé de maladie, congé autorisé), les commis de la saisie des données ne doivent pas trouver des « solutions de rechange » en entrant les heures pour des dates différentes.**

Réponse de la direction

Dans certains cas, un employé peut exiger une paie pour du travail sur demande pendant un congé (p. ex. quand les employés ont des compétences particulières ou en cas d'urgence). Comme le système ne permet pas d'entrer ces heures, il est nécessaire de recourir à des « solutions de rechange ». La Ville évaluera la faisabilité d'un ajustement du système de paie pour permettre la saisie de ces heures légitimes.

Commentaires généraux de la direction de l'Administration de la paie

La direction convient que l'échantillon de formulaires DC/DTEE utilisés lors de la vérification n'était pas statistiquement représentatif et qu'aucune conclusion ne peut être tirée au sujet des procédures de saisie des données de l'Administration de la paie à partir de cet échantillon.

RECOMMANDATION 9

Pour les secteurs visés par la vérification des dépenses en heures supplémentaires de 2002 (Transport en commun, Entretien du parc automobile, Service paramédic et Opérations de surface), la direction devrait surveiller et gérer les dépenses en heures supplémentaires dans les limites de leur budget.

Réponse de la direction

La direction est en accord avec cette recommandation. Elle reconnaît que l'établissement des budgets des heures supplémentaires comportait des lacunes et que ces budgets auraient dû être révisés minutieusement en fonction des besoins réels.

La direction a pris des mesures dynamiques de gestion des présences dans chacun de ces secteurs de service, comme l'a indiqué le vérificateur général, et elle continuera de surveiller et des gérer les présences de manière à réduire au minimum les heures supplémentaires. Il faut toutefois souligner qu'il s'agit de services directs offerts en tout temps et que les heures supplémentaires constituent une part essentielle des

opérations pour un certain nombre de raisons : des heures supplémentaires doivent être payées à ceux qui travaillent lors de congés fériés ou qui offrent des services en cas d'urgence ou de mauvais temps. Ces services doivent être offerts. Ainsi, quand la Ville adopte un gel du recrutement, alors ces services sont donnés par le personnel existant qui fait des heures supplémentaires. Dans certains cas, comme le Service paramédic et le Transport en commun, les heures supplémentaires s'accumulent pour les services prévus par des contrats et pour lesquels la Ville reçoit des sommes. En ce qui concerne le Transport en commun, l'analyse de KPMG sur les opérateurs de véhicule de transport en commun, réalisée en 2004, a établi que les heures supplémentaires étaient plus rentables que les heures normales pour la Ville, parce que cette dernière n'avait pas à payer d'avantages sociaux pour le travail supplémentaire.

L'examen approfondi permettra de déterminer les niveaux optimaux des heures supplémentaires dans ces secteurs, et les budgets en tiendront compte.

RECOMMANDATIONS POUR L'ENSEMBLE DE LA VILLE

Les conclusions de cette vérification nous permettent de formuler quelques recommandations générales qui s'appliqueraient à l'ensemble de la Ville. Ces recommandations sont les suivantes.

RECOMMANDATION 10

Les services devraient mieux surveiller et gérer les heures supplémentaires dans les limites budgétaires prévues pour les heures supplémentaires. Cela comprend la modification des quarts de travail pour s'occuper de la charge de travail prévue, une meilleure gestion de l'absentéisme et une procédure de révision budgétaire active.

Réponse de la direction

La direction est en accord avec cette recommandation.

La direction mettra en place des protocoles clairs sur les critères précis des heures supplémentaires pour chaque service, et cela fera l'objet de l'examen approfondi. Les budgets des heures supplémentaires seront toujours gérés dans le cadre du budget global de la rémunération, plutôt que comme un simple poste. En général, les heures supplémentaires ne sont pas prises indépendamment du budget global de la rémunération, et la direction est d'avis qu'il ne faut pas les considérer séparément parce que beaucoup de services de la Ville sont offerts en tout temps, que certains facteurs de service importants sont imprévisibles (c.-à-d. conditions météorologiques, bris d'infrastructure comme les conduites d'eau ou les feux de circulation) et que le recrutement est gelé depuis les trois dernières années. Tous ces facteurs sont gérés dans l'enveloppement de la rémunération total en vue d'offrir des services de première ligne à l'endroit et au moment où ils sont nécessaires.

RECOMMANDATION 11

Les services devraient utiliser toutes les fonctions du système financier de la Ville pour surveiller, contrôler et réduire le nombre d'heures supplémentaires dans son ensemble et pour chaque employé. Ils devraient aussi offrir de la formation additionnelle aux employés selon les besoins. En outre, il faut cesser l'utilisation et la maintenance de tout sous-système autre que le système financier de la Ville. Dans le but d'assurer l'exactitude des renseignements du système financier de la Ville, les services devraient s'occuper du délai de soumission des formulaires de demande de congé ou d'heures supplémentaires par les employés.

Réponse de la direction

La direction est d'accord avec le but de cette recommandation.

Cela fera partie de l'examen approfondi. Toutefois, étant donné le nombre d'installations différentes, la direction s'attend à ce qu'il existe toujours des délais dans beaucoup de service. L'examen analysera des méthodes visant à réduire au minimum ces délais.

RECOMMANDATION 12

Les Services aux employés devraient élaborer des politiques et des directives claires sur la gestion des heures supplémentaires.

Réponse de la direction

La direction est d'accord avec le but de cette recommandation.

Toutefois, la direction croit que la plupart des politiques et des directives seront élaborées pour chaque service et non à l'échelle de la Ville étant donné le nombre de variables opérationnelles entre les directions (p. ex. engagements relatifs aux services, niveaux de dotation, niveaux budgétaires et conventions collectives applicables).

La direction n'est pas d'accord avec la gestion des heures supplémentaires séparément du budget global de la rémunération. Les budgets des heures supplémentaires doivent refléter plus fidèlement les dépenses réelles, mais il faut continuer de les gérer dans le cadre du budget global de la rémunération parce que beaucoup de services de la Ville sont offerts en tout temps, que certains facteurs de service importants sont imprévisibles (c.-à-d. conditions météorologiques, bris d'infrastructure comme les conduites d'eau ou les feux de circulation) et que le recrutement est gelé depuis les trois dernières années. Tous ces facteurs sont gérés dans l'enveloppement de la rémunération total en vue d'offrir des services de première ligne à l'endroit et au moment où ils sont nécessaires.

Le Conseil a décidé de réduire les dépenses en heures supplémentaires de 3,5 millions de dollars dans le budget 2006. La direction déterminera les économies à l'appui de l'atteinte de cet objectif dans l'examen décrit précédemment.

Remerciements

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1   Introduction

Overtime is incurred based on actual incidences, planned or unplanned, is influenced by internal or external factors and managed by personal judgement at the time of occurrence.   Internal factors include: scheduling; training; special work; and absenteeism, annual leave, court time and other leave, whereas, external factors relate to service delivery. Employees are compensated for their overtime by payment, usually at a premium rate, or by authorized time off in lieu.

As in any organization, it is essential that overtime be managed in the most economical way.   As such, the utilization of overtime is a balance between meeting service delivery needs, addressing appropriate staffing levels and using staff on overtime. Therefore, there is, for every service line, an optimization point between the above three components.

However, overtime, in many cases, is a discretionary cost. Good management practices require that overtime be managed in the most cost-effective manner possible.   In general, overtime must be properly authorized, recorded, accumulated, approved and controlled.

Total overtime cost incurred Citywide in 2004 was approximately $36.9 million. The following table summarizes overtime by area.

Area / Department	Total
Public Works & Services	$19,897,405
Police Service	8,024,358
Community & Protective Services	6,043,199
Corporate Services	2,399,281
Planning & Growth Management Services	402,958
Library Services	134,072
City Manager's Office	2,806
Total Operating Overtime	**$36,904,180**

Figure 1: City of Ottawa – 2004 Overtime Expenditure

1.1   Objective, Scope and Methodology

Objective

The audit objective is to assess the processes and practices in place at the City to authorize, approve, track, manage and control overtime.

Scope

The audit examined 2004 overtime incurred by the Fire Services Branch; the Utility Services Branch; and the Real Property Asset Management (RPAM) Branch. The analysis of overtime was based on areas that had a high volume of overtime during 2004, which had not been examined during a previous 2002 audit conducted by the former Audit and Consulting Services Branch.

The three areas reviewed by the current audit, account for $5.5 million or approximately 15% of the total Citywide overtime for 2004.

- Utility Services .... $2.0 million
- Fire Services... 2.2 million
- Real Property Asset Management............... 1.3 million
          Total .... $5.5 million

We also asked management to report on their progress in implementing the 2002 Audit of Overtime recommendations conducted by the former Audit and Consulting Services Branch, and we reviewed the actual overtime expenditure in these areas.

Initially the scope of this review did not include any examination of processing of overtime by Payroll Division. We did however review payroll reports available from SAP, the City's corporate financial system.

However, as part of our work in Utility Services Branch, a judgmental sample of Exception Leave Request/Time Reporting forms (ELR/TR) was reviewed. The sample is not statistically representative and therefore the issue identified through our limited review do not necessarily represent Payroll Division's data entry processes. The Office of the Auditor General will consider undertaking a more detailed review of time reporting practices during 2006.

During the course of the audit, management informed us that they were not required to manage overtime as a line item, but rather that they were to manage to the total compensation envelope. Therefore, although we did not review the compensation envelopes financial data, we have included this information for each branch and division.

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Approach and Methodology

The audit included the following procedures:

- Review and assess the existence of procedures and controls over the planning, monitoring and controlling of overtime.

- Analysis of selected high overtime areas including interviews with Management. Review and analyze any internal reports and documentation regarding overtime, staffing levels, sick leave and contractual obligations, including general order and legislations in the selected areas.

2 Fire Services Branch – Community & Protective Services

The Fire Services Branch is responsible for protecting the lives, property and environment of the people that live, work and visit the City of Ottawa. The personnel are highly trained in order to respond to emergency and non-emergency incidents. The Branch provides the following cores services: (1) fire suppression (2) prevention and public education (3) disaster support and (4) public assistance.

Our review included the Suppression (Urban Fire Fighting) and Education and Prevention Services Divisions. The 2004 estimated full-time equivalents (FTEs) were 985 for the Branch.

In 2004, the Branch's Financial Support Unit (FSU) prepared quarterly financial reports. In 2005, these were prepared and submitted to Fire Services on a monthly basis. The FSU provides several monthly financial reports, which they extract from the corporate financial system. Reports include an operating summary by cost centre and overtime detail for each program to the employee level. These reports are submitted to members of Fire Services, Management Team (Fire Chief, Deputy Fire Chiefs and Manager).

Fire Services overtime budget is based on historical information. In the last three years, the Branch has attempted to reduce its overtime by increasing the number of FTEs and closely monitoring sick leave. They have also been focusing on better planning of vacations and training time to mitigate the overtime usage.

The Fire Services Branch 2004 overall overtime budget was in the amount of $2,146,240 and actual incurred overtime was $2,173,377. This represents a slight over expenditure of 1%.

For 2005, total annual overtime budget was $1,946,182 and actual incurred overtime was $1,857,017 which represents an under expenditure of 5%.

For 2004 and 2005, Fire Services Branch managed their overtime expenditures to remain close to their budget. Although, overall the Branch was within budget, some divisions within the Branch exceeded their budget levels. The details of overtime and compensation envelope expenditures and budgets for 2002 to 2005 are outlined in the following table.

		2002	2003	2004	2005
FIRE SERVICES BRANCH					
Overtime	Budget	1,323,800	2,101,240	2,146,240	1,946,182
	Actual	2,122,140	2,814,262	2,173,377	1,857,017
	Variance	**160%**	**134%**	**101%**	**95%**
Compensation	Budget	67,509,493	75,787,688	87,029,962	91,524,296
Envelope	Actual	68,335,364	76,996,550	87,435,253	90,697,403
	Variance	**101%**	**102%**	**100%**	**99%**

Figure 2: Fire Services Branch –
Overtime and Compensation Envelope Expenditures 2002-2005

2.1 Fire Suppression – Urban Fire Fighting Division

The objectives of the Fire Suppression unit are to: (1) reduce loss of life and property; (2) promote health and safety; (3) mitigate environmental contamination; (4) assist and support in the event of large-scale emergencies; (5) use emergency resources effectively; (6) promote firefighter safety. The unit is divided into four platoons shifts with 5 districts within each platoon. There are 43 fire stations, which include 27 urban and 16 rural stations. The 27 urban stations are staffed full time. The rural stations incur very little overtime as they are staffed by volunteer firefighters.

FIRE SUPPRESSION - URBAN FIRE FIGHTING DIVISION		2004	2005
Overtime	Total Annual Budget	1,617,687	1,442,123
	Actual	1,444,891	1,156,501
	Variance	**89%**	**80%**
Compensation Envelope	Total Annual Budget	74,545,752	77,709,426
	Actual	75,037,300	77,541,860
	Variance	**101%**	**100%**

Figure 3: Fire Suppression – Urban Fire Fighting Division – Overtime and Compensation Envelope Expenditures 2004-2005

Platoon Chiefs have the authority to allocate overtime as the need arises. Shift schedulers are informed to call back additional resources either by email or telephone. Per the collective agreement, the shift scheduler refers to the call back list, which is based on rank, to determine the employee to be called to cover the shift. If the member is unavailable, the next person is contacted.

When an individual is called in and earns overtime, he/she will complete the Overtime/Call Back Form describing the number of overtime hours and the reason. This form is first sent to the Platoon Chief who confirms the overtime was incurred and then to the Deputy Chief for authorization. As such, management is reviewing and authorizing overtime on an individual case basis.

2.1.1 Policies and Guidelines

The Fire Services Branch have developed formal general orders and standard operating procedures that provide guidance to managers as to when to incur overtime. They also adhere to the rules set out in the collective agreement that

outlines the particular manning levels that are required.

A general order outlined that during each shift the Platoon Chief is responsible to review the staff complement level across the City for that day. If there is a staff shortage the Platoon Chief will determine whether resources can be reallocated between the districts and whether a vehicle is to be taken out of service.

We found that a significant amount of the overtime incurred relates to covering off absenteeism at the captain level. There were 108 captains in 2004 that incurred, on average, 18 days of sick leave. We also observed that average absenteeism increased the higher the position level.

As each platoon of each station aims to be under the charge of a captain, when a captain calls-in sick, either another captain is called in to cover the shift, which results in overtime; or a lieutenant acts as captain and incurs acting-pay. Per the Ottawa Professional Fire Fighters' Association (OPFFA) collective agreement, section 5:10, for urban fire stations, the requirement stated is: "So far as practical, each platoon in each station shall be in the charge of a Captain". Given the cost of overtime, it may not be practical to continue to have a captain in charge of each platoon.

Fire Services Management has recognized that there is a systematic overtime problem with covering absences at the captain level and have created an acting Program Manager position to oversee the Branch's high absenteeism levels.

2.1.2 Planning

Meeting the budget amounts is a priority and regular meetings every four to six weeks are scheduled between the Deputy Chief and Platoon Chiefs to discuss the unit's actual expenditures in relationship to the budget; this includes overtime.

2.1.3 Roles and Responsibilities

The Platoon Chief has the authority to approve overtime when required and sign the members' Overtime/Call Back Form to validate that the overtime was incurred.

The Deputy Chief authorizes the compensation for the overtime.

2.1.4 Recording of Overtime

Duplication of efforts was observed in the Fire Suppression section. Specifically, it was reported that one of two shift schedulers inputs the approved Overtime/Call back form into an Excel spreadsheet. The spreadsheet identifies the individual who incurred the overtime, the number of overtime hours and the reasons for the overtime. The shift scheduler also completes a "402 form", which identifies acting pay, absences and call back on overtime. Another employee then verifies this form prior to it being sent to Payroll.

Payroll is only responsible for the inputting and recording the acting pay and absences, as one of the shift schedulers enters the callback, overtime and committee overtime directly into the City's financial system.

Management informed us that they believed the information in the corporate financial system was not current and accurate, as such; the separate Excel spreadsheet is maintained in order to provide management sufficient details for monitoring overtime.

Fire Services acknowledged that employees are not required to submit the leave/overtime forms within a certain timeframe. These delays in submitting the forms create time lapses causing the corporate financial system information to not consistently be timely and accurate.

2.1.5 Reporting and Monitoring

Monthly overtime reports provided by the Branch's FSU are reviewed monthly at the meeting held between the Deputy Chief and Platoon Chiefs.

Management indicated as another explanation for the duplication of effort and creation of sub-system is that the City's financial system does not capture the internal or external causes of overtime and that therefore, they produce their own sub-reports in order to manage overtime.

For example, they have created daily reports in Excel to identify the individuals who incurred overtime for a specific day including the amount and the reasons.

They also receive weekly reports detailing the summary of attendance for the week. These particular reports are monitored on a weekly basis by the management team to determine if there are any anomalies and to monitor the causes of overtime such as sick, holiday, time off in lieu, maternity leave etc.

We found that the corporate financial system had the required functionalities, with the exception of providing a rationale for absences and overtime, to provide the

information that Fire Services Branch requires. As an example, it was thought that the corporate financial system did not have the capability to review multi-staff information concurrently but this can be done on the corporate financial system. Fire Services staff were provided with a one-day training session on the corporate financial system and additional training would be beneficial to help staff better utilize all system functionalities.

It was observed that Fire Services does not take advantage of City's corporate financial system, HR module functionality to review staff total leave. It was confirmed with the Branch's FSU that only overtime detailed information is provided monthly.

2.1.6 Analysis of Overtime by Management

Management highlighted that they analyse and monitor overtime to identify the drivers of overtime. They believe that systematic overtime is a result of a shortage of lieutenants to act as captains when the need arises. Management indicated that they are implementing measures to try to rectify the situation such as promoting firefighters to acting lieutenants in order to increase the available pool of individuals to replace absent captains. In our opinion, the core reason for the systematic overtime is absenteeism at the captain level. Although absenteeism is being monitored at present, additional work is required to resolve the problem.

In 2004, Fire Suppression – Urban Fire Fighting Division managed their overtime expenditures to remain within budget. Actual expenditures were 11% under budget. In 2005, Urban Fire Fighting Division continued to be under budget by 20%. Although Fire Suppression is operating within budgets, there are areas where improvements to the management and monitoring of overtime could be made and these are outlined below.

RECOMMENDATION 1

In order to better monitor and manage overtime, Fire Services Branch (Fire Suppression – Urban Fire Fighting Division) should:

- **Review their staffing practice of requiring a captain for each platoon of each station in order to reduce overtime.**

Management Response

Management disagrees with this recommendation. This recommendation cannot be implemented at this time since it is a requirement under the collective agreement. Section 5:10 of the Collective Agreement dictates that a Captain shall be in charge at each Station on every shift. Should a Captain not be available an eligible acting Captain may be put in place.

In 2004, Captains in the Ottawa Fire Service incurred an average of 14.75 days of sick leave, in 2005 the number is 18.42. However, the dollars spent on overtime to address this were reduced from $452,000 to $187,000 because management took action to promote Captains and Lieutenants ahead of time as retirements became known and improved scheduling of vacation and sick leave management.

Management has challenged the union on its interpretation of the collective agreement (currently at arbitration) which if successful will result in further reduction of overtime costs. (Also reference below the efforts made under the AIP that are addressing this audit concern.)

- **Adopt a more aggressive attendance initiative and aim to decrease its usage of sick leave days in particular at the captain's level and higher.**

  Management Response

  Management agrees with the intent of this recommendation. However, Management has already implemented a very aggressive approach with its Attendance Management Program.

  An Attendance Improvement Program Managers' position has recently been finalized and will be going to Job Evaluation mid-December for final rating and will subsequently be posted. The position has been filled in an acting capacity since September 2003. Over the past two years the program has been developed in conjunction with the Corporate Program. Subsequently absenteeism has been reduced from 15.88 days per year to 10.68 days per year since the Attendance Improvement Program was implemented 2 years ago.

- **Addresses the time-lapse by members in submitting the required leave/overtime form in order to insure the corporate financial system information is timely and accuracy.**

  Management Response

  Management agrees with this recommendation. This will be addressed before Q3 2006.

- **Stop maintaining an Excel sub-system and, monitor, control and report on total Branch absences and overtime using the corporate financial system.**

Management Response

Management is deferring its response to this recommendation. The comprehensive review will examine the best reporting methods in each service. The Excel sub-system for overtime is used for analytical purposes to determine why overtime is being used. It tracks the reasons for overtime and the SAP system only tracks the use of overtime by cost center for budget and accounting purposes.

- **Provide additional training, as required, on the corporate financial system to facilitate the monitoring and controlling of staff overtime and absences.**

Management Response

Management agrees with this recommendation. This will be implemented during Q2 2006.

2.2 Prevention, Training, Special Operations & Communications

The objectives of the Education and Prevention Division are to: enhance delivery of community safety programs; increase community fire safety by investigating fires; increase public awareness of fire risks; educate citizens on fire safety; distribute smoke alarms through the community; and provide proactive inspection services.

The Division is divided into the following sections for financial reporting purposes: special operations; fire prevention; education and prevention services; logistics and administration; and special events. Within this Division, we reviewed Fire Prevention and Education and Prevention Services, as this was where the most significant overtime was found.

		2004	2005
**EDUCATION AND PREVENTION SERVICES DIVISION **			
Overtime	Total Annual Budget	522,553	498,059
	Actual	724,403	696,260
	Variance	**139%**	**140%**
Compensation Envelope	Total Annual Budget	10,265,910	11,375,778
	Actual	10,017,073	10,810,246
	Variance	**98%**	**95%**

** *Includes: Special Operations, Fire Program Development Fire Operational Support, and Fire Performance Management*

Figure 4: Education and Prevention Services Division –
Overtime and Compensation Envelope Expenditures 2004-2005

Both the safety and communications sections work a 42-hour work week on an assigned shift rotation schedule. The remaining four sections: maintenance, prevention, training and special operations work a Monday to Friday, 35 hour work week.

Management identified that the main drivers of overtime are: manning levels, absenteeism, committee work, training initiatives, and emergency events. The two primary units that incurred overtime in 2004 are the fire prevention and communications.

The Special Operations Chief has no direct report and as such uses trained firefighters from fire suppression to deal with the auto extrication, hazardous

material incidents, tactical team responses, water rescue, and committee work. The pre-approval of overtime to its authorization is a very different process.

When overtime is required by communication, the supervisors/Assistant Division Chiefs have the authority to pre-authorizing overtime.

When an individual is called in and earns overtime, he/she will complete the ELR/TR forms describing the number of overtime hours. This form is then sent to the Division Chief and Deputy Chief for authorization. As such, management is reviewing and authorizing overtime usage on an individual case basis.

2.2.1 Policies & Guidance

Fire Services adhere to the rules set out in the collective agreement.

2.2.2 Planning

Management informed us that their budget for overtime is based on historical amounts; however in the last three years management has tried to reduce the budget by focusing on better planning of vacations, training time and monitoring of absenteeism.

Management also indicated that meeting the budget amounts is a priority as well as regular monthly meetings between the Deputy Chief and Division Chiefs to discuss the unit's actual expenditures in relationship to the budget which includes overtime amounts.

We found that overtime in Fire Prevention was incurred over weekends or after normal working hours to staff prevention programs such as the Fire Safety House, the Jasmine House, fire safety displays in local malls, etc.

Per the collective agreement, sub-section 5:03, relating to Fire Prevention, Training, Planning, Maintenance and Mechanical divisions, hours of work are to be scheduled "eight (8) consecutive hours a day, five (5) days a week Monday to Friday, between 07:00 hours and 17:00 hours." In addition, letter of understanding number 5 states that Prevention Officer may work a compressed four day workweek.

In light of the prevention mandate, more flexible shift might be appropriate in order to cover events during normal working hours and thus not incurring overtime. If much of the prevention program is regularly delivered on Saturday or Sunday, the shifts should be scheduled for these regular workdays. If this operation is by its nature a 7-day operation, the hours of work should be better defined to reflect this. Such possible flexibility in shifts would need to be agreed upon during collective agreement negotiation.

2.2.3 Roles and Responsibilities

The responsibility for post-authorization and monitoring of overtime has been assigned to the Division Chiefs and the Deputy Chief.

2.2.4 Recording of Overtime

Once the employee has filled out the Exception Leave Request form, it goes through the post-authorization process. Once authorized, it is transferred to Payroll for input into the corporate financial system. Fire Services employees are not required to submit their forms within a set timeframe that impedes timely and accurate information being reflected within the City's financial system.

2.2.5 Reporting and Monitoring

Reports provided by the Financial Support Unit (FSU) on a monthly basis are reviewed monthly with the Division Chiefs.

2.2.6 Analysis of Overtime by Management

Management informed us that they are aware of some of the reasons that result in systematic overtime such as absenteeism and scheduling and have implemented methods to minimize this overtime. One of these strategies is that they have hired part-time staff to help mitigate the overtime caused by absenteeism. However, they are restricted under the collective agreement as to what methods can be implemented.

We also enquired of management about specific individuals with high overtime amounts and it was noted they do not use the corporate financial system's HR functionality to monitor overtime by individual. Monitoring is solely done on monthly transactions entered into the corporate financial system and not the yearly cumulative overtime total by individual.

They informed us that the reason some individuals have higher overtime balances is because they perform specialty work such as rope and ladder repair mainly on overtime. In addition, they indicated the Fire Prevention unit has higher individual overtime balances due to events not being scheduled during their regular scheduled shifts. As such, time spent in evenings or on weekends is on overtime.

In 2004, Prevention, Training, Special Operations and Communications overtime expenditures exceeded the budget by 39%. In 2005, the overtime budget was exceeded by 40%. There are areas were improvements to the management and monitoring of overtime could be made and these are outlined below.

RECOMMENDATION 2

That Fire Services Branch (Prevention, Training, Special Operations and Communications) monitor and manage overtime within the limits of established budget including the following:

- **Start using the corporate financial system's full functionalities to monitor, control and report on total Branch overtime and leave as well as overtime and leave by employee.**

Management Response

Management agrees with this recommendation.

- **Address the time-lapse of members to submit the required leave/overtime form in order to insure the corporate financial system information accuracy.**

Management Response

Management agrees with this recommendation. The comprehensive review will need to establish reasonable timelines given the large contingent of staff operating from a large number of decentralized stations there are time lapses experienced with respect to the time for the form to make its way from the station back to Administration and collect all the necessary signatures.

- **Explore the possibility of modifying the collective agreement to alter Fire Prevention staff work/shift schedule to reflect job requirements, as is the practice in other areas within the Fire Services Branch.**

Management Response

Management agrees with this recommendation. The comprehensive review will assist in determining the optimal levels of overtime for this service.

■ **Review its work assignment, and if required train additional resources, to ensure that there is a sufficient pool of resources with the necessary skills to do repairs during regular working hours to the extent possible.**

<u>Management Response</u>

Management agrees with the intent of this recommendation. However, Management has been addressing the situation by getting as much of this work done on shift as possible.

<u>Fire Services Branch - General Management Comment:</u>

As a technicality, OFS is of the position that the shift premium (budgeted at $753,408 in 2004 with actual expenditures of $700,051) should be backed out of the overtime cost centre. Shift premium is set out in the collective agreement and applies to firefighters who are regularly scheduled (one must actually be at work to qualify) and who work on a statutory holiday as part of the normal shift rotation. The shift premium has long since been negotiated into the collective agreement and is a standard form of payment to fire fighters across the Province. It is not a discretionary item or one that can be mitigated or reduced unless negotiated out of the collective agreement. The shift premium element is clearly not overtime.

If the shift premium is backed out of the overtime cost centre, the OFS will have actually under spent its 2004 overtime budget by one (1%) percent.

3   Utility Services Branch -- Public Works and Services

The Utility Services Branch is responsible for providing services to Ottawa residents in the areas of drinking water, sewers, wastewater and solid waste while preserving the environment and protecting the health of the community. The focus of this audit is on three of the five Divisions within the Branch, specifically Customer Services and Operational Support, Wastewater & Drainage Services, and Solid Waste Services. Environmental Program & Technical Support and Drinking Water Services were not included in the scope of this audit. In 2004, the estimated full-time equivalents (FTEs) for the Branch were 538.

The three Divisions identified some common issues that impact on the management of overtime. Those issues are as follows:

- The Divisions operate under a highly legislated framework on a 24/7 emergency response basis. This means that a reduction in staff or inability to fill vacant positions requires existing employees to work overtime to maintain service levels.

- From 2002-2004, there was a 13% increase in the compensation budget (largely as a result of Collective Bargaining Agreements) but no increases were made to the overtime budgets to reflect the increased wage and salary rates. As a result, the capacity in the overtime budget has been reduced.

- From June 10, 2003 to June 25, 2004 there was a hiring freeze mandated by Council. As a result, vacant positions remain unfilled, existing employees were required to work more overtime to maintain customer service and compliance levels.

- When the hiring freeze was lifted in 2004, there were delays in filling vacant positions, as the lag time to fill a vacancy is often more than 6 months.

The Branch also indicated that the corporate directive in preparing budgets over the last few years has focused on managing the total compensation envelope, and not overtime as a line item (as shown in the table below). The table illustrates that the total compensation envelope amount budgeted for the Branch was not exceeded. The practice has been to cover off over expenditures in overtime with funding from unfilled vacancies. In 2004, the Utility Services Branch overtime budget was $1,427,521. The actual incurred overtime was $1,975,910, an over expenditure of 38%. For 2005, the total annual overtime budget was $1,567,521 and the expenditures were $2,123,299 that represent over expenditures of 35%.

		2002	2003	2004	2005
UTILITY SERVICES BRANCH					
Overtime	Budget	1,422,681	1,427,521	1,427,521	1,567,521
	Actual	1,910,816	2,150,835	1,975,910	2,123,299
	Variance	**134%**	**151%**	**138%**	**135%**
Compensation	Budget	29,552,696	32,340,452	33,466,003	35,075,191
Envelope	Actual	27,925,904	31,144,098	32,105,828	34,392,058
	Variance	**94%**	**96%**	**96%**	**98%**

Figure 5:   Utility Services Branch –
Overtime and Compensation Envelope Expenditures: 2002-2005

The Branch convenes monthly Branch Management Team (BMT) meetings to review the budget. It was only in mid-2005 that the Branch started reviewing monthly budget reports that identified overtime as a separate line item. Prior to that, the BMT only reviewed total compensation on a monthly basis, so how each Division or the Branch was tracking against the planned overtime budget was not monitored.

In terms of planning and budgeting for overtime, the Branch has acknowledged that only high-level analyses are done to determine overtime expenditures each year. The practice has been to carry the same number forward each year, as increases in overtime have not been granted across the corporation. In some Divisions, increases were requested but denied at the higher levels of draft budget review. In Solid Waste Services, the overtime budget was reduced by $5,000 in 2005 although the reduction was not requested.

Recognizing that there are challenges to managing the overtime budget, this audit has identified opportunities for increased management and control of the overtime budget in all Divisions. These are outlined in the following sections of the report.

3.1 Customer Services and Operational Support (CSOS)

The Customer Services and Operational Support (CSOS) Division is a 24/7 service operation which manages and delivers the following services:

- 24/7 customer service (First Response Unit) and complaint investigations for all the Drinking Water and Wastewater and Drainage Divisions within the Utility Services Branch
- emergency response service
- water meter testing and repairs
- coordination of issuing of permits and data service
- contract management
- utility coordination.

The Division's First Response Unit, which is a 24/7 service operation, operates and maintains all service connections between the customer and the City's infrastructure i.e., sewers and water mains. A major component of managing the First Response Unit is scheduling work and service requests. This includes determining which activities can be deferred to the next available regular shift and which activities must be completed on overtime because safety is deemed to be at risk. The First Response Unit also has an internal service standard of responding to all calls within a 3-hour timeframe.

In 2004, the overtime budget for the Division was overspent by 59%, and overspent by 32% in 2005. These figures are summarized in the following table, along with the total compensation envelope.

		2004	2005
CUSTOMER SERVICES AND OPERATIONAL SUPPORT (CSOS)			
Overtime	Total Annual Budget	162,000	202,000
	Actual	257,904	267,475
	Variance	**159%**	**132%**
Compensation Envelope	Total Annual Budget	4,799,430	5,043,599
	Actual	4,434,532	4,840,387
	Variance	**92%**	**96%**

Figure 6:   Customer Services and Operational Support (CSOS)
Overtime and Compensation Envelope Expenditures: 2004-2005

There were 9 vacancies in 2004 that could not be filled due to the hiring freeze. This allowed the Division to manage within the total compensation envelope even though overtime was overspent.

The Division identified that the three main drivers of overtime are:

- absenteeism (including annual leave, sick leave, time off in lieu, compassionate leave, etc.)
- major emergency events (September flood and Frozen Services in 2004)
- planned shift cover offs and extensions.

The Division is broken down into seven sections. The FTEs and the percentage of total actual overtime incurred for each section is outlined below.

Section	FTEs*	2004 Overtime Expenditure	% of Actual Overtime
Manager's Office	2.0	-43	0.0%
Meter Maintenance	14.0	25,829	10.0%
Operational Support	5.7	903	0.4%
Contract Coordination	23.5	19,296	7.5%
Utility Coordination	11.0	28,571	11.1%
First Response Unit	15.3	166,902	64.7%
Permits & Data Services	14.5	16,446	6.4%
Total	**86.0**	**257,904**	**100.0%**

In 2004, FTEs ranged from 66 in the winter to 94 in the summer.

Figure 7: Customer Services and Operational Support (CSOS) FTEs vs. Actual Overtime - 2004

3.1.1 Policies & Guidance

The First Response Unit (which accounts for approximately 65% of the overtime in 2004) has developed a First Response Procedures Manual that has a section on "Replacing Shift Personnel When Absent" which outlines a process for who to call for each shift. However, it does not provide detailed direction to Supervisors regarding authorization and approval of overtime (e.g., guidelines on which circumstances and activities that are appropriate for overtime and which circumstances and activities that should normally be deferred to the next regular shift).

The other Sections within the Division do not have any formal policies regarding overtime. It is authorized on an as required basis by the Section Supervisor.

3.1.2 Controlling Overtime

The Division's practice is that all overtime must be pre-authorized by the Supervisor, with the exception of the following situations in the First Response Unit where pre-authorization is not required:

- A job cannot be left unfinished if safety is at risk (e.g., an open trench) or a customer is without service (e.g., a customer without water). The First Response Coordinator usually determines this.
- The First Response Unit has established an internal service standard of responding to all calls within a 3-hour timeframe. Overtime may be incurred to maintain this level of service.
- Shift cover off in the event employees call in sick or are absent for other reasons (the CUPE 503 agreement requires that overtime be paid to employees when shifts are rescheduled without one week's notice). This happens mostly on the night shift, as the Division requires 2 staff on the night shift. On the day shift, if an employee is absent, the shift is not usually covered off on overtime.
- Planned shift schedules for the night shift where each night shift employee works 84 hours per pay period (12 hour shifts, 3 days one week, and 4 days the next). This results in 4 hours of overtime pay per employee, per pay period (4 night shift employees).

However, the requirement to have overtime pre-authorized by a Supervisor is not formally documented or communicated.

Sick leave and other reasons for absenteeism (i.e., annual leave and time off in lieu) have a significant impact on overtime due to the need to reschedule shifts. The Division acknowledged it could be more aggressive in managing shift rescheduling by requiring more than one week's notice for annual leave and time off in lieu so that overtime could be reduced.

3.1.3 Planning

The budget, including overtime, is based largely on historical budgeted amounts and adjustments are requested annually if there are significant changes to service levels or service delivery. However, the Division does not conduct a rigorous analysis each year to determine optimal FTE and overtime budget levels.

The overtime budget of $162,000 was the same in 2002, 2003, and 2004. It increased by $40,000 in 2005. An increase of $30,000 was requested in 2004 but was cut during the corporate budget review process.

For the First Response Unit, where the majority of overtime is incurred, shift schedules and resource levels are not reviewed on a regular basis. It was acknowledged by the Division, that closer monitoring and review of the shift schedules to ensure optimum resource levels, would be beneficial, and may reduce the use of overtime.

3.1.4 Roles and Responsibilities

The Manager of the Division is responsible for managing the Division's budget, including compensation and overtime. The Manager has given Supervisors (Program Managers, Coordinators, and Program Engineers) the authority to authorize and approve overtime. However, there is no formal delegation of this authority through policy or guideline documents.

Supervisors authorize and approve overtime to respond to operational needs and maintain a high level of customer service. However, Supervisors do not have access to or use overtime budget information to track and monitor overtime expenditures on an ongoing basis. Supervisors are authorizing and approving overtime based on operational need without an awareness of the overtime budget. Therefore, the approval of overtime should be more closely managed to the overtime budget.

3.1.5 Recording of Overtime

MMS-ITX is a work order/project management system that captures information for each activity performed by the First Response Unit, Meter Maintenance, Utility Coordination, and Contract Coordination. Information captured by the system includes labour hours (regular and overtime), equipment use, and materials use. The system is primarily used to manage maintenance activities through work orders, and does not contain overtime budget information.

The intended process for recording overtime is as follows:

- Employees record their time (regular and overtime) on a work order form that is generated from the MMS-ITX system.
- At the end of each shift, employees submit their work order forms, a summary time sheet for the shift (generated form MMS-ITX), and a completed ELR/TR form to the Supervisor. The ELR/TR forms do not include details on the overtime incurred, as there is sufficient detail in the work order forms.
- The Supervisor signs off the work order forms, along with the timesheets and ELR/TR forms daily.

- The signed off work order forms are given to the Permits & Data Services Unit for entry into the MMS-ITX system and the ELR/TR forms are forwarded to Payroll.

Overtime incurred by Permits & Data Services and Operational Support is not captured in MMS-ITX. Employees in these sections submit ELR/TR forms directly to their Supervisors for approval and are sent to payroll for processing.

The MMS-ITX system is not linked to the corporate financial system. In reviewing the overtime hours captured in each of these systems, it was identified that the MMS-ITX data for overtime hours does not reconcile to the corporate financial system's payroll overtime hours. It was noted that overtime hours are sometimes being recorded and/or entered as regular hours.

The Division acknowledged that there were data integrity issues with the MMS-ITX data being captured (mostly due to data entry errors) and currently has a Data Quality Assurance Plan in place to improve the data integrity.

Management advised us that MMS-ITX was no longer being supported by its designer, and therefore the Branch are in the process of examining viable options for system replacement. Exploring opportunities for a system with one point of data entry may be advantageous in reducing data entry workload and improving data integrity.

3.1.6 Reporting and Monitoring

Many reports can be generated from MMS-ITX and the information can be "sliced and diced" in many ways. The Manager has review access to the system and uses it to run ad hoc reports on specific projects, events, and to determine the average cost of certain activities. However, the MMS-ITX system does not include overtime budget information and cannot generate reports to track and monitor the overtime budget.

In 2004, there was no regular or ongoing analysis of overtime expenditures. The monthly Branch Management Team (BMT) reports generated from the corporate financial system did not include a break out of overtime as a line item. The report only provided expenditure information on the total compensation envelope. As a result, year to date expenditures of overtime was not being monitored or tracked.

The practice of the Division, as well as the Branch, has been to manage the total compensation envelope, and not the overtime line item.

3.1.7 Analysis of Overtime by Management

The Division has established a high level of customer service and responsiveness for the residents of the City of Ottawa. The 24/7 nature of the work environment for the Customer Services and Operational Support Division requires that some work and activities be incurred on overtime. However, the Division acknowledged that it does not analyze overtime expenditures in order to identify opportunities for more optimal management of overtime.

Specifically, analysis of such things as high overtime users, data (overtime hours) discrepancies between MMS-ITX and SAP, and shift schedules may result in opportunities to optimize overtime expenditures.

RECOMMENDATION 3

That the Customer Services and Operational Support Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

Management Response

Management agrees with this recommendation. The Financial Support Unit will adjust the line items in the overall compensation budget to better reflect actual spending, as was indicated during the 2006 Budget process. However, it should be noted that, given the 24/7 nature of this City services and the unpredictability of some significant service drivers, management will continue to work within the total compensation envelope to continue to provide front-line services where and when they are needed. The overtime review will help determine where efficiencies can be found within this line item.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

Management Response

Management agrees with this recommendation. Efforts will be made in documenting and analyzing the relationship between FTEs, overtime and service levels.

- **For employees using the MMS-ITX system, ensure a 3-way match at time of approval for overtime – work order, time sheet, and ELR/TR form.**

Management Response

Management agrees with this recommendation. The recommendation mirrors the procedure already in place to approve and sign off overtime.

- **For employees not using the MMS-ITX system, ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

Management Response

Management agrees with this recommendation.

- **Review shifts on a regular and ongoing basis to ensure most effective use of overtime.**

Management Response

Management agrees with this recommendation.

- **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

Management Response

The delegation of authority is already delegated to the appropriate operational level. Management will formalize and document the current procedure.

- **Formalize Service Level Agreements between Divisions as to what activities can be performed on overtime.**

Management Response

Management agrees with the recommendation. Service level agreements exist but are not formalized. The Division has been formalizing these agreements since early 2005 and will continue this process.

- **Review and update First Response Manual on a regular and ongoing basis. Include specific guidelines as to which situations need immediate response and which can be deferred.**

Management Response

Management agrees with the recommendation. The First Response Manual, developed 3 years ago, already includes specific guidelines to that effect. These guidelines will be reviewed and updated in 2006.

- **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users and reconcile the data to MMS-ITX to ensure high levels or data integrity.**

Management Response

Management agrees with this recommendation. Since early 2005, a data quality assurance plan is being developed. Data reconciliation between SAP and ITX-MMS is included on this project work plan.

- **Explore the opportunity to have one point of data entry with next MMS system to reduce data entry workload and data entry errors.**

Management Response

Management agrees with this recommendation.

3.2 Wastewater and Drainage Services

The Wastewater and Drainage Services Division is responsible for treating all industrial, commercial and residential wastewater produced in Ottawa at the Robert O. Pickard Environmental Centre (ROPEC). The collection system includes 2,400 kilometres of sanitary sewers, approximately 2,000 kilometres of storm sewers and 125 kilometres of combined sewers, 75 lift stations, about 27,000 access chambers and more than 150,000 laterals.

In 2004, the overtime budget for the Division was under spent by 6%, and overspent by 11% in 2005. These figures are summarized in the following table, along with the total compensation envelope showing compensation expenditures on budget in 2004 and a 2% over expenditure in 2005.

		2004	2005
WASTEWATER AND DRAINAGE SERVICES			
Overtime	Total Annual Budget	410,911	410,911
	Actual	384,385	455,711
	Variance	**94%**	**111%**
Compensation Envelope	Total Annual Budget	8,928,361	9,218,113
	Actual	8,968,571	9,444,981
	Variance	**100%**	**102%**

Figure 8: Wastewater and Drainage Services –
Overtime and Compensation Envelope Expenditures: 2004-2005

The Division identified that the two main drivers of overtime are plant shut down for maintenance requirements (maintenance cannot be planned during peak hours of operation) and responses to emergency situations (i.e. after hours emergencies and alarms generated from the SCADA system). Overtime responding to SCADA alarms was approximately $108,000 in 2004, or approximately one-third of all overtime. The Division indicated that this amount in overtime would be reduced in future years due to improvements in the SCADA system. The Division considers these situations as non-discretionary overtime and is planned for in the budget each year. Discretionary overtime such as dealing with work order backlogs also has an impact on overtime. However, the Division received approval for an additional 17 FTEs in the 2006 budget that will address the backlog and reduce the need for overtime in the Sewer Maintenance Section.

The Division is broken down into eight sections. The FTEs and the percentage of total actual overtime incurred for each section is outlined below.

Section	FTEs	2004 Overtime Expenditure	% of Actual Overtime
Manager's Office	2.0	0	0.0%
Wastewater Treatment	49.3	130,220	33.9%
Wastewater Collection	38.7	102,568	26.7%
Wastewater Pump Stations	16.3	137,842	35.9%
Wastewater Inspections	7.0	12,465	3.2%
Municipal Drainage	4.0	0	0.0%
Stormwater Treatment	4.3	443	0.1%
Operations Engineering	4.0	847	0.2%
Total	**125.6**	**384,385**	**100.0%**

Figure 9: Wastewater and Drainage Services – FTEs vs. Actual Overtime - 2004

3.2.1 Policies & Guidance

The intended practice of the Division is that Program Managers and Supervisors must authorize all planned overtime in advance of it being worked. The Program Managers and Supervisors also review and authorize all unplanned overtime expenditures on a case-by-case basis after the work is complete. The ELR/TR form is to be submitted by the employee within one week of the overtime occurring, along with work order forms (where appropriate) generated by the MMS-ITX or MMS-SAP systems.

However, in advance of this audit, there were no formal guidelines documented regarding the authorization and approval process for overtime. The Division is now in the process of formalizing guidelines that specify (1) guidelines for overtime call-outs, and (2) acceptable reasons for planned overtime.

3.2.2 Controlling Overtime

The Division's practice is that all overtime must be pre-authorized by the Program Manager or Supervisor, with the exception of on-call responses to alarms and emergency calls. However, the requirement to have overtime pre-authorized by a Program Manager or Supervisor is not formally documented.

In the Wastewater Treatment Section and the Pumping Station Section, all Electricians and Mechanics are on an on-call rotation. Employees can switch

their on-call duties with other employees or give their on-call day to another employee by informing the Supervisor. The Supervisor's concern is that someone is on-call, not who is on-call, and therefore does not monitor or track high overtime users. This is supported by the fact that in 2004, one employee (out of approximately 6 employees on rotation) incurred 40% of the on-call days (145 out of 365). Overtime for planned activities is allocated to the person(s) with the appropriate skill set to do the work.

It would be good management practice to monitor high overtime users to ensure overtime is being appropriately allocated, employees are not violating the limits for overtime in the CUPE 503 agreement, and employees are not working excessive overtime hours.

3.2.3 Planning

As with the Customer Services and Operational Support Division, the budget, including overtime, is based largely on historical budgeted amounts and adjustments are requested annually if there are significant changes to service levels or service delivery. The FSU forms for the 2004 budget planning cycle show a high-level breakdown of overtime amounts for the Division. The Division indicated that they do the most detailed planning they can with the information available to them, and feel the budget fairly represents anticipated expenditures.

The overtime budget of $410,911 was the same 2003, 2004, and 2005. There was no increase in the 2006 budget, however, they did receive approximately an additional $350,000 in the total compensation envelope called "Budget Contractor Supervision" to deal with the backlog of Sewer Maintenance Inspections.

3.2.4 Roles and Responsibilities

The Manager of the Division is responsible for managing the Division's budget, including compensation and overtime. The Manager has given Program Managers and Supervisors the authority to authorize and approve overtime. However, there is no formal delegation of this authority through policy or guideline documents.

In reviewing ELR/TR forms it was identified that it is not always the Program Managers and Supervisors who are signing off on overtime. The Senior Operator (one level below the Supervisor) is often the signing authority for overtime. This operational level was at a lower level than management indicated had authority to approve overtime. However, on further review, it was found that the job descriptions for these positions did have authority to approve overtime and leave.

Program Managers and Supervisors authorize and approve overtime for planned events such as maintenance during non-peak hours, capital projects, and contractor supervisions, and unplanned events such as emergency responses and SCADA alarms. However, Program Managers and Supervisors do not have access to or use overtime budget information to track and monitor overtime expenditures on an ongoing basis. Supervisors are authorizing and approving overtime based on operational need without an awareness of the budget. Therefore, the approval of overtime should be more closely managed to the overtime budget. However, compensation expenses are monitored and managed almost within the approved budgets.

3.2.5 Recording of Overtime

MMS-ITX and MMS-SAP are the two work order/project management systems that are used by the Division. The Sewer Maintenance Section uses MMS-ITX, and the Pumping Station Section and the non-shift employees in the Wastewater Treatment Section use MMS-SAP. The MMS systems capture information for each activity/job performed, including information on labour hours (regular and overtime), equipment use, and materials use. The systems are primarily used to manage planned maintenance activities through work orders, and do not contain overtime budget information.

The Division's intended process for recording overtime for employees that use the MMS systems is as follows:

- Employees record their time (regular and overtime) on a work order form that is generated from the MMS-ITX and MMS-SAP systems.
- At the end of each shift (or in some cases at the end of the activity), employees submit their work order forms and completed ELR/TR forms to the Program Manager or Supervisor. The ELR/TR forms do not include details on the overtime incurred, as there is sufficient detail in the work order forms.
- The Supervisor signs off the work order forms, along with ELR/TR forms daily.
- The signed off work order forms are given to the Data Entry Clerks in their respective Sections for entry into the MMS-ITX and MMS-SAP systems. The ELR/TR forms are forwarded to Payroll.

However, it was identified that for employees on the MMS-ITX system, work orders are signed off and submitted daily for data entry but the ELR/TR forms are submitted weekly (usually Wednesday) for processing. Overtime hours are listed for the week on one leave form indicating that work order forms and ELR/TR forms are not matched at the time of approval.

The MMS-ITX and MMS-SAP systems are not linked to the corporate financial system. In reviewing the overtime hours captured in each of these systems, it was identified that the MMS-ITX data for overtime hours and the MMS-SAP data for overtime hours does not reconcile to the corporate financial system for overtime hours. It was acknowledged by the Division that there are data integrity issues with the MMS work order forms because staff are sometimes not as conscientious when filling them out (as they are with the ELR/TR forms) because they are not the forms that trigger payments from Payroll.

Another data integrity issue identified with the MMS systems is that they do not capture data in the same manner. The MMS-ITX system captures the date the work was actually done, as well as the posting date, whereas with the MMS-SAP system, the posting date is entered and not the date the work was actually performed. This, along with the fact that there is a significant data entry backlog in MMS-ITX data (that will be addressed in 2006 with the approval of additional FTEs), makes it difficult to generate relevant reports on MMS data.

There are approximately 40 FTEs who do not record their work or time in either of the MMS systems. These employees submit ELR/TR forms directly to their Program Managers or Supervisors for approval, usually with little or no details as to the overtime worked, and are sent to Payroll for processing.

Management advised us that MMS-ITX was no longer being supported by its designer, and therefore the Branch was in the process of examining viable options for system replacement. Exploring opportunities for a system with one point of data entry may be advantageous in reducing data entry workload and improving data integrity.

3.2.6 Reporting and Monitoring

The MMS-ITX and MMS-SAP systems have reporting capabilities to generate predefined and ad hoc reports on work order data. However, the Data Entry Clerk for MMS-ITX does not have access to overtime reports through her User Profile and would have to request the reports from the CSOS Division. Also, the Manager of the Division does not have access to the MMS systems and would have to request reports through the MMS Data Entry Clerks.

As noted earlier, the MMS-ITX and MMS-SAP systems do not include overtime budget information and cannot generate reports to track and monitor the overtime budget.

In 2004, there was no regular or ongoing analysis of overtime expenditures. The monthly Branch Management Team (BMT) reports generated from the corporate financial system did not include a break out of overtime as a line item. The report

only provided expenditure information on the total compensation envelope. As a result, year to date expenditures of overtime were not being monitored or tracked for the Division.

The practice of the Division, as well as the Branch, has been to manage the total compensation envelope, and not the overtime line item.

3.2.7 Analysis of Overtime by Management

The Division acknowledged that they do not conduct regular or ongoing analysis of overtime expenditures. Given that overtime in 2004 was approximately 4.6% of the total compensation envelope, and the Division has not been over budget on their total compensation envelope, it has not been identified as an area that requires detailed analysis.

However, during the course of this audit, an analysis of overtime hours in MMS-ITX and MMS-SAP has identified data integrity issues with both MMS systems (neither reconcile to the corporate financial system), and data entry issues with the MMS-SAP system where the posting date is entered, not the date of the work.

RECOMMENDATION 4

That the Wastewater & Drainage Services Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

  Management Response

  Management agrees with this recommendation. Overtime will be specifically monitored and managed as part of the overall budget review process.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

  Management Response

  Management agrees with this recommendation. Overtime budget will be analysed during annual budgeting process and adjusted accordingly.

- **For employees using the MMS-ITX and MMS-SAP systems, ensure work orders and ELR/TR forms are matched at time of approval.**

Management Response

Management agrees with this recommendation. This will be incorporated into documented procedures.

- **For employees not using the MMS systems, ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

  Management Response

  Management agrees with this recommendation. This actually has already been directed to staff and will be incorporated into documented procedures.

- **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

  Management Response

  Management agrees with this recommendation. This will be incorporated into new procedures.

- **Complete and formalize the "Guidelines for Overtime Call-Outs". Include specific guidelines as to which situations need immediate response and which can be deferred.**

  Management Response

  Management agrees with this recommendation. This will be incorporated into documented procedures.

- **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users and reconcile the data to MMS-ITX and MMS-SAP to ensure high levels of data integrity.**

  Management Response

  Management agrees with this recommendation. Reconciliation of SAP Financial with MMS will form part of the monthly budget review.

- **Explore the opportunity to have one point of data entry with next MMS system to reduce data entry workload and data entry errors.**

  Management Response

  Management agrees with this recommendation. The ability to link the replacement for ITX MMS to the SAP payroll system will be requested in the new system

requirements. It should be noted that the responsibility for this project is with the Corporate IT group in effecting this system linkage.

3.3   Solid Waste Services

The Solid Waste Services Division provides landfill operations, scale house activities, composting operations, contract collection administration of six discreet zones, waste inspection and complaint investigation, and a full collection service for one of the six zones from an in-house bid award.

In 2004, the overtime budget for the Division was overspent by 33%, and overspent by 46% in 2005. These figures are summarized in the following table, along with the total compensation envelope. The Division did not manage to within its compensation envelope and was over budget 4% in 2004 and over budget 2% in 2005.

			2004	2005
SOLID WASTE SERVICES				
Overtime	Total Annual Budget		170,573	165,573
	Actual		226,806	242,508
	Variance		**133%**	**146%**
Compensation Envelope	Total Annual Budget		3,876,721	3,870,750
	Actual		4,038,859	3,931,858
	Variance		**104%**	**102%**

Figure 10:   Solid Waste Services –
Overtime and Compensation Envelope Expenditures: 2004-2005

There were a number of vacancies in 2004 that could not be filled due to the hiring freeze.

The Division identified that the three main drivers of overtime are as follows:

- Workload factors (in some cases seasonal peaks) to cover off work of vacant positions.
- Absenteeism due to sick leave and WSIB (the Manager feels that there was excessive sick leave in 2004 due to human resources issues and low morale, and that this situation is now improving).
- Leave (i.e., vacation leave, time off in lieu, and special leave).

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The Division is broken down into seven sections. The FTEs and the percentage of total actual overtime incurred for each section is outlined below.

Section	FTEs	2004 Overtime Expenditure	% of Actual Overtime
Manager's Office	3.0	857	0.4%
Disposal – Operations Branch	19.7	102,413	45.2%
Disposal – Household Special	2.8	4,982	2.2%
Disposal – Leaf & Yard Waste	1.0	14,423	6.4%
Collection – Garbage Collection	10.0	27,216	12.0%
Collection – Regular Garbage	31.0	76,915	33.9%
Collection – Waste Diversion	3.0	0	0.0%
Total	**70.5**	**226,806**	**100.0%**

Figure 11: Solid Waste Services – FTEs vs. Actual Overtime - 2004

3.3.1 Policies & Guidance

The Solid Waste Services Division advised us that they face many operational challenges that required staff to incur overtime. Some of these challenges include:

- Seasonal trends in collection. The Division is staffed on averages, acknowledging that there are peak and low periods of collection volumes throughout the year. Therefore, in the peak periods staff (Waste Collectors, Waste Inspectors, Equipment Operators, etc.) work overtime to meet the workload demand.
- Weather conditions. Extreme weather conditions at anytime in the year have an impact on collection (i.e., freezing rain, snow storms, floods, etc.) and overtime must be worked to ensure completion (collection and proper disposal of waste at the landfill site).
- Scale Operations lost one position with the introduction of new scale technology. However, there was an 18-month gap between the time the position was declared redundant and the technology was operational (it is still currently in the Pilot Phase).
- Landfill Operations has been short 2.5 Operators. Therefore, maintaining compliance with its Certificate of Approval means incurring a certain level of overtime to provide daily cover of landfill garbage.

However, the Division does not have any formal written policies or guidelines directing Program Managers and Supervisors on the appropriate use of overtime.

It should be noted that, compared to the other two Divisions reviewed, the majority of overtime for Solid Waste Services is not planned (with the exception of covering off for statutory holidays and Saturdays). The requirement to authorize overtime to respond to operational and compliance needs on a day-to-day basis increases the need for more formal delegation of authority and strong control and management of overtime.

3.3.2 Controlling Overtime

The Division's intended practice is that all overtime must be pre-authorized by the Program Managers or Supervisors. There are very few instances when employees would be required to work overtime without pre-authorization as the start time for overtime would immediately follow normal working hours. There is no longer an on-call requirement for the landfill site or after-hours response services. As stated above, the requirement to have overtime pre-authorized by a Program Manager or Supervisor is not formally documented or communicated.

In Waste Disposal Operations, the Supervisor or Program Manager authorizes overtime on a day-to-day basis determined by operational need. Up until April 2004, allocation of overtime was based on seniority (as was shift preferences and vacation). However, in mid-2004, the Manager revised the allocation process of overtime and it is now based on trying to ensure fairness across the board. Shifts rotate so that every 3rd week employees are required to work the late shift, which is when most of the overtime is incurred (this is the least desirable shift as most employees prefer to work the early shift). The high overtime time users in this area are typically those with specific skill sets or job positions (e.g., Leaf & Yard Waste Operator and Site Compliance Technician).

It would be good management practice to monitor high overtime users to ensure overtime is being appropriately allocated, employees are not violating the limits for overtime in the CUPE 503 agreement, and employees are not working excessive overtime hours.

Supervisors and Program Managers do not generate or have access to regular reports that track the overtime budget.

3.3.3 Planning

As with the other Divisions reviewed, the budget, including overtime, is based largely on historical budgeted amounts and adjustments are requested annually if there are significant changes to service levels or service delivery. However, the Division does not conduct a rigorous analysis each year to determine optimal FTE and overtime budget levels.

The overtime budget of $170,573 was the same in 2002, 2003, and 2004. It was reduced by $5,000 in 2005 during the higher-level draft budget review. The Division did not request the reduction. The Division also lost 5 FTEs during the Universal Program Review (UPR) in 2004.

For the Waste Disposal and Processing Section (the landfill site), where the majority of overtime is incurred, shift schedules and resource levels are not reviewed on a regular basis. As indicated above under "Policies and Guidance", there are operational challenges that impact this Section, however, closer monitoring of shift schedules and resource levels would lead to better management of overtime.

3.3.4 Roles and Responsibilities

The Manager of the Division is responsible for managing the Division's budget, including compensation and overtime. The Manager has given the Program Managers and Supervisors the responsibility of authorizing and approving overtime. However, there is no formal written delegation of this authority through policy or guideline documents.

Program Managers and Supervisors authorize and approve overtime to respond to operational needs, maintain a high level of customer service for waste collection, and maintain compliance with the Certificate of Approval at the landfill site. However, Program Managers and Supervisors do not have access to or use overtime budget information to track and monitor overtime expenditures on an ongoing basis. Supervisors are authorizing and approving overtime based on operational need without an awareness of the budget. Therefore, the approval of overtime should be more closely managed to the overtime budget. The Division did not manage its compensation envelope expenditures and were over budget 4% in 2004 and over budget 2% in 2005.

In reviewing the ELR/TR forms for Solid Waste Disposal, it was identified that it is not always the Program Managers and Supervisors who are signing off on overtime, as outlined below:

- In one case, an employee was authorizing, signing and submitting their own ELR/TR forms for the period March 2004 to October 2005. Self-authorized compensation for overtime and on-call totalled $27,500 in 2004 and $14,300 in 2005 for a total of approximately $41,800.
- In some cases, the Supervisor was filling out, signing, and authorizing ELR/TR forms on behalf of subordinate employees. The process requires employees to submit their own ELR/TR form for approval.

- In 2005, at least two Heavy Equipment Operators and one Labourer, who did not have formal delegated authority to act as supervisor, signed-off many ELR/TR forms.
- The leave form indicated that the employee was "on-call" during annual leave, sick leave, time off in lieu, and special leave.

Other issues noted with the ELR/TR forms for Solid Waste Disposal Operations include:

- One employee had a practice of incorrectly dating all of his ELR/TR forms.
- Many of the ELR/TR forms reviewed were not completed correctly – i.e., missing dates, missing signatures, and missing employee information.
- The Division incurred additional cost as employee worked overtime in a lower remunerated position but was compensated at his higher salary rate.
- Meal allowances were being authorized for regular recurring overtime. The CUPE 503 agreement states the meal allowances are to be authorized for unplanned overtime.

3.3.5 Recording of Overtime

For Solid Waste Disposal Operations:

It was identified that there is lack of consistency in the process for recording overtime at Solid Waste Disposal Operations. As outlined above in "Roles and Responsibilities", there is lack of control regarding the management of ELR/TR forms and the process does not comply with the established corporate practices, as outlined in the Integrated Business Solution (IBS) Employee Handbook on Leave Request/Time Reporting.

Microsoft Outlook is used to manage the daily operations of the Heavy Equipment Operators. This is essentially a logbook of which employees are off, which employees are working overtime, and records equipment issues. It cannot be used to manage overtime (and it was not intended to) as it does not have any reporting capabilities. ELR/TR forms are not matched to Microsoft Outlook when being signed off.

Essentially, there is no "check and balance" system used to ensure the overtime being claimed is verifiable as there is no mechanism for matching to an operational system that captures overtime data (i.e., MMS, logbooks, database, etc.). There is little or no detail provided on the forms as to the reasons for overtime being worked.

The majority of ELR/TR forms for Solid Waste Disposal Operations are faxed to Payroll, and the hard copies are retained in the office at the landfill site.

For Solid Waste Collection Operations:

The In-house Garbage Collection Group uses daily log/activity sheets which captures overtime. The log/activity sheets are inputted by a Data Entry Clerk into an Excel spreadsheet and printed off daily. The Section Manager reviews the log/activity sheets and summary spread sheet daily and completes and submits the ELR/TR forms for each of the Waste Collection Operators. Waste Collection Operators do not complete or even sign their ELR/TR forms before they are submitted to Payroll. Waste Collection Operators should be completing and signing all their ELR/TR forms and then submitting them to their Supervisor for approval.

The Contract Administration group uses daily log sheets completed by the Waste Management Inspectors detailing all their activities. These are detailed records as Inspectors are also Municipal By-law Officers and their records are considered legal documents. The Contract Coordinator receives the logbooks daily along with ELR/TR forms. The Contract Coordinator initials the overtime amount and then forwards the forms to the Program Manager for sign off.

All hard copies of the ELR/TR forms for Waste Collection Operations are forwarded to Payroll through internal mail.

3.3.6   Reporting and Monitoring

The Division does not generate regular reports from the corporate financial system or any other system to monitor and track overtime. However, the Program Manager, Collection Operations requests from the FSU an overtime report by employee at mid-year to review the payroll status of each employee. From the report, the Program Manager is able to identify high overtime users, although the reason for generating the report is as a check to ensure employees are being properly paid and that there are no significant payroll issues.

In 2004, there was no regular or ongoing analysis of overtime expenditures. The monthly Branch Management Team (BMT) reports generated from the corporate financial system did not include a break out of overtime as a line item. The report only provided expenditure information on the total compensation envelope. As a result, year to date expenditures of overtime was not being monitored or tracked for the Division.

The practice of the Division, as well as the Branch, has been to manage the total compensation envelope, and not the overtime line item.

During the course of this audit it was identified that, for at least one employee, the overtime hours incurred significantly exceeded what is allowed under the CUPE 503 agreement, which is 32 hours per pay period. In more than two pay periods, this employee's overtime hours exceeded 60 hours. Regular monitoring and

tracking of overtime would allow management to identify these occurrences.

3.3.7 Analysis of Overtime by Management

In 2004, overtime expenditures in Solid Waste Services Division were over budget 33%. The Division acknowledged that they do not conduct regular or ongoing analysis of overtime expenditures. However, given the over expenditures in Solid Waste Disposal, the Division would benefit from increased review and monitoring of overtime as a means of quantifying the drivers of overtime, and develop strategies to reduce levels of overtime.

In Solid Waste Collection, Waste Collectors work and are paid for four 10-hour days per week. The 10-hour work day, four days a week was put in the contract because the average collection route takes 5 hours to complete (including collection, disposal, and vehicle inspection, cleaning and fuelling). This work schedule was deemed more cost effective than the typical 8-hour day, five days a week as more overtime would have to be paid out on a daily basis. This also allows for Saturdays to be worked at regular pay instead of overtime pay.

However, it was identified by the Division that during non-peak months for collection (typically December to March), Waste Collectors typically leave (on average) one hour early 50% of the time. The Division does not track this non-productive time and review it at the end of the contract to determine if more reflective work schedule should be negotiated in the contract during non-peak months.

RECOMMENDATION 5

That the Solid Waste Services Division of the Utility Services Branch:

- **Monitor and manage overtime within the limits of the established overtime budget, independently from the compensation envelope.**

  Management Response

  Management agrees with this recommendation. The Branch has requested an adjustment to the overtime line item and regular reporting of both compensation and overtime line items for management review.

- **Conduct a more detailed review of the overtime budget annually, in conjunction with FTE levels and service levels, to reflect anticipated/optimum overtime expenditures.**

Management Response

Management agrees with this recommendation. The work schedule review was undertaken in 2005 and a new rotating start time has been implemented as of August 2005 to attempt to optimize resources to operational demands from incoming waste. This process will be reviewed when the staff compliment is filled.

- **Review resource levels at Landfill Operations and identify more optimal work schedules to reduce levels of overtime.**

Management Response

Works schedules were revised in 2005 with rotating start times to ensure optimal use of staff. Solid Waste Disposal has yet to be fully staffed which affects the full effectiveness of the work schedule.

- **For Landfill Operations, implement more rigorous processes and controls for authorizing and approving overtime.**

Management Response

Management have already implemented written instruction to Supervisors and Program Managers regarding authorization for sign off of overtime. The Manager is signing off on all overtime for the Solid Waste Disposal Section until the Program Manager position is filled.

- **Ensure corporate standards are met with regard to completing and submitting ELR/TR forms.**

Management Response

Management agrees with this recommendation. Solid Waste Disposal staff have already received a training refresher session on the completion of ELR/TR forms.

- **Ensure sufficient detail is included on the ELR/TR form as to the overtime worked.**

- **Management Response**

   Management agrees with this recommendation. ELR/TR forms are now being completed with the rationale for overtime.

- **Formalize the delegation of authority to the appropriate operational level that may authorize and approve overtime.**

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Management Response

Management agrees with this recommendation. A formal documented process will be developed detailing delegated authority including staff in an "acting" role.

- **Review corporate financial system data on overtime hours monthly as a mechanism to track high overtime users. For Waste Collection Operations, reconcile the data to the Excel database ensure high levels of data integrity.**

Management Response

Management agrees with this recommendation. A process will be put into effect in 2006.

- **Consider revising practice of letting Waste Collectors leave early.**

Management Response

The In-house Waste Collection Group was created to prepare a competitive bid for solid waste collection with an In-house Bid Team in a Public/Private Competitive Service Bid in 1998. The financial success of the Public Sector In-house Waste Collection Group in a competitive waste management industry is attributed to management's ability to retain good employees and provide efficient and effective services. The Solid Waste Administrative Services Collection Division has delivered over $1.7 million dollars of accumulated additional savings over the past 7 years of service provision. Waste Collection staff have provided a tendered bid on the basis of a staff wage rate that is linked to the waste industry standards, rather than the higher CUPE 503 Heavy Equipment Operator wage rates. Our working conditions, effectiveness, and reduced costs in delivery service have provided efficiency and value to the residents of Ottawa throughout this service delivery timeframe.

Waste Collection Services operates consistent with the private sector and industry practices of ensuring that the team completes the entire pick-up zone each day. If a crew completes their route early, they are reassigned to other locations until the entire daily route of solid waste and recycling pick-up is complete.

The existing procedures have not generated any additional overtime to complete the daily solid waste pick-up.

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4   Real Property Asset Management Branch – Corporate Services

The Real Property Asset Management Branch (RPAM) is responsible for all of the City's structures, furniture and related equipment, as well as other real property. The Branch provides six service areas including: strategic planning, comprehensive asset management, property management, real estate services, design & construction services; and, security services. The 2004 estimated FTE level was 552.

The Real Property Asset Management Branch (RPAM) 2004 overall overtime budget was in the amount of $1,488,906 and actual incurred overtime was $1,269,956. This represents an under expenditure of 15%.

For 2005, total annual overtime budget was $1,521,906 and actual incurred was $1,309,260 which represents and under expenditure of 14%.

For 2004 and 2005, Real Property Asset Management Branch (RPAM) managed their overtime expenditures to remain close to their budget. Overall the Branch was within budget.

The details of overtime and compensation envelope expenditures and budgets for 2002 to 2005 are outlined in the following table.

		2002	2003	2004	2005
REAL PROPERTY ASSET MANAGEMENT					
Overtime	Budget	537,652	1,025,282	1,488,906	1,521,906
	Actual	1,699,765	1,434,533	1,269,956	1,309,260
	Variance	**316%**	**140%**	**85%**	**86%**
Compensation	Budget	34,646,714	38,695,331	40,299,642	45,059,377
Envelope	Actual	34,272,893	37,606,397	43,632,364	45,172,879
	Variance	**99%**	**97%**	**108%**	**100%**

Figure 12: Real Property Asset Management -
Overtime and Compensation Envelope Expenditures: 2002-2005

Our review covered two Divisions within one of the five service areas: Program Properties and Venture Properties management within the Facilities and Property Management area.

4.1 Program Properties Division

This Division delivers property management services for over 981 City of Ottawa buildings and these services are delivered through a strategic mix of internal and external resources by four operational districts; Central, East, South, and West.

Management indicated that overtime is generally driven by the following factors: unforeseen emergencies, statutory holidays, and absenteeism.

		2004	2005
RPAM - PROGRAM PROPERTIES DIVISION			
Overtime	Total Annual Budget	699,730	699,730
	Actual	611,258	606,943
	Variance	**87%**	**87%**
Compensation Envelope	Total Annual Budget	18,835,963	21,999,295
	Actual	21,015,281	22,022,037
	Variance	**112%**	**100%**

Figure 13: Program Properties Division -
Overtime and Compensation Envelope Expenditures: 2004-2005

4.1.1 Policies and Guidance

Formal written policies and guidance for managers to decide when overtime can be incurred have not been developed; however, management indicated that they have developed four criteria for on-call supervisors, to use when determining whether they should incur the overtime. These criteria, which have been verbally communicated to on-call supervisors, include: urgent, emergency, routine, and differ.

4.1.2 Controlling Overtime

Supervisors verbally pre-authorize overtime as such, no documentation is maintained to detail that the pre-authorization was actually performed.

An employee's immediate supervisor is responsible for post-authorization of overtime, which is performed by signing the employee's Maintenance Activity Sheet. There is no requirement for managers to perform any post-authorization activities.

Management stated that when an employee works on overtime caused by an on-call incident the Portfolio Managers have the ability to review the incident reports to ensure that the overtime hours were reasonable for the nature of the call. However, during our fieldwork we noted that the Portfolio Managers do not review the incident reports on a regular basis.

4.1.3 Planning

Management informed us that their budget for overtime is 3.5% of the compensation budget. They also indicated that they are trying to proactively plan their training, annual leave, and seasonal shifts in order to try to minimize the overtime usage.

4.1.4 Roles and Responsibilities

Employee's immediate supervisor is responsible for authorizing the payment or banking of overtime.

Monitoring is to be done at the Portfolio Manager level. However, there is limited follow-up by management to ensure the Portfolio Managers are in fact performing the monitoring activities.

4.1.5 Recording of Overtime

For the recording of on-call overtime an employee records the details of the incident on an "On-Call Incident Report" and this is sent to the service desk. Management advised us that these reports are not always filled out properly with the start and end times. As such, the Maintenance Planner cannot always determine the time that was required to respond to the various types of calls. Management also does not reconcile the Maintenance Activity Sheet to the incident reports to identify any discrepancies or errors in the information.

Overtime is recorded in the corporate financial system through the input from the daily Maintenance Activity Sheet that is completed by the employee and signed by their immediate supervisor. On the form, the employee indicates whether they would like the overtime to be paid or banked for time off in lieu. However, there is no requirement for an employee to provide and record the justification for the overtime incurred.

4.1.6 Reporting and Monitoring

Maintenance Planners produce monthly management reports, generated from Access, on the number of calls by cause, facility, and by on-call staff for each of the four districts. Management informed us that this information is reviewed and assessed to allow management to address problematic areas. They believe that by performing this analysis of when on-call resources should be accessed will help minimize the usage of overtime. However, they indicated that the individual reports are not monitored to ensure the criteria for initiating overtime is followed.

Currently, there is no requirement to document the reasons for the overtime usage as such; the reporting system cannot provide details on the causes of the usage of overtime. Therefore, management could not determine if the majority of the overtime usage was due to emergency situations, staff replacement, sick leave or other causes.

4.1.7 Analysis of Overtime by Management

Management indicated that they have not performed any cost benefit analysis relating to overtime, utilized any benchmarking techniques nor have they analyzed any correlation between sick leave and other leave in relationship to the occurrence of overtime.

We also enquired of management about specific individuals with high overtime amounts and they indicated regular monitoring for specific overtime earners is not required. Although management have access to the overtime list by individual, management has left it up to the discretion of the Portfolio Managers to monitor overtime by individual during the course of the year and indicated that a regular review of individuals with high overtime amounts is not being done.

In 2004, Program Properties Division managed their overtime expenditures to remain within budget. Although actual overtime expenditures were 13% under budget the Division's compensation envelope was overspent by 12%. In 2005, overtime expenditures were under spent by 13% and the Division was within its compensation envelope. Although Program Properties Division is operating within overtime budgets, there are areas where improvements to the management and monitoring of overtime could be made and these are outlined below.

RECOMMENDATION 6

In order to better monitor and manage overtime, Real Property Asset Management, Program Properties Division, should:

- **Continue its efforts to monitor and manage overtime within the limits of their established overtime budget.**

- **Require that staff provide a rationale and justification on the daily Maintenance Activity Sheets as to the reason for any overtime claimed.**

Management Response

The comprehensive review will examine the best reporting methods in each service. The input of the Maintenance Activity Sheets is driven numerically with fixed codes assigned to the leave types. Incidence reporting parallels the time sheet process whereby a "reason" is documented, approved, and reported with respect to overtime and on call usage. Continued emphasis will be placed on this information source for the purposes of overtime management.

4.2 Venture Properties

Venture Properties Division delivers property management service for particular City of Ottawa properties for example: Lansdowne Park, Corporate Campus and Technical Services, Public Market, OC Transpo Facility, Utility properties etc. In addition, the Division is to develop business opportunities to ensure venture facilities are operating at break-even on a short-term basis and working towards an acceptable return on investment.

Management identified the drivers of overtime include: workload factors, emergency calls, and absenteeism.

		2004	2005
RPAM - VENTURE PROPERTIES			
Overtime	Total Annual Budget	741,200	776,200
	Actual	638,574	689,109
	Variance	86%	89%
Compensation Envelope	Total Annual Budget	13,639,488	15,130,033
	Actual	14,107,500	15,324,283
	Variance	103%	101%

Figure 14: Venture Properties
Overtime and Compensation Envelope Expenditures: 2004-2005

4.2.1 Policies & Guidance

Formal written policies and guidance for managers to decide when overtime can be incurred have not been developed; however they indicated that they adhere to the collective agreement.

4.2.2 Controlling Overtime

Management indicated that supervisors verbally pre-authorize the usage of overtime and as such, documentation of the pre-authorization is not maintained.

Employee's immediate supervisor is responsible for post-authorization of overtime, which is performed by signing the employee's Maintenance Activity Sheet. There is no requirement for managers to perform any post-authorization activities.

In one instance we found that a supervisor used a stamp as opposed to affixing his signature on the Daily Maintenance Activity Sheets.

4.2.2 Planning

Management informed us that their budget for overtime is based on historical data. The budget is predetermined and the line items are not adjusted to reflect the forecasted cost.

4.2.3 Roles and Responsibilities

Employee's immediate supervisor is responsible for authorizing the payment of overtime.

Monitoring is to be done at the Portfolio Manager level. However, there is limited follow-up by management to ensure the Portfolio Managers are in fact performing the monitoring activities.

4.2.5 Recording of Overtime

Overtime is recorded in corporate financial system through the input from the daily Maintenance Activity Sheet that is completed by the employee and signed by their immediate supervisor. On the form, the employee indicates whether they would like the overtime to be paid or banked for time off in lieu.

4.2.6 Reporting and Monitoring

As the Division does not have a requirement at present to provide justification for overtime on the Daily Maintenance Activity Sheets, it is uncertain as to how managers can assess the validity of the overtime.

The corporate financial system report that is used for monitoring purposes is the unspent balance report. They indicated that they would drill-down within this report to investigate fluctuations. The report showing the cumulative total of overtime for each employee is not reviewed on a regular basis. Therefore, regular monitoring of high overtime users is not performed.

4.2.7 Analysis of Overtime by Management

Management indicated that they have not performed any cost benefit analysis relating to overtime, utilized any benchmarking techniques nor have they analyzed any correlation between sick leave and other leave in relationship to the occurrence of overtime. During our discussions, it was noted that not all managers consider managing overtime a priority. For example, management indicated that supervisors' paperwork and maintenance work is completed regularly through the usage of overtime.

We also enquired of management about specific individuals with high overtime amounts but they could only recall that they had investigated one individual last year and indicated to us that most of the pay is not related to overtime, but is in fact a retro active payment from a previous position. It was noted that management did not maintain an overtime list by individual and does not monitor overtime by individual during the course of the year.

In 2004, Venture Properties managed their overtime expenditures to remain within budget. Although actual overtime expenditures were 14% under budget the Division compensation envelope was overspent by 3%. In 2005 the actual overtime expenditures were 11% under budget and compensation envelope was 1% overspent. Although Venture Properties is operating within its overtime budget, there are areas where improvements to the management and monitoring of overtime could be made and these are outlined below.

RECOMMENDATION 7

In order to better monitor and manage overtime, Real Property Asset Management Branch, Venture Property, should:

- **Require that staff provide a rationale and justification on the daily Maintenance Activity Sheets as to the reason for any overtime claimed.**

- **Require that staff (OC Transpo Facility) sign the daily Maintenance Activity Sheets and that any use of signature stamp be stopped.**

Management Response

Management agrees with this recommendation. The two operational supervisors will be directed to process and approve overtime paperwork using their signature versus a signature stamp. Follow up by the data input personnel to monitor compliance will commence immediately.

Management Comment -- Real Property Asset Management - with respect to Corporate Security overtime

Transit operations as part of the 2004 budget, identified under the Opportunity Log Business Process Review (item TW5.2) a savings of $260,000 and a reduction of 4.5 FTE's under the heading "Initiate alternative security services of city facilities used by Transit Services". This required that Corporate Security take over this function. This initiative was approved by City Council. The reduction in FTE's came into effect in June of 2004. Corporate Security received Bridge Financing to cover the 6 months of cost for the 4.5 staff being let go. The costs included regular compensation and any overtime that they incurred. This is where the $12,000 comes from. The bottom line is that Corporate Security would not have incurred this expense (which was covered by bridge financing) except for this transfer. Since this change, there has not been any overtime charges in Corporate Security (and there will not be as all the staff are MPE).

5   Payroll Division – Corporate Services

As part of the Overtime Audit in the Utility Services Branch, a sample of Exception Leave Request/Time Reporting forms (ELR/TR) from Wastewater & Drainage Services Division and Solid Waste Service Division was requested from the Payroll Division. The judgmental sample of ELR/TR forms covered two pay periods in November 2004 for specific individuals. The sample is not statistically representative and therefore the issues identified through our limited review may not necessarily represent Payroll Division's data entry processes. The Office of the Auditor General will consider undertaking a more detailed review of time reporting practices during 2006.

5.1   Payroll Background

In 2001, through Amalgamation, the City of Ottawa inherited various payroll systems. To streamline its operational requirements, the corporation made the decision to standardize human resources (HR) management through the implementation of a single corporate HR/Payroll System. In early 2004, the Integrated Business Solution (IBS) project group communicated the roll out of the third and last employee group to the new HR/Payroll System SAP 4.6C. The third group, which included CUPE 503 inside/outside, CIPP management, non-union, etc., was rolled-out in May 2004. As part of this last release, IBS developed and distributed an Employee Handbook to provide guidance and clarification on process requirements (i.e., changes to codes, forms, signing requirement, signing authorities, etc.). One of the major changes was a move to exception leave reporting, and thus the use of the ELR/TR for a large majority of City staff who were used to a regular time reporting system in order to be paid.

5.2   Observations and Findings

In the Solid Waste Services Division, 23 ELR/TR forms for six high overtime earners were reviewed. The review identified significant data integrity and processing issues, which contravened both the IBS Employee Handbook and good management practices, and that were not adequately addressed by Payroll Division, including:

- **Employee self-authorization:** In one case, an employee was authorizing, signing, and submitting his own ELR/TR forms for a 20 month period from March 2004 to October 2005. Self-authorized compensation for overtime and on-call totalled $27,500 in 2004 and $14,300 in 2005 for a total of approximately $41,800.

- **Submitting ELR/TR forms on behalf of subordinates:** Two supervisors were filling out, signing, and authorizing ELR/TR forms on behalf of subordinate employees. The ELR/TR forms were being submitted without the signature of the employee.

- **Payroll Clerks developing "work-arounds" for information not accepted by the system:** In the case of one employee, many ELR/TR forms were submitted that included leave (annual leave, special leave, time off in lieu, and sick leave) dated on the same day as on-call pay was being claimed. The system was designed to reject the claiming of on-call hours when an employee is on leave. However, the Data Entry Clerk(s) developed a "work-around" by entering the on-call time on different dates than stated on the ELR/TR form to allow the data to be entered into the system.

- **Incomplete ELR/TR forms:** In some cases, ELR/TR forms were processed with missing dates or signatures.

Our review of ELR/TR forms was expanded to include forms retained at the landfill site for 2004 and 2005. From these supplementary forms, we found the following additional issues:

- **Delegated signing authorities:** A significant number of ELR/TR forms processed by Payroll had more than one signing authority for an individual employee (i.e., forms submitted by the same employee on different dates did not have consistent Supervisor's signatures). Therefore, in some cases, co-workers at the same operational level were authorizing forms for fellow employees. In addition, we observed instances where two additional employees authorized, signed and submitted their own ELR/TR forms during 2005. This contravenes the published IBS Exception Leave Request and Time Reporting Employee Handbook that states, "Time entry forms are to be filled out by the employee and approved by their direct supervisor."

In the Wastewater & Drainage Division, 16 ELR/TR forms for six high overtime earners were reviewed. The review identified:

- **Delegated signing authorities:** Overtime for four of the six employees reviewed (10 ELR/TR forms) had been authorized by staff that were at a lower operational level than indicated by management.

The primary responsibility for properly completing and submitting ELR/TR forms is with the employee and the Supervisor authorizing the form. However, it is also the responsibility of the Payroll Division to ensure controls are in place to ensure that forms that do not comply with the corporate guidelines and good management practices are not processed.

Based on our limited sample, we found issues that are considered significant and warrant the attention of management to ensure all processing of ELR/TR forms comply with the established corporate guidelines and good management practices.

RECOMMENDATION 8

That Payroll Division ensure appropriate controls are in place for processing of all ELR/TR forms including:

- **Ensure appropriate authorization is present.**

Management Response

Although there was a limited audit sample, Payroll has and will be taking action to expand its control procedures. The time/leave forms have been revised to incorporate a designated area where authorizing supervisors or managers will print their name and title. This will aid in the identification of signatures. In addition, Payroll will prepare a current list of managers and supervisors who are authorized to sign time/leave forms as a further control measure.

- **Ensure incomplete, or ELR/TR forms with errors, are not accepted and returned to the Client Group for complete information before processing.**

Management Response

In the past, an informal process was used to return timesheets that were not complete. Although the audit found few forms with missing information and some of that information was not significant (eg. missing the date of signature of the employee), adjustments will be made in payroll procedures. In the future, a more formal approach will be implemented. Forms that are not completed properly will be returned to the relevant area for correction with an explanation of why the form is being returned. Due to the volume of forms (Payroll processes approximately 400,000 lines of data entry per year), minor changes will continue to be made further to telephone conversations with the authorized supervisor / manager.

- **In cases where the system will not accept the data being entered (e.g., on-call time being claimed on the same dates as annual leave, IPP, or time off in lieu), Data Entry Clerks should not create "work-arounds" by entering the time on different dates.**

Management Response

There are situations where on-call pay may be claimed while an employee is on leave. This would include situations where an employee has a specific skill set or emergency situations. As the system does not currently allow the entry of this time, it is

necessary to do "work-arounds". In the future, the City will investigate the feasibility of adjusting the pay system to allow the entry of this legitimate time.

Payroll Division – General Management Comment

Management agrees that the sample of ELR/TR forms used in this audit was not statistically representative and therefore no reliable conclusions can be drawn based on this sample regarding Payroll's data entry processes.

6 Follow-up, 2002 Audit of Overtime Cost Recommendations

The former Audit and Consulting Services Branch presented in 2002 its Audit of Overtime Costs. This 2002 report was received by Council October 9, 2002. The follow-up on the status of the audit recommendations had not previously been conducted by the former Audit and Consulting Services Branch.

The Office of the Auditor General asked management to report on their progress in implementing the 2002 audit recommendations. The actions taken, as reported by Management, on implementing the 2002 recommendation are detailed in Appendix 1. Management generally reported that they had implemented the recommendations. However, our review of overtime in the areas that were covered by the 2002 Audit of Overtime, indicate that in all areas, spending on overtime was well over budget in 2004. Therefore the implementations made by Management did not foster the changes anticipated by Council. These areas were also over budget in 2005. The overtime expenditure and budgets for the areas covered by the 2002 audit are outlined in the table below.

Overtime Costs Compared to Compensation Envelope 2002 to 2005 Areas Covered by the 2002 Audit of Overtime **			2002	2003	2004	2005
TRANSIT SERVICES						
Overtime	Budget		5,282,385	4,685,779	5,284,605	6,464,075
	Actual		8,747,905	10,789,916	9,475,139	10,441,676
	Variance		166%	230%	179%	162%
Compensation	Budget		92,945,690	98,835,819	105,031,811	115,335,675
Envelope	Actual		94,286,503	103,908,344	107,046,669	112,189,096
	Variance		101%	105%	102%	97%
FLEET MAINTENANCE						
Overtime	Budget		1,993,428	1,948,428	1,948,428	1,448,428
	Actual		2,276,395	3,003,734	2,997,413	3,636,761
	Variance		114%	154%	154%	251%
Compensation	Budget		31,841,705	34,802,893	37,643,138	39,426,529
Envelope	Actual		30,495,884	34,818,013	37,241,966	39,072,564
	Variance		96%	100%	99%	99%

Figure 15: Follow-up - 2002 Audit of Overtime –
Overtime and Compensation Envelope Expenditures 2002-2005

Overtime Costs Compared to Compensation Envelope 2002 to 2005
Areas Covered by the 2002 Audit of Overtime *

		2002	2003	2004	2005
PARAMEDIC SERVICES					
Overtime	Budget	2,079,474	2,231,116	1,858,942	1,774,363
	Actual	1,850,664	2,092,495	2,684,955	2,300,359
	Variance	89%	94%	144%	130%
Compensation	Budget	23,216,659	30,070,544	32,189,310	35,179,774
Envelope	Actual	21,037,734	29,188,689	32,927,267	34,850,919
	Variance	91%	97%	102%	99%
SURFACE OPERATIONS					
Overtime	Budget	1,917,998	2,183,407	2,048,015	2,848,100
	Actual	3,950,724	3,402,917	3,767,516	3,258,093
	Variance	206%	156%	184%	114%
Compensation	Budget	37,338,270	39,612,338	42,294,729	45,988,783
Envelope	Actual	41,398,443	44,581,978	46,643,533	47,439,514
	Variance	111%	113%	110%	103%
TOTAL (4 AREAS)					
Overtime	**Budget**	**11,273,285**	**11,048,730**	**11,139,990**	**12,534,966**
	Actual	**16,825,688**	**19,289,062**	**18,925,023**	**19,636,889**
	Variance	**149%**	**175%**	**170%**	**157%**
Compensation	**Budget**	**185,342,324**	**203,321,594**	**217,158,988**	**235,930,761**
Envelope	**Actual**	**187,218,564**	**212,497,024**	**223,859,435**	**233,552,093**
	Variance	**101%**	**105%**	**103%**	**99%**

** Audit conducted by the former Audit and Consulting Services Branch

Figure 15: (Cont'd) Follow-up - 2002 Audit of Overtime –
Overtime and Compensation Envelope Expenditures 2002-2005

As noted above, for 2004, the areas had the following overtime variances:

- Transit Services.. 79% over budget
- Paramedic Services .... 44% over budget
- Surface Operations.................................... 84% over budget
- Fleet Maintenance .... 54% over budget

The total 2004 budget for these areas was $11.1 million and actual spending was $18.9 million, which represents an overspending of $7.8 million or 70% over budgets. In 2005, total overtime expenditures were $19.6 million, which was $7.1 million or 57% over the established budget.

Despite management assertion that they have implemented the recommendations of the 2002 audit, their efforts have not lead to overtime being managed within the limits of established budgets.

We found in some areas, such as absenteeism, that Management was unable to successfully implement measures to reduce overtime. For example, in Transit Services, Management agreed to target reducing average absenteeism by two days from the 2001 level of 16.4 days per employee, per annum. However, in 2004 absenteeism remained at 16.5 days. The results were similar in Fleet Maintenance where management agreed to target reducing average absenteeism by two days from the 2001 level of 12.2 days per employee, per annum. However, in 2004, absenteeism actually increased to 13.4 days.

Given that all the areas covered by the 2002 audit continue to incur overtime in excess of their budget limits, Management in these areas should monitor and manage overtime within the limits of established budgets.

RECOMMENDATION 9

For the areas covered in the 2002 Audit of Overtime Costs (Transit Services, Fleet Maintenance, Paramedic Services and Surface Operations), Management should monitor and manage overtime expenditures within the limits of their established budgets.

Management Response

Management agrees with this recommendation. Management acknowledges that the budgeting for overtime has been flawed, and that overtime budgets should have been revised to more closely reflect actual requirements.

Management has taken aggressive attendance management measures in each of these service areas, as indicated by the Auditor General, and will continue to monitor and

manage attendance to help keep overtime as low as possible. It should be noted, however, that these are 24/7 on the street services and overtime will continue to be a necessary part of operations for a number of reasons: overtime must be paid to those who provide service on statutory holidays and to those who respond to emergency/weather-related situations. These are services that must be provided so, when the City has hiring freezes in effect the service is provided by existing staff working overtime. In some cases, as in Paramedic Services and Transit Services, overtime is accrued for contracted services that the City receives revenues for. In Transit Services, the 2004 KPMG Transit Operator Establishment Review stated that within limits (total work hours), overtime is more cost effective than straight time for the City, because benefits are not paid on overtime wages.

The comprehensive review will help identify the optimal levels of overtime in these areas and budgets will reflect those levels.

7   Corporate-Wide Recommendations

As a result of findings in this audit, we are able to make some general recommendations that would apply on a corporate-wide basis. These recommendations are as follows:

RECOMMENDATION 10

Departments should better monitor and manage overtime within the limits of their established overtime budget. This would include modification of shifts to address expected workload, better management of absenteeism, and an active budget review process.

Management Response

Management agrees with this recommendation.

Management will establish clear protocols around the specific criteria for overtime on a service-by-service basis, and this will be part of the comprehensive review. Overtime budgets will continue to be managed as part of the overall compensation budget, rather than as a single line item. Overtime is generally not viewed in isolation of the overall compensation budget and it is management's view that it should not be viewed in isolation given both the 24/7 nature of many City services, the unpredictability of some significant service drivers (i.e. weather conditions, infrastructure failure like water mains or traffic lights, etc) and the hiring freezes that have been put in place over the past three years. All of these factors are managed within the total compensation envelope to continue to provide front-line services where and when they are needed.

RECOMMENDATION 11

Departments should utilize the corporate financial system's full functionalities to monitor, control, and reduce total overtime as well as individual employee overtime and that where required, staff be provided with additional training. In addition, that any use or maintenance of sub-systems other than the corporate financial system should be discontinued. In order to ensure the corporate financial system's information accuracy, Departments should address the time lapse of employees submitting the required leave/overtime forms.

Management Response

Management agrees with the intent of this recommendation.

This will be part of the comprehensive review. Given the number of different facilities, however, management expects that there will always be some time lapse in many services. The review will address methods of minimizing that lapse.

RECOMMENDATION 12

That Employee Services develop clear policies and guidelines regarding the management of overtime.

Management Response

Management agrees with the intent of this recommendation.

However, management believes most policies and guidelines will be developed on a service-by-service basis rather than a corporate basis given the number of operational variables between branches eg. service commitments, staffing and budget levels and applicable collective agreements.

Overall Comments – Corporate-wide

Management agrees with the overall spirit of the Auditor General's recommendations, although a number of the specific recommendations do not recognize the constraints of the City environment, particularly given the 24/7 nature of the front-line services examined in the audit and the requirements to manage with existing collective agreements. As the Auditor General Report states: *" in any organization, it is essential that overtime be managed in the most economical way. As such, the utilization of overtime is a fine balance between meeting service delivery needs, addressing appropriate staffing levels and using staff on overtime. Therefore, for every service line, there is an optimization point between the above three components. "*

Finding this optimal level must be done on a service-by-service basis given the significant differences among the services and the differing requirements of each service. While Management has specific issues with some of the individual findings and recommendations, Management agrees that there has not been a focused, corporate effort to manage overtime as effectively as possible. There is currently no consistent definition of the difference between discretionary and non-discretionary overtime in many services. Management agrees that clarity needs to be established in each service without delay keeping in mind our obligations under all of our collective agreements. In the first few years following amalgamation, when many services were understaffed and overtime was absolutely necessary to be able to fulfill our service obligations, management's focus was on stabilizing the organization and putting the basic Human Resources and financial systems in place. The City Manager will now undertake a comprehensive review of the management and control of overtime across the City. This review will include conducting a systematic analysis by service of alternative approaches to minimize overtime, including adjusting current hours of work, using part-time or temporary staff and improving scheduling, reviewing existing policies and procedures for overtime and evaluating the need for better management reports on overtime.

Management does not agree that overtime should be dealt with in isolation of the overall compensation budget. Overtime budgets should more accurately reflect actual spending, but continue to be managed as part of the total compensation envelope given both the 24/7 nature of many City services, the unpredictability of some significant service drivers (i.e. weather conditions, infrastructure failure like water mains or traffic lights, etc) and the hiring freezes that have been put in place over the past three years. All of these factors need to be managed within the total compensation envelope to continue to provide front-line services where and when they are needed.

Council has set a target for reduced overtime expenditures of $3.5 million in the 2006 Budget. Management will identify savings towards that target through the review described above.

8   Acknowledgements

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

Appendix 1 – Management Actions Taken Relating to Recommendations in 2002 Audit of Overtime Costs

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
FLEET SERVICES BRANCH			
Management of FTEs	That Fleet Management review staffing requirements and staff to the approved complement level *Management, with the cooperation of Human Resources, will staff to the approved complement level*	To the extent possible manning has been to authorize levels. Hiring takes place once or twice a year for technicians and attendants.	100%
Absenteeism	That Fleet Management target a one or two-day reduction in absenteeism. That Management consider reinstating the 1999 absenteeism policy, which required medical certificates for most absences *Management has implemented the City's Attendance Management Program, which is designed to reduce absenteeism and will consider reinstating the 1999 Absenteeism Policy, which required medical certificate for most absences.*	AIP has been followed with limited success. Timeliness of information and inconsistent application have resulted in several false starts to the program. Recent re-alignment of management responsibilities in Transit Fleet Maintenance should aid in applying the program more consistently and effectively.	50%
SURFACE OPERATIONS			
Weekend Shifts in Central Area, Winter Operations	That, given the 24-hour, 7-day nature of Surface Operations, Management review scheduling and adjust it where possible, to reduce the amount of overtime built into the booking processes *Management has balanced the use of overtime to the best of its ability within the confines of the collective agreements. Management regularly reviews scheduling requirements and is willing to consider other options and adjust scheduling if feasible. The issue of defining hours of work to better reflect the 24-7 nature of operations is currently being reviewed as part of the collective bargaining process*	Management has implemented the following items: 1. Premiums and overtime provisions of the new collective agreement have been implemented across the Branch. 2. Application of Premiums associated with the Weekend Shift Overtime will be going before an arbitrator for settlement 3. Management receives and reviews monthly Financial Reports that include overtime costs.	100% on item 1& 3. Item 2 is dependent on the Arbitration hearing date.

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
TRANSIT SERVICES			
Overtime Distribution and Statistics	That Transit Management better enforce the existing 120-hour bi-weekly cap and that controls be developed to ensure this limit is not exceeded *Management agrees and has implemented a manual system to monitor and enforce the 120-hour bi-weekly cap within the provisions of the collective agreement*	Enforcement of the 120-hour bi-weekly cap remains in place and individual operator caps are reviewed daily. Enforcement has been a factor in reducing individual operator overtime resulting in a shift in the distribution to fewer hours and lower compensation totals while reducing the number of operators who worked excessive overtime. Additional enhancements are being sought through the Collective Bargaining process currently underway.	100%
	That Transit Management establish an overtime budget based on business requirements within the compensation funding envelope and ensure actual costs are within budget *Management agrees. There is an operational requirement for overtime of approximately 5% of service plus an allowance for contractual overtime. Based on 2001 data, a reasonable target would have been $5,000,0000 in conjunction with the successful implementation of the other recommendations in the report*	5% of service plus contractual allowance for overtime is still considered a minimum requirement. As a result of service reinstatements and growth in 2005, the operator establishment was appropriately increased to reflect the service increases approved. The Department completed a comprehensive establishment review (KPMG Study) to assist in identifying the appropriate ratio between service hours/labour force/productivity expectations/redundancy factors and appropriate overtime standards and service reliability targets.	100%
Service Reliability	That Transit Management review the minimum service reliability level and document the additional costs of maintaining this level of reliability with the impact on ridership and its financial impact *Service reliability is one of the, if not the most important considerations of transit users, as evidenced by numerous user opinion surveys. Management also recognizes that its mandate is to provide an effective, reliable public transit service within the budget approved by City Council for this service. Management will review the relationship between achieving established service reliability standards and overtime costs*	The Department completed a review of service design guidelines and service reliability targets and a report on Transit System Management Policies and a Transit Service and Fare Policy manual were presented to the Transportation Committee on 1 June 2005 and approved by Council with amendments on 22 June 2005. The review considered the recommendations of the 1998 comprehensive review of OC Transpo, the Ottawa 2020 and Official Plan directions approved by Council and compared standards of other like Transit systems.	100%
Extensions	That Transit Management significantly reduce the use of extensions for overloads in non-essential cases *Management agrees and has significantly reduced the use of extensions. Management will develop and implement guidelines for the use of extension.*	The use of extensions remains tightly controlled by the operational superintendent and guidelines have been issued. For efficiency and consistency, frequency and type of service, first/last trips and load factors are carefully monitored. Overtime hours due to extensions have been reduced by 87% from 47,910 in 2001 to a projected 6,000 in 2005.	100%

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
	That Transit Management develop and implement clear guidelines for the use of extensions to provide supervisors with guidance as to when an extension should be authorized *See above*	See above	100%
Contractual Overtime and Staffing Below Approved Establishment	That Transit Management review its staffing efforts to ensure the approved 2002 establishment will be reached and review its establishment management processes to ensure the available Operator complement is sufficient to meet operational requirements *Management agrees and is currently training and hiring staff to meet the approved establishment*	KPMG study completed in November 2004 resulting in "Rightsizing the Operator Establishment" An aggressive recruitment and training effort will result in Transit achieving their 2005 establishment target by years end.	100%
	That Transit Management work with Human Resources to improve the hiring process and consider the potential of a pre-qualification process so that when hiring is required it can be done on a timelier basis from the pool of pre-qualified candidates *Management agrees and is working with Human Resources to improve the hiring process*	Hiring process has been enhanced to ensure the availability and timely hiring of Bus Operators required by Transit Operations. The increased requirement for new Operators in 2005 has reduced the pool of pre-qualified candidates; however, course loadings will enable establishment targets to be met.	100%
	That Transit Management work with Human Resources to deal with the potential attrition of Operators. This includes planning for expected retirements in the year *Management agrees and is working with Human Resources to improve the hiring process*	Developed an annual Training plan, which incorporates: known retirements, other attrition variables and growth to ensure sufficient Operator recruitment. All variables are monitored monthly and training requirements adjusted as required.	100%
	That Transit Management prepare and document detailed analysis to demonstrate when the use of overtime is more cost effective than new hires *Management agrees*	Completed KPMG – Transit Operator Establishment Review in November 2004, which confirmed the appropriate level of overtime, operator productivity and required establishment, which has been approved by Council in the 2005 budget.	100%

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
Absenteeism	That Transit Management target a reduction of two days of absenteeism per operator in the short term with a longer-term target of further reductions. That Management consider reinstating the 1999 policies and rules for wage continuance, which required medical certificates for most absences *Management has implemented the City's Attendance Management Program, which is designed to reduce absenteeism. Transit Management will raise the issue of reinstating the 1999 Absenteeism Policy, which required medical certificate for most absences with Human Resources*	Transit Management working with Human Resources & Labour Relations reinstated the requirement for Medical Certification as per the 1999 ATU 279 Collective Agreement in April 2005.	100%
Special Events, Training	That Transit Management continue to ensure training requirements are met to comply with industry standards and the coroner's recommendations. Increasing staff to the approved complement should allow Management to schedule staff to meet their full training requirements without incurring overtime costs *Management agrees*	Mandatory cyclical training was re-introduced throughout 2003/2004 and first quarter of 2005. Training will resume once training of large number of new operators is complete in Fall of 2005.	100%
Rural Service	That Transit Management review staffing requirements and hire the Operators approved for rural service *Management agrees and is currently hiring for rural service*	Hiring for rural service was completed in 2002.	100%
EMERGENCY MEDICAL SERVICES (EMS)			
Shortfall in the number of FTEs	That EMS Management review staffing levels and staff to the budgeted full-time staffing levels *During the period reviewed by Audit there were, and continues to be, a general shortage of paramedics in Ontario. Since then EMS Management has increased staffing levels to the budgeted maximum.*	Ottawa Paramedic Service Paramedic staffing has increase from ~150FTE to 296 FTE. We have maintained full staffing in relation to budget for the previous three years.	

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
	That EMS Management maintain a sufficient pool of part-time employees as a resource for dealing with some overtime requirements *In the spring of 2002, 36 part-time staff was hired to help address the issue of overtime*	The Ottawa Paramedic Service has reduced our part-time Paramedic pool to almost zero. Management has opted to operate a full-time staffing model. Paramedic administrative, recruitment, training, security, LR, ongoing CME and equipment costs are prohibitive to maintain part-time Paramedics. The comprehensiveness and complexity of our service precludes the use of part time staffing. We buffer predicted staffing shortfalls by maintaining tight control on vacation and leave requests. Several policies and procedures have been developed and implemented to reduce the incidence and effect of overtime.	
Special Events, Absenteeism	That EMS Management work with staff to reduce absenteeism. Staff with both high absenteeism and high overtime should be closely reviewed and monitored	The Ottawa Paramedic Service has reduced absenteeism significantly in the past three years. We have implemented the City's Attendance Improvement Program. Absenteeism has decrease such that our effective hours calculation for a Paramedic FTE has increase from 1278 hours to 1580 in 2004 for Paramedics, a 23 percent increase based on a 2180 hour FTE. In 2004, rising call volume and a staffing shortage resulted in an increase in Overtime. In 2005, with the addition of 34 of the committed 52 FTE by City Council, the Ottawa Paramedic Service is tracking to record a >25% reduction in overtime. Today, a large portion overtime is a contractual obligation for statutory holiday pay (18% of the $1.6M budget).	
PAYROLL AND FINANCE			
Incomplete Recording of Payroll Transactions	That Finance and Payroll Management ensure appropriate control processes are implemented to ensure the completeness and timely posting of individual pay runs to the General Ledger **Payroll** - *Generally Payroll is responsible for processing the pay and it is Finance's responsibility to account and post the individual pay runs.* **Finance** - *Management agrees, and a process is currently being put in place to ensure all interfaces are posted on a timely basis.*	**Joint** - Payroll is now responsible for processing of payroll and for posting to the General Ledger on a scheduled basis (normally 4 days prior to pay day). Controls are in place to ensure completeness of information.	100%

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
Records Retention	That Payroll Management establish and implement an appropriate records management system for payroll source documents Payroll agrees. All timesheets, which are the responsibility of Payroll, are now filed in Payroll. All other payroll documents are stored as per the Corporate Record Management System	**Payroll** - A Record Management System has been established for the filing of time/leave forms and timesheets, which are Payroll's responsibility. All other payroll documents are stored as per the Corporate Record Management System.	100%
Treatment of Banked Overtime	That Payroll and Finance Management ensure all payroll-related liabilities are consistently treated and properly recorded across all payroll systems **Payroll -** *The IBS Project Team was aware of these practices at the outset of their project and will incorporate the required changes. To obtain this information on pay period bases would require enhancements to the seven legacy systems. However payroll is willing to work with Finance to provide data where available. The accrual issue at year-end should be responded to by Finance.* **Finance -** *Finance agrees and the accrual of the liabilities will be estimated as part of the year-end reporting. Management will also assess the feasibility of accruing the liability on a more frequent basis.*	**Joint -** With the implementation of the new SAP 4.6C HR/Payroll system, there is a consistent approach to recording payroll-related liabilities. Liabilities and corresponding expenditures are recorded when incurred with the exception of any former sick leave plans that continue to accrue. These sick leave plans accrue once per annum, normally at year-end.	100%
Management Authorization and Monitoring of Overtime	That Financial Services develop management reporting tools to allow managers to set up budget views to support effective monitoring of costs **Finance -** Finance agrees and will provide management reporting tools with flexibility in budgeting compensation costs.	**Finance -** Access to SAP has been provided to all Managers who may access their cost centre reports at any time. The detail level that is accessible allows for on going monitoring of overtime costs and all other compensation costs within every cost centre.	
	That Payroll Management ensure operating managers have authorized overtime hours by rejecting any timesheet not properly approved prior to input **Payroll** - Management will instruct staff to reject any overtime timesheets that are not signed.	**Payroll** – The employee's Supervisor/Manager must authorize all time/leave forms. Timesheets are returned if not properly approved.	100%

2002 Finding	2002 Audit Recommendation and *2002 Mgmt Response*	Management Action(s) taken as at July 29, 2005 (per management)	% Completed
	That Human Resources Management ensure, as part of the new payroll system, standardized reports on overtime are developed in the IBS project that can be accessed by managers on a regular basis to monitor their overtime costs and banked overtime liability **Payroll** - Human Resource Management will relay this recommendation to the IBS Project Team to provide for standardized reports on overtime that will be assessed by Managers on a regular basis.	**Payroll** - Several standard HR/Pay reports have been developed and placed on Manager's Desktop so they can be easily accessed including overtime and details on absences and attendances. In addition financial cost center reports exist that can be drilled down to obtain this information.	100%

Ottawa

Office of the Auditor General

AUDIT OF
DRINKING WATER SERVICES
2005 REPORT

Chapter 2

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Executive Summary

The City of Ottawa (the City) provides drinking water services to almost 750,000 residents and businesses served by one central system and four communal wells. The Drinking Water Services (DWS) Division of the Utility Services Branch is responsible for the production and distribution of water and compliance with the federal and provincial regulations designed to ensure the safety and security of the water supply system and process. The Customer Services and Operational Support Division (CSOS) provides support to DWS, in particular, maintaining water meters and responding to customer complaints. The Revenue Division of Financial Services is responsible for meter reading, billing and collection.

Drinking water was a regional responsibility before amalgamation, so no integration of lower tier units was required. However, the structure of the new City is different than that of the Region, resulting in some changes in how the service is delivered. In particular, the billing and collection function was integrated with tax billing, and planning for growth requirements and related capital programs were moved to the Planning and Growth Management Department. The centres of expertise concept was also expanded.

DWS was selected for audit because it involves substantial expenditures and is an area of significant risks, particularly risks to public health. The recent Walkerton experience demonstrated the seriousness of those risks and has drawn attention to the importance of safe and secure operations of the water system. It has also resulted in substantial new legislative and regulatory requirements for water system operators. While the regulatory environment continues to evolve, the audit provides an opportunity to determine whether DWS is keeping pace with the regulatory changes.

In this context, the audit objectives were to determine:

1. Compliance with federal and provincial drinking water guidelines, standards, and regulations.

2. The extent to which the financial planning processes (rate setting and budgeting) contribute to efficient and effective operations of DWS.

3. Whether the key risks within the revenue billing and collection process have been mitigated by Financial Services to support DWS objectives and activities and are consistent with water volume accountability requirements.

4. The assessment of the DWS water distribution system water quality sampling program.

5. The assessment of the DWS programs to reduce water loss in the distribution system.

6. The City's status on meeting upcoming provincial regulatory requirements (Quality Management System & Sustainable Water and Sewage Systems Act).

The audit focused on DWS, but also included an examination of the billing and collection functions carried out by Financial Services, and the involvement of CSOS in the water system, particularly as it relates to water meter maintenance, billing and collection for flusher hydrant use and customer relationship management. The audit examined the water fund, but not the other groups that are charged to the water fund, either directly or indirectly.

Key Findings

o **DWS complies with the relevant federal and provincial regulations governing the safe supply of drinking water to Ottawa residents.**

- The water sampling and testing program meets and in most cases exceeds established regulations. Although this program meets regulatory requirements, industry best practices are evolving, and other specific water quality programs should be implemented to further minimize water quality risks.

- There remain risks associated with private water systems that are connected to the central system. The water sampling and testing program includes measures to reduce these risks, however, all private water systems with more than one connection to the City's distribution system should be required to have written maintenance procedures and to notify the City of any activities that may impact water quality.

- A Quality Assurance/Quality Control program on positions that conduct the water sampling collection program is needed to regularly verify the completeness and accuracy of their tasks.

- Anticipated regulations from the Sustainable Water and Sewage System Act and the Quality Management System requirements will necessitate some additional steps throughout departments within the City.

- Although not required by legislation, the City should implement a proactive lead service replacement program.

o **The City has a program to reduce water loss in the distribution system, but it could be better coordinated.**

- The tracking and control of water loss is an evolving field. The City has given significant attention to this field and recent results are consistent with industry expectations, however, these results are still preliminary and ongoing refinement must continue.

- There is no clear centralized accountability for the program, and there are new initiatives the City should pursue in this area.

- The City has been monitoring the international approach to reducing water loss, and is currently adopting many of the water loss principles of the International Water Association best practice.

- The recommendations include identifying a lead for the program and preparing a comprehensive report for Council identifying the initiatives to be pursued.

o **Accountability for the City water system is dispersed, with only the City Manager having overall responsibility.**

- The dispersion of responsibilities for the water system between organizational units in three different departments leaves no one below the City Manager with overall responsibility for the water system or the water fund.

- The centres of expertise model is inconsistently and incompletely applied. This has resulted in sub-optimal coordination and difficulty in resolving differences of priority or direction.

- It is recommended that overall responsibility for the water system be established below the level of the City Manager, that units not directly reporting to the lead organization be accountable to it via a Service Level Agreement, and that existing centre of expertise Service Level Agreements be updated to reflect current expectations.

o **Meter and remote sensor repair has been a problem, resulting in too many billings based on estimated readings.**

- Meter and sensor connection repair sometimes requires access to customer premises (sensors are the boxes outside buildings from which meters can be read). The current approach appears to be customer friendly to a fault, resulting in inefficiency and ineffectiveness in order to avoid inconveniencing or challenging customers. The result has been inadequate attention to meter and sensor repair and too many billings provided on the basis of estimated readings, primarily for residential customers.

- The recommendations include use of by-law provisions to gain access to customer premises when required to ensure repairs can be conducted in a timely and efficient manner, clear allocation of responsibilities and consistent efforts to ensure meter readings can be conducted on a timely basis.

o **The computerized systems used to support billing and collection, and meter inventory and maintenance activities require improvement or replacement.**

- The deficiencies impact the ability of the City to ensure all users are being billed (no specific unbilled customers were identified), and allow inadequately documented entries, including the closure of work orders which have not been completed. As such, the complete accuracy of current information cannot be assured.

- It is recommended that the systems be analyzed to determine whether they should be upgraded or replaced; water accounts be reconciled with property tax records and the meter inventory; and improved procedures be put in place to ensure accounts are established for new connections on a timely basis.

Conclusion

The audit did not reveal any concerns related to the safety of the drinking water supply system in Ottawa, although there are steps that could be taken to further reduce risks. The water system is generally managed and operated in a manner consistent with best practices. No significant theft of water was identified, although some steps were identified that would reduce the risk that this is happening, or could happen. Better coordination could be achieved with some changes in the accountability structure, leading to improvements in efficiency and effectiveness. A complete list of the detailed recommendations follows.

Acknowledgement

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

List of Detailed Recommendations

The following is a list of all recommendations arising from the audit of Drinking Water Services. For complete details regarding the observations and findings which led to these recommendations, please refer to the full audit report.

Recommendation 1

DWS should evaluate options to modify the Carp Communal Well System in the event that regulations change with respect to the parameter Dibromochloromethane.

> **Management Response**
>
> Management agrees with the intent of this recommendation. Staff are continuing to follow the development of this water quality guideline. The actual imposition, level and compliance timeline are unknown at this time. Drinking Water Services will complete a Treatment Feasibility and Functional Design Report by Q4 2006. This information will be used to develop 2007 capital budget requirements for any required upgrades or improvements.

Recommendation 2

That representatives from DWS, the Financial Support Units (FSU) and Accounts Payable develop a mutually acceptable solution to address DWS' information requirements with respect to utility invoices such as Hydro Ottawa.

> **Management Response**
>
> Management agrees with this recommendation. The first priority for Hydro Ottawa invoices is that they be paid within the time limits established. Staff will work together to find a mechanism to provide the consumption information and other data required by DWS by Q3 2006.

Recommendation 3

That the service level agreements between DWS and centres of expertise be reviewed jointly by both parties on an annual basis as part of the budgeting cycle and adjusted to document actual or expected service levels.

> **Management Response**
>
> Management agrees with this recommendation. This review will be initiated in conjunction with the work related to Recommendation 24.

Recommendation 4

Responsibility and accountability for the maintenance program for water meters and remote receivers should be clearly defined and acceptable service levels established, with priority given to areas where the potential for lost revenue is greatest.

Management Response

Management agrees with this recommendation. Service standards need to be established for repair times and better communication introduced between the two work groups. Both groups need to understand the priority setting mechanism and look at the revenue loss and customer service when establishing work plans. A review will be undertaken in 2006.

Recommendation 5

The approach for gaining access to customer premises should be improved by placing more reliance on By-Law enforcement and/or service termination to ensure access to the premises on a timely and efficient basis.

Management Response

Management agrees with this recommendation. A review will be completed by Q3 2006.

Recommendation 6

The rationale for meter reading frequency should be reviewed as part of the study of meter reading technology, taking into account the benefits to customers and water volume accountability of frequent, accurate readings.

Management Response

Management agrees with this recommendation. A study of meter reading frequency will be undertaken to determine the most cost-effective frequency. The frequency issue could be improved dramatically through the introduction of Automatic Meter Reading technology. Consolidated management of all aspects of meter maintenance and meter reading may provide improved productivity, water accountability and information reports.

This initiative is not included in the 2006 work plan or budget and will be included in the 2007 Corporate Services Departmental work plan.

Recommendation 7

A formal assessment of the Aquacis system should be conducted to determine if the system can cost effectively meet user needs and ensure the achievement of divisional and strategic objectives.

Management Response

Management agrees with this recommendation. Once the new meters and reading technology are selected, a review of the Aquacis will be undertaken. This will form part of the 2007 Corporate Services Departmental work plan.

Recommendation 8

A formal assessment of the ITX/IIMS system should be conducted to assess the existence and appropriate design of controls and whether they are operating effectively and result in reliable reporting.

Management Response

Management agrees with this recommendation. The recommended assessment will be completed by Q2 2007 as part of the ITX/IIMS replacement project initiated by the Public Works & Services Department.

Recommendation 9

Communication regarding customer service requests and work orders between the Customer Accounts, Collections and Customer Services and Operational Support groups should be improved including agreement on narrative descriptions within a service request and the criteria for prioritization or cancellation of requests.

Management Response

Management agrees with this recommendation. All the tools to enable coordination and communication of work order and service request information are currently available in ITX. Improved training and process implementation will improve results. The review of consolidating management of the groups will also address the issue. This will be addressed in 2006.

Recommendation 10

A formal communication process for by-passes observed by meter readers, or Customer Services and Operational Support maintenance staff, should be developed

by the Customer Services and Operational Support group along with the associated action measures, including notification of By-Law Enforcement.

Management Response

Management agrees with this recommendation. A reporting process is already in place, and used by both Meter Maintenance staff and Meter Readers. Open bypasses are not in compliance with the Water By-law, and each reported offence is followed by issuance of a fine to the building owner. Although the process works and is used by both groups, formal and written documentation of the procedures is lacking. This will be resolved in Q1 2006.

Recommendation 11

Procedures to reconcile water accounts with property tax accounts (VTAX), meters installed (ITX/IIMS) and building permits issued should be developed to help mitigate the risk of incomplete billings.

Management Response

Management agrees with this recommendation. This initiative will assist in ensuring that all customers are being billed. Currently, this cannot be accommodated within existing resources. Additional resources will need to be identified as part of the 2007 Corporate Services Departmental work plan and budget.

Recommendation 12

Processes related to activating accounts for new development should be reviewed to facilitate identification of developers/contractors that may use water that should be billed or that turn on water without notifying the City.

Management Response

Management agrees with the intent of this recommendation. The Water By-law is very clear on that subject: only City staff are allowed to turn on or off water on the system. The By-law is enforced with fines on every reported infraction. Some water that is used in new developments is unauthorized and unbilled. A review, to be completed by Q1 2007, is currently underway to improve compliance on building construction related usage and a process to bill new developments using water.

Recommendation 13

Procedures should be developed to address the issues associated with new meter specifications, communication of new meter information, and potential By-Law impacts.

Management Response

Management agrees with the intent of this recommendation. We believe there are no issues with meter specifications. The meter specifications are part of the Water Specifications Guidelines that include all water related parts and materials. They are reviewed regularly following a process managed by the Infrastructure Services Branch. The communication of new meter information issue relates to the transfer of information between Customer Accounts and Meter Maintenance. The issue was addressed in Q4 2005.

Recommendation 14

That CSOS review options to improve compliance (reporting and payment) by flusher hydrant users including the cost-effectiveness of creating dispensing stations and the use of stronger By-Law enforcement.

Management Response

Management agrees with this recommendation. The Flusher Hydrant Program is an honour-based system, relying on the user to self-report water usage. It is expected that some users will not report some of their usage. Staff attempted to quantify theft, as reported in the Audit. Staff will be assessing the cost / benefit of constructing bulk water dispensing stations through the City to ensure full metering, regulated water withdrawal flow rates, surge protection and backflow safety features. This assessment will be completed by Q4 2006.

Recommendation 15

The internally established collection target should be re-evaluated by Revenue and Collections management.

Management Response

Management agrees with this recommendation. This target will be reviewed in 2006.

Recommendation 16

The data input and trending analysis of all tested parameters from the distribution system water quality sampling program should occur on a regular basis by dedicating staff time or by contracting out this service to the private sector.

Management Response

Management agrees with intent of this recommendation. With the implementation of the new WaterTrax Water Quality monitoring software, this functionality now allows staff to do this.

Recommendation 17

The City should implement a cross-connection control program in accordance with the InfraGuide's Best Practice of Methodologies for Implementing a Cross-Connection Control Program.

Management Response

Management agrees with the intent this recommendation. We do not believe this is a high risk item that would require it be a priority action item at this time. Staff if requested would bring a report forward in Q2 2007 outlining a proposed program and long term cost for Committee's consideration.

Recommendation 18

The City should implement a proactive lead services replacement program.

Management Response

Management agrees with intent of this recommendation. The Branch is fully aware of the recommendations contained in the Walkerton Report. The City currently treats drinking water so that it will remain in compliance with all federal and provincial guidelines for lead content in drinking water. Monitoring programs have confirmed the effectiveness of this approach. A report will be presented in Q3 2006 outlining a proposed strategy to Council for addressing lead services.

Recommendation 19

The City should develop a by-law that requires all private water systems with more than one connection to the City's distribution system to have written maintenance procedures and requires prior notification to the City of any activities on the private water system that may impact water quality.

> **Management Response**
>
> Management agrees with the intent of this recommendation. This initiative should be developed in conjunction with the Cross Connection Control Program referred to in Recommendation 17. A proposed by-law will be presented to Council in Q3 2007 addressing perimeter metering and back-flow prevention for private systems.

Recommendation 20

DWS should implement a Quality Assurance/Quality Control program on organizational positions that conduct the water sampling collection program to regularly verify the completeness of their tasks, including the sampling of all sites identified, and on the processes and procedures they must follow.

> **Management Response**
>
> Management agrees with the intent of this recommendation. While staff are confident of the information gathered by our current monitoring program and procedures, we will review our procedures to provide this additional level of security and confidence in our results. This review will be completed by Q4 2006.

Recommendation 21

The City should identify a specific group to lead and be responsible for all water loss reduction programs.

> **Management Response**
>
> Management agrees with this recommendation. A report came forward in Q1 2006, to outline the Water Loss Control program to reduce water losses. The Branch will coordinate a steering committee to improve overall water accountability. The DWS division will be responsible for water leakage reduction.

Recommendation 22

Utility Services should bring forward a report to Council addressing all elements of their water loss strategy.

Management Response

Management agrees with this recommendation. A report covering this program has been prepared and was tabled with Committee in Q1 2006.

Recommendation 23

Utility Services should implement a full Quality Management System for all environmental programs (Biosolids, Solid Waste, Water and Wastewater).

Management Response

Management agrees with the intent of this recommendation. This initiative is already well underway with the development of the Utility Services Quality Management System and is in place for the Bio-solids Program. Its implementation will be phased in the remaining programs. The Province has recently released the new Drinking Water Quality Management Standard. Staff are currently reviewing this new Standard and expect to report to Committee in Q1 2006 on this issue. Funds were approved in the 2006 Budget to address this likely regulatory requirement.

Recommendation 24

The governance structure of the delivery of water services should be reviewed and restructured to ensure accountability of an individual below the level of the City Manager for the water fund and services funded by the water fund.

Management Response

Management agrees with the intent of this recommendation. The first step should be to identify a specific individual to oversee the entire system. Whether to move to one distinct separate organization should be fully studied to determine the costs and benefits of doing so. This review will be initiated in Q3 2006.

Recommendation 25

That Financial Services re-examine the allocation of costs to the water fund and identify current costs for all elements.

Management Response

Management agrees with this recommendation. This review will be completed by Q4 2006 consistent with the rules of the report "Watertight: The case for change in Ontario's water and wastewater sector" (if adopted) and allocation methodology adopted through OMBI.

Résumé

La Ville d'Ottawa (la Ville) alimente près de 750 000 résidents et entreprises en eau potable par l'entremise d'un réseau d'aqueduc centralisé et de quatre puits collectifs. Il incombe à la Division des services de gestion de l'eau potable (SGEP), de la Direction des services publics, de produire et de distribuer l'eau ainsi que de veiller au respect des mesures réglementaires fédérales et provinciales portant sur la sécurité du système et le processus d'approvisionnement en eau. La Division des services à la clientèle et soutien opérationnel (SCSO) offre un soutien à SGEP, notamment en s'occupant de l'entretien des compteurs d'eau et en intervenant en réponse aux plaintes de la clientèle. La Division des recettes de Services financiers est chargée du relevé des compteurs, de la facturation et de la perception.

Puisque, avant la fusion, l'eau potable relevait de la Région, aucune intégration n'a été nécessaire entre les diverses municipalités. Toutefois, comme l'organisation de la nouvelle Ville d'Ottawa diffère de celle de la Région, des changements ont été apportés à la prestation de services. Ainsi, la facturation et la perception ont été intégrées à celles des taxes foncières, et la planification des besoins liés à la croissance de même que les programmes d'immobilisations connexes ont été transférés au Service de l'urbanisme et de la gestion de la croissance. En outre, le concept des centres d'expertise a été élargi.

La décision de procéder à une vérification de SGEP a été prise parce que cette division a des dépenses substantielles et qu'il s'agit d'un domaine à risques élevés, notamment pour la santé publique. Les récents événements de Walkerton ont montré la gravité de ces risques et attiré l'attention sur l'importance d'avoir un réseau d'alimentation en eau qui soit sain et sûr. La catastrophe a entraîné l'instauration de nouvelles exigences législatives et réglementaires fondamentales considérables pour les exploitants d'un réseau. Même si le cadre réglementaire continue d'évoluer, la vérification donne l'occasion de déterminer si SGEP réussit à se tenir à jour de ces changements.

Dans ce contexte, la vérification avait pour objectif d'évaluer :

1. la conformité avec les lignes directrices, les normes et les règlements fédéraux et provinciaux relatifs à l'eau potable;

2. le degré auquel les processus de planification financière (établissement des taux d'imposition et des budgets) contribuent à l'exploitation efficace de SGEP;

3. la mesure dans laquelle le Direction des services financiers limite les risques principaux du processus de facturation et de recouvrement des recettes de façon à étayer les objectifs et les activités de SGEP, et la mesure dans laquelle ces risques correspondent aux exigences de comptabilisation du volume d'eau;

4. le programme d'échantillonnage de la qualité de l'eau dans le réseau d'aqueduc de SGEP;

5. les programmes établis par SGEP pour réduire les pertes en eau du réseau d'aqueduc;

6. la situation municipale actuelle pour ce qui est de respecter les exigences provinciales à venir en matière de réglementation (système de gestion de la qualité et *Loi sur la durabilité des réseaux d'eau et d'égouts*).

La vérification a porté principalement sur SGEP, mais a également inclus un examen des fonctions de facturation et de perception assumées par Services financiers et de la participation de SCSO dans le réseau d'aqueduc, notamment en ce qui a trait à l'entretien des compteurs d'eau, à la facturation et à la perception découlant de l'utilisation des bouches d'incendie ainsi qu'à la gestion des relations avec la clientèle. Les vérificateurs se sont penchés sur le fonds de réserve pour l'eau, mais non sur les autres groupes facturés en fonction de celui-ci, que ce soit de façon directe ou indirecte.

Principales constatations

o **SGEP se conforme aux mesures réglementaires fédérales et provinciales pertinentes qui régissent l'approvisionnement sécuritaire des résidents d'Ottawa en eau potable.**

▪ Le programme d'échantillonnage et d'analyse de l'eau satisfait, et parfois même excède, les mesures réglementaires établies. Toutefois, comme les pratiques exemplaires de l'industrie évoluent constamment, d'autres programmes de vérification de la qualité de l'eau devraient être mis en oeuvre afin de réduire au minimum les risques à cet égard.

▪ Les risques qui subsistent concernent les réseaux d'aqueduc privés reliés au réseau central. Le programme d'échantillonnage et d'analyse de l'eau comprend des mesures qui visent à atténuer ces risques, mais tout réseau privé qui comporte plus d'un raccordement au réseau municipal devrait être tenu d'avoir des procédures d'entretien écrites et d'aviser la Ville de toute activité pouvant avoir une incidence sur la qualité de l'eau.

▪ Il est nécessaire d'instaurer un programme d'assurance et de contrôle de la qualité à l'intention des personnes chargées du programme de collecte d'échantillons d'eau, afin de vérifier régulièrement si leurs tâches sont accomplies de façon exhaustive et correcte.

▪ Les règlements pris en application de la *Loi sur la durabilité des réseaux d'eau et d'égouts*, qui entreront en vigueur sous peu, et les exigences relatives au système de gestion de la qualité obligeront tous les services de la Ville à prendre des mesures additionnelles.

▪ Bien qu'elle ni soit pas légiférée, la Ville devrait instaurer un programme proactif de remplacement des conduites de plomb.

- o **La Ville dispose d'un programme de réduction des pertes en eau du réseau d'aqueduc, mais il pourrait être mieux coordonné.**

  - Le suivi et le contrôle des pertes en eau sont un domaine en évolution sur lequel la Ville s'est penchée sérieusement. Les résultats récents sont conformes aux attentes de l'industrie, mais comme il s'agit de résultats préliminaires, le programme doit continuer d'être perfectionné.

  - La responsabilité centrale du programme n'est pas clairement attribuée : la Ville devrait envisager de nouvelles initiatives à cet égard.

  - La Ville s'est intéressée aux approches adoptées à l'étranger en matière de réduction des pertes en eau et est en voie d'adopter nombre des principes sur lesquels se fondent les pratiques exemplaires de l'International Water Association à cet égard.

  - Parmi les recommandations, mentionnons la désignation d'une unité responsable du programme et la rédaction à l'intention du Conseil d'un rapport exhaustif cernant les initiatives à mettre en oeuvre.

- o **Les responsabilités associées au réseau d'aqueduc sont dispersées, le directeur municipal en assumant seul la responsabilité globale.**

  - La dispersion des responsabilités associées au réseau d'aqueduc entre les unités organisationnelles de trois services fait que personne, outre le directeur municipal, n'est globalement responsable du réseau et du fonds de réserve pour l'eau.

  - Le modèle des centres d'expertise est mis en application de façon non uniforme et incomplète, menant à une coordination insuffisante et à des difficultés à trancher entre les diverses priorités et orientations.

  - On recommande que la responsabilité globale du réseau d'aqueduc soit confiée à des postes autres que celui de directeur municipal, que les unités qui ne relèvent pas directement de l'unité responsable y soient liées par une entente de niveau de service et que les ententes de niveau de service courantes des centres d'expertise soient mises à jour pour tenir compte des attentes actuelles.

- o **La réparation des compteurs et des dispositifs de télérelevé posent problème et entraînent trop de facturation fondée sur des estimations.**

  - La réparation des compteurs et des dispositifs de télérelevé exigent parfois l'accès aux locaux du client (le dispositif de télérelevé est la boîte à l'extérieur du bâtiment à l'aide de laquelle il est possible de faire le relevé d'un compteur situé à l'intérieur). L'approche actuelle semble

trop avantager les consommateurs et finit par être inefficace pour éviter de les incommoder ou de les confronter. Il en résulte que l'entretien et la réparation des appareils sont négligés et que trop de factures sont fondées sur des estimations, surtout pour la clientèle résidentielle.

▪ On recommande notamment de recourir à des dispositions réglementaires pour obtenir l'accès aux installations des clients lorsque c'est nécessaire, afin de procéder rapidement et efficacement à des réparations, de répartir clairement les responsabilités et de veiller à relever régulièrement les compteurs.

o **Les systèmes informatisés utilisés pour la facturation et la perception ainsi que pour tenir l'inventaire et entretenir les compteurs doivent être mis à niveau ou remplacés.**

▪ Les lacunes des systèmes informatiques empêchent la Ville de veiller à ce que tous les consommateurs soient facturés (aucun cas de clientèle non facturée n'a été précisé) et laissent entrer des données mal documentées, par exemple indiquant comme terminés des ordres de travail non exécutés. Par conséquent, on ne peut présumer que l'information actuelle soit exacte.

▪ On recommande que les systèmes soient analysés afin de déterminer s'ils doivent être mis à niveau ou remplacés, que les comptes d'eau soient rapprochés des comptes de taxes foncières et de l'inventaire des compteurs, et que des procédures améliorées soient mises en place pour s'assurer qu'un compte est créé rapidement pour tout nouveau branchement.

Conclusion

La vérification n'a pas révélé de problème touchant la salubrité du réseau d'approvisionnement en eau potable d'Ottawa, mais des mesures pourraient être prises afin de réduire davantage les risques à cet égard. Dans l'ensemble, le réseau d'aqueduc est géré et exploité conformément aux pratiques exemplaires du domaine. Aucun vol d'eau significatif n'a été relevé, mais des mesures ont cependant été proposées pour diminuer les risques qu'une telle situation se produise, présentement ou dans l'avenir. Une modification de la structure de reddition de comptes pourrait améliorer la coordination, ce qui renforcerait la rentabilité et l'efficacité. La liste complète des recommandations détaillées suit.

Remerciements

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification

Liste des recommandations détaillées

Voici la liste complète des recommandations qui découlent de la vérification des Services de gestion de l'eau potable. Pour prendre connaissance de l'ensemble des observations et des constatations qui ont mené à la formulation de ces recommandations, consultez le rapport de vérification intégral.

Recommandation 1

SGEP devrait étudier diverses options en vue de modifier le système de puits collectifs de Carp afin d'être prêt à tout changement dans la réglementation relativement au dibromochlorométhane.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Le personnel continue de suivre de près l'élaboration de cette ligne directrice sur la qualité de l'eau; on ne connaît pas encore quel sera le règlement imposé, son ampleur ni le calendrier de conformité qui y seront associés. Services de gestion de l'eau potable rédigera un rapport de faisabilité et de conception fonctionnelle d'ici au dernier trimestre de 2006. Cette information permettra d'établir les sommes nécessaires à inscrire au budget d'immobilisations de 2007 aux fins de mises à niveau ou d'autres améliorations.

Recommandation 2

Que des représentants de SGEP, de l'Unité de soutiens financier (USF) et de Comptes payables doivent trouver un moyen leur convenant à tous de satisfaire aux besoins de renseignements de SGEP relativement à des factures comme celles d'Hydro Ottawa.

Réponse de la direction

La direction est d'accord avec cette recommandation. En ce qui a trait aux factures d'Hydro Ottawa, la priorité absolue consiste à payer les factures dans les délais autorisés. Le personnel collaborera afin de trouver, d'ici au troisième trimestre de 2006, un mécanisme permettant de fournir les données relatives à la consommation et toute autre donnée exigée par SGEP.

Recommandation 3

Prévoir chaque année un examen conjoint des accords sur les niveaux de service entre SGEP et les centres d'expertise dans le cadre du cycle budgétaire, et les modifier pour tenir compte des niveaux de services actuels ou souhaitables.

Réponse de la direction

La direction est d'accord avec cette recommandation. Cet examen sera lancé de concert avec le travail découlant de la recommandation n° 24.

Recommandation 4

Définir clairement la responsabilité et la reddition de comptes relatives au programme d'entretien des compteurs d'eau et des dispositifs de télérelevé, et établir des niveaux de services acceptables en accordant la priorité aux endroits où les pertes potentielles de recettes sont les plus importantes.

Réponse de la direction

La direction est d'accord. Il faut définir des normes de services relativement aux délais de réparation et améliorer les communications entre les deux groupes de travail, ceux-ci devant comprendre le mécanisme d'établissement des priorités et considérer les pertes de recettes et le service à la clientèle lorsqu'ils dressent leur plan de travail. Un examen sera effectué en 2006.

Recommandation 5

Rendre plus rapide et plus efficace l'accès aux bâtiments des clients en recourant davantage à l'application des règlements municipaux et à l'interruption de service.

Réponse de la direction

La direction est d'accord avec cette recommandation. Un examen sera effectué d'ici au troisième trimestre de 2006.

Recommandation 6

Réévaluer la fréquence de relevé des compteurs dans le cadre de l'étude des technologies correspondantes afin de tenir compte des avantages de relevés plus fréquents et plus exacts pour la clientèle et pour la comptabilisation des volumes d'eau.

Réponse de la direction

La direction est d'accord avec cette recommandation. Une étude de la fréquence des relevés de consommation d'eau sera entreprise afin de déterminer laquelle est la plus rentable. Cette question pourrait être simplifiée considérablement par le recours à une technologie de relevé automatique. Le regroupement de la gestion des diverses facettes de l'entretien et du relevé des compteurs pourrait améliorer la productivité, la comptabilisation de l'eau et la rédaction de rapports d'information.

Cette initiative ne fait pas partie du programme de travaux ni du budget de 2006, mais sera incluse dans le plan de travail de Services généraux pour 2007.

Recommandation 7

Procéder à une évaluation officielle du système Aquacis afin de déterminer s'il peut satisfaire de façon économique aux besoins des usagers et favoriser l'atteinte des objectifs stratégiques et de ceux de la Division.

Réponse de la direction

La direction est d'accord avec cette recommandation. Lorsque les nouveaux compteurs et la technologie de relevé auront été choisis, un examen du système Aquacis sera réalisé dans le cadre du plan de travail de Services généraux de 2007

Recommandation 8

Procéder à un examen officiel du système ITX/IIMS afin d'évaluer s'il dispose de contrôles et si ceux-ci sont conçus de façon appropriée, et déterminer si ces contrôles fonctionnent efficacement et permettent une reddition de comptes fiable.

Réponse de la direction

La direction est d'accord avec cette recommandation. L'examen recommandé sera terminé d'ici au deuxième trimestre de 2007 dans le cadre du projet de remplacement du système ITX/IIMS lancé par Services et Travaux publics.

Recommandation 9

Améliorer les communications entre les groupes du Bureau des comptes, de Recouvrements et de Services à la clientèle et soutien opérationnel relativement aux demandes de service à la clientèle et aux bons de travail, notamment en uniformisant les descriptions narratives des demandes de service ainsi que les critères régissant la priorisation ou l'annulation des demandes.

Réponse de la direction

La direction est d'accord avec cette recommandation. ITX offre actuellement tous les outils nécessaires à la coordination et à la communication de l'information relative aux bons de travail et aux demandes de service. L'amélioration de la formation et de la mise en oeuvre du processus devrait donner de bons résultats. L'examen du regroupement de la gestion des groupes se penchera également sur cette question. Tout ce travail sera fait en 2006.

Recommandation 10

La Division des services à la clientèle et du soutien opérationnel doit élaborer un processus officiel de signalement des dérivations observées par les releveurs de compteurs ou par son personnel d'entretien, et établir les mesures à prendre dans une telle situation, y compris l'envoi d'un avis de mise en application du règlement municipal.

Réponse de la direction

La direction est d'accord avec cette recommandation. Le personnel d'entretien des compteurs et les releveurs de compteurs utilisent déjà un processus de signalement. Les dérivations ouvertes ne sont pas conformes au Règlement sur les aqueducs, et chaque infraction rapportée mène à l'imposition d'une amende au propriétaire du bâtiment. Même si ce processus est efficace et est appliqué par les deux groupes, il n'existe aucune documentation écrite officielle à son sujet. On remédiera à cette situation au cours du premier trimestre de 2006.

Recommandation 11

Établir des procédures pour le rapprochement des comptes d'eau, d'une part, et des comptes de taxes foncières (VTAX), de l'inventaire des compteurs d'eau (ITX/IIMS) et des permis de construction délivrés, d'autre part, afin d'atténuer les risques de facturation incomplète.

Réponse de la direction

La direction est d'accord avec cette recommandation. Cette initiative aidera à veiller à ce que chaque client se voie facturer sa consommation réelle, ce que ne permettent pas les ressources actuelles. Des ressources supplémentaires devront être inscrites en 2007 au budget et au programme de travaux de Services et travaux publics.

Recommandation 12

Revoir les processus de création de comptes pour les nouveaux lotissements afin de repérer plus facilement les promoteurs et les entrepreneurs qui pourraient utiliser de l'eau non facturée ou qui activent un branchement sans en aviser la Ville.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Le Règlement sur les aqueducs est clair à ce sujet : seul le personnel municipal est autorisé à activer ou à supprimer un branchement. Ce règlement est appliqué en imposant une amende pour chaque infraction rapportée. Une partie de l'eau utilisée dans les nouveaux lotissements constitue une consommation non autorisée et non facturée. Un examen, qui se terminera d'ici au premier trimestre de 2007, est en cours afin d'améliorer le respect des règlements concernant la consommation d'eau dans la construction de bâtiments ainsi que d'élaborer un processus permettant de facturer ce type de consommation.

Recommandation 13

Élaborer des procédures afin de traiter les problèmes associés aux nouvelles caractéristiques des compteurs, à la communication de l'information relative aux nouveaux compteurs ainsi qu'aux répercussions des règlements municipaux.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. On n'envisage aucun problème au sujet des caractéristiques des nouveaux compteurs. Ces caractéristiques sont prévues par les lignes directrices connexes qui régissent l'ensemble des pièces et du matériel associés à l'eau potable et qui sont revues à intervalles réguliers selon un processus géré par la Direction des services d'infrastructure. La communication de renseignements sur les nouveaux compteurs concerne la transmission d'information entre le Bureau des comptes et la Section de l'entretien des compteurs d'eau; cette question a été réglée au dernier trimestre de 2005.

Recommandation 14

Que SCSO étudie diverses façons d'améliorer la conformité (déclarations et paiements) des usagers des bouches d'incendie, y compris la rentabilité de créer des postes de distribution d'eau et de recourir à une application plus sévère des règlements municipaux.

Réponse de la direction

La direction est d'accord avec cette recommandation. Le programme relatif aux bouches d'incendie est fondé sur l'honnêteté des usagers, qui doivent rapporter leur consommation d'eau; on s'attend, évidemment, à ce que certains omettent de le faire. Comme le révèle la vérification, le personnel a cherché à quantifier ce type de vol. Par ailleurs, le personnel évaluera le rapport coût-avantages de l'aménagement de postes de distribution de gros volumes d'eau dans toute la ville qui permettraient de comptabiliser toute l'eau consommée, de régir le débit de l'eau distribuée et de mettre en place des dispositifs de protection des surtensions et des antirefouleurs; ce rapport sera terminé d'ici au dernier trimestre de 2006.

Recommandation 15

La direction de Recettes et de Recouvrement doit réévaluer l'objectif de recouvrement fixé à l'interne.

Réponse de la direction

La direction est d'accord avec cette recommandation. L'objectif sera revu en 2006.

Recommandation 16

À intervalles réguliers, saisir les données et analyser les tendances touchant tous les paramètres du programme d'échantillonnage de la qualité de l'eau du réseau d'aqueduc qui ont été testés, en y affectant le personnel ou en signant un contrat de sous-traitance à cet effet avec le secteur privé.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Le nouveau logiciel WaterTrax de suivi de la qualité de l'eau permet désormais au personnel de le faire.

Recommandation 17

La Ville devrait mettre en oeuvre un programme de prévention des retours d'eau polluée, conformément aux règles de l'art d'InfraGuide intitulées Méthodes d'implantation d'un programme de prévention des retours d'eau polluée.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Nous considérons qu'il ne s'agit pas là d'une question à risque élevé exigeant la prise de mesures prioritaires pour le moment. Sur demande, le personnel pourrait soumettre à l'étude du Comité, au cours du deuxième trimestre de 2007, un rapport traçant les grandes lignes d'un programme proposé et estimant ses coûts à long terme.

Recommandation 18

La Ville devrait instaurer un programme proactif de remplacement des conduites de plomb.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. La Direction connaît bien les recommandations formulées dans le rapport sur l'incident de Walkerton. La Ville traite actuellement l'eau potable afin qu'elle demeure conforme à toutes les lignes directrices fédérales et provinciales relatives à la teneur en plomb, approche dont l'efficacité a été confirmée par des programmes de suivi. Un rapport proposant une stratégie pour le remplacement des conduites de plomb sera présenté au Conseil au troisième trimestre de 2006.

Recommandation 19

La Ville devrait se doter d'un règlement municipal exigeant que tout réseau d'aqueduc privé qui comporte plus d'un raccordement au réseau municipal dispose de procédures d'entretien écrites et avise au préalable la Ville de toute intervention sur le réseau privé pouvant avoir une incidence sur la qualité de l'eau.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Cette initiative devrait être instaurée en liaison avec le programme de prévention des retours d'eau polluée mentionné à la recommandation n° 17. Un règlement modifié, traitant de l'installation d'antirefouleurs et compteurs d'eau sur le périmetre des réseaux privés, sera présenté au Conseil au troisième trimestre de 2007.

Recommandation 20

SGEP doit mettre en oeuvre un programme d'assurance et de contrôle de la qualité visant les postes chargés du programme de collecte d'échantillons d'eau afin de vérifier à intervalles réguliers que ces personnes accomplissent leurs tâches de façon

exhaustive, notamment pour ce qui est de la collecte d'échantillons à tous les sites désignés et du respect des processus et des procédures.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Même si le personnel a confiance dans les données obtenues grâce aux procédures et au programme de suivi actuels, les procédures seront passées en revue d'ici au dernier trimestre de 2006 afin de rehausser les niveaux de sécurité et de confiance dans les résultats.

Recommandation 21

La Ville devrait assigner à un groupe précis la direction et la responsabilité de tous les programmes de contrôle des pertes en eau.

Réponse de la direction

La direction est d'accord avec cette recommandation. Un rapport a été présenté au cours du premier trimestre de 2006. Il tracera les grandes lignes d'un programme de contrôle des pertes en eau, qui appliquera des pratiques de gestion optimales à la réduction de ces pertes. La Direction coordonnera les travaux d'un comité directeur afin de rehausser globalement l'exploitation responsable de l'eau. Il incombera à SGEP de veiller au contrôle des fuites.

Recommandation 22

Services publics devrait soumettre au Conseil un rapport décrivant tous les éléments de sa stratégie de contrôle des pertes en eau.

Réponse de la direction

La direction est d'accord avec cette recommandation. Un rapport sur ce programme a été préparé et sera soumis au Comité au cours du premier trimestre de 2006.

Recommandation 23

Services publics doit mettre en oeuvre un système exhaustif de contrôle de la qualité pour tous les programmes environnementaux (biosolides, déchets solides, eau et eaux usées).

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. Cette initiative est bien enclenchée pour ce qui est de l'élaboration du système de contrôle de la qualité de Services publics et est déjà instaurée pour le programme relatif aux biosolides; elle sera mise en oeuvre graduellement dans les autres programmes. La Province a rendu publique depuis peu sa nouvelle norme de gestion de la qualité de l'eau potable; le personnel l'étudie actuellement et devrait soumettre un rapport au Comité au cours du premier trimestre de 2006. Des fonds ont été prévus dans le budget de 2006 afin de satisfaire à cette exigence qui sera bientôt réglementaire.

Recommandation 24

Examiner et réorganiser la structure de gestion des services d'approvisionnement en eau afin qu'une autre personne, outre le directeur municipal, soit responsable du fonds de réserve d'eau et des services financés par ce dernier.

Réponse de la direction

La direction est d'accord avec l'esprit de cette recommandation. La première étape consisterait à affecter une personne à la supervision de l'ensemble du réseau. La possibilité de créer une entité distincte à cet effet doit être étudiée avec soin afin d'établir les coûts et les avantages d'une telle mesure. L'examen sera entrepris pendant le troisième trimestre de 2006.

Recommandation 25

Que Services financiers revoit l'attribution des coûts au fonds de réserve d'eau et déterminer les coûts actuels de chaque élément.

Réponse de la direction

La direction est d'accord avec cette recommandation. Cet examen sera terminé d'ici au dernier trimestre de 2006, ce qui est conforme aux règles établies dans le rapport À TOUTE ÉPREUVE: *:* L'importance d'améliorer le secteur ontarien de l'eau (s'il est adopté) de même qu'aux méthodes d'attribution retenues par l'OMBI.

1. Background on Drinking Water Services

The City of Ottawa's Drinking Water Services (DWS) Division is responsible for managing, producing and distributing water to close to 750,000 residents and businesses in Ottawa. This includes the Central System and four communal well systems.

The City's central water distribution system has the following characteristics:

- Two water purification plants
- 2,700 km of watermains
- 13 pressure zones
- 22 pumping stations
- 16,800 fire hydrants
- 37,000 valves
- 195,000 water meters
- 195,000 water services

Over 99% of the drinking water supplied by the City is through the central water distribution system. The remaining water supplied by the City (<1%) is through 4 communal water systems, namely;

1. The Carp Communal Water System
2. The Vars Communal Water System
3. The Munster Communal Water System
4. The Richmond (King's Park Subdivision) Communal Water System

The City is responsible for the water system up to the property line. There are many locations in the City where property owners are responsible for significant water systems within private property that are connected to the City system (e.g. shopping centres, condominiums, Federal government property, such as Parliament Hill, Tunney's Pasture, etc.). There are also between 50,000 and 60,000 private wells in the City's rural area and another 150 to 180 small private well systems, which do not fall under the responsibility of the DWS Division.

The Drinking Water Services Division is part of the Utility Services Branch in the Public Works and Services Department (PWS) and its main activities consist of the following:

- Water treatment, reservoirs and pumping stations operation & maintenance
- Water distribution system operation & maintenance
- Water quality assurance
- Communal water system operation and maintenance
- Direct operational technical support

The overall organizational structure of the Division is presented below.

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                          ┌─────────────────┐
                          │  City Manager   │
                          └─────────────────┘
                                   │
                          ┌─────────────────┐
                          │ Deputy City Manager │
                          │ Public Works and │
                          │    Services     │
                          └─────────────────┘
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| Director Surface Operations | Director Infrastructure Services | **Director Utility Services** | Director Transit Services | Director Traffic & Parking Operations | Director Fleet Services |

| Manager Customer Services & Operational Support | Manager Environmental Programs & Technical Support | **Manager Drinking Water Services** | Manager Wastewater & Drainage Services | Manager Solid Waste Services |

| **Program Manager Water Distribution** | **Program Manager Water Production** | **Program Manager Water Quality** |

A number of other groups within the City of Ottawa are responsible for other aspects of the water system. These include:

- The Customer Services and Operational Support (CSOS) Division of Utility Services is responsible for customer complaints, maintenance of water meters and general support to DWS.
- The Revenue Division of Financial Services (within Corporate Services Department) is responsible for meter reading, billing and collection, and related customer inquiries.
- The Planning and Growth Management Department is responsible for new or expanded water infrastructure
- The Infrastructure Services Branch within PWS is responsible for the project management of the design of new or expanded facilities and the construction supervision for most capital projects.

The City of Ottawa operates under a "centres of expertise" model, with the result that DWS also relies on specialized groups to support its activities in such areas as real property management, fleet services, financial services, information technology, public relations, legal services and human resource management.

The drinking water system is "rate supported", with water bills paid by customers covering the costs of DWS and the contributions of the other groups involved, in some cases by direct allocation of the costs to the water fund, and in other cases through a general allocation of corporate overhead.

Drinking water services was a purely regional function before amalgamation in 2001. As a consequence it did not experience the same range of changes other activities experienced when the activities of a variety of former organizations were combined. However the organizational structure of the new City is different than that of the former Region of Ottawa-Carleton, with the result that the structure did change significantly. In particular, the centres of expertise model has resulted in many activities formerly carried out by the water department being provided now as services to DWS by the various centres of expertise. Similarly, the water billing and collection activities were merged with tax collection to gain efficiencies of scope and the planning for expansion of the water system was relocated within the Planning and Growth Management Department.

While this audit focuses on the activities of DWS, it also reviews the revenue and collection activities of the Revenue Division, and the water accountability activities (including meter maintenance) of CSOS, and the governance of the City water services as a whole.

The audit approach included:

- An initial document review and selected interviews
- Development of Audit Objectives and Criteria as part of an Audit Plan
- Review of the Audit Plan with the Auditor General and the key management members
- Review of the relevant legislation and regulations and reports expected to lead to changes in legislation and/or regulations
- Review of industry association and Province of Ontario data comparing regulatory compliance and performance of water system operators
- Benchmarking comparisons with London, Ontario and Halifax, Nova Scotia
- Extensive interviews within DWS, CSOS and the Revenue Division
- Interviews with Legal Services, the Public Health Branch
- Collection and analysis of related documentation and reports from the City, industry associations, the Province of Ontario, the Government of Canada
- Preparation of a draft report and recommendations, and
- Review of the report by management, and the inclusion of their comments.

2. Audit Objectives and Scope

The audit included an examination of DWS regulatory compliance, financial management, and performance as outlined and defined through the audit objectives which were to determine:

1. Compliance with federal and provincial drinking water guidelines, standards, and regulations.

2. The extent to which the financial planning processes (rate setting and budgeting) contribute to efficient and effective operations of DWS.

3. Whether the key risks within the revenue billing and collection process have been mitigated by Financial Services to support DWS objectives and activities and are consistent with water volume accountability requirements.

4. The assessment of the DWS water distribution system water quality sampling program.

5. The assessment of the DWS programs to reduce water loss in the distribution system.

6. The City's status on meeting upcoming Provincial regulatory requirements (Quality Management System & Sustainable Water and Sewage Act).

Criteria for the measurement of each of these objectives were established and are listed in detail in the section that follows.

The audit focused on DWS, but also included an examination of the billing and collection functions carried out by Financial Services, and the involvement of CSOS in the water system, particularly as it relates to water meter maintenance, billing and collection for flusher hydrant use and customer relationship management. The audit considered the adequacy of support DWS receives from centres of expertise to support its basic functions, but did not examine the functioning of the centres of expertise or the activities of other groups that may be charged to the water fund, either directly or indirectly, however the audit did consider the approach used to allocate costs and revenues to the water fund.

3. Detailed Observations, Findings and Recommendations

This chapter outlines the detailed findings related to each of the audit objectives. Under each objective, the criteria employed are listed and the findings are identified. Where appropriate, related recommendations are provided and explained. In some cases, findings related to a number of objectives contribute to a single recommendation. These recommendations and the related explanations are provided in section 4.7

3.1 Compliance with federal and provincial drinking water guidelines, standards, and regulations.

Background

Since the tragedy of the drinking water contamination in Walkerton, Ontario in May of 2000, the Ontario provincial government has been regularly imposing new regulations and standards. In May of 2002, Justice Dennis O'Connor released Part 2 of the Report of the Walkerton Inquiry "A Strategy for Safe Drinking Water", which included 93 specific recommendations. The Ontario provincial government stated that all 93 recommendations would be acted on. The federal government also monitored the Walkerton Inquiry closely and considered many of Justice O'Connor's recommendations that were relevant at the federal level.

New regulations began to be imposed on Ontario drinking water providers in late 2000, and since then, new Acts and Bills have been passed, regulations have been imposed, amended, and even revoked, and new regulations are still forthcoming. Many of these regulations are directly related to the recommendations in Justice O'Connor's Part 2 report, while others are updates and amendments based on best practices, recent changes to technology or new data. Water providers must monitor the Provincial Environmental Bill of Rights on a regular basis to make certain nothing is being overlooked.

As well, following the Walkerton tragedy, the Water Industry has focused attention on the implementation of a number of "Best Practices" that are not required by regulations, but that can reduce the risk of possible water quality contamination within a water distribution system.

Focus of Audit

The audit focused on the compliance of the City's Drinking Water Services with respect to existing Federal guidelines, standards and regulations. The audit also focused on the City's process to monitor the Provincial Environmental Bill of Rights, how the City responded to Environmental Bill of Rights issues (i.e. comment period), and how the impact of regulations was communicated within the City (e.g. Impact on budgets, general communication to staff and Council, etc.). The audit also reviewed possible future water quality guidelines and their impact, if any, on the City.

It should be noted that pending provincial regulations related to the requirement of a Quality Management System, and the Sustainable Water and Sewage Act are discussed as a separate audit objective (see section 4.6).

Audit Criteria

The audit reviewed compliance with the guidelines, standards and regulations that are directly related to the drinking water quality and those related to the licensing of the facilities and staff.

Federal Guidelines
- Guidelines for Canadian Drinking Water Quality
- New recently released guidelines
  - Turbidity
  - Protozoa
  - Chlorite/Chlorate (comment period ends Oct./05)

Provincial Standards and Regulations
- Drinking Water Systems Regulation (Reg. 170/03)
  - Reg. 249/03 (amendment to Reg. 170/03)
  - Reg. 269/03 (amendment to Reg. 170/03)
  - Reg. 408/04 (amendment to Reg. 170/03)
- Drinking Water Quality Standards (Reg. 169/03)
  - Reg. 268/03 (amendment to Reg. 169/03)
- Certification of Drinking Water System Operators (Reg. 128/04)
- Drinking Water Testing Services (Reg. 248/03)
- Water Taking and Transfer (Reg. 387/04)
- Definitions of Words and Expressions (Reg. 171/03)
- Definition of Deficiency and Municipal Drinking Water System (Reg. 172/03)
- Schools and Private Nurseries (Reg. 173/03)

Findings/Observations of Audit

1. The City's drinking water system meets all guidelines and regulations.

2. New regulations, ongoing amendments and regulatory monitoring have impacted staff resourcing since 2001. This includes the actual monitoring of new or amended regulations, and the specific reporting requirements imposed by the province.

3. DWS has clear lines of staff accountability for regulatory compliance (Manager – DWS).

4. Most of the impact and responsibility rests with the DWS group, but both the Legal and Health Branches have important roles. Communication between the Health Branch and the DWS group, with respect to drinking water quality issues and overall community

health concerns related to drinking water, is excellent. Both groups understand their roles, both have excellent written procedures that meet provincial requirements and both communicate on a regular basis (not only when issues arise).

5. The review of regulations when posted on the Environmental Bill of Rights is completed by both the City's Legal Branch and by DWS (normally initiated by DWS), and a joint response is sent to the province when required. Responses are frequently shared with other provincial municipalities and others (various associations in Ontario, such as the Ontario Water and Wastewater Association and the Association of Municipalities of Ontario).

6. The City of Ottawa should continue its focus on monitoring and commenting on the provincial Environmental Bill of Rights and the federal Environmental Bill of Rights. DWS must continue to allocate appropriate resources to meeting all regulatory requirements, and continue to be involved in Associations that comment on regulatory impacts.

7. The review of the Federal Environmental Bill of Rights is monitored by the Canadian Water and Wastewater Association on behalf of its members, and any issues related to drinking water are brought to the attention of the DWS group. Canadian Water and Wastewater Association also has a Water Quality Committee that comments on guideline changes being proposed by Health Canada. The comments are circulated to the Canadian Water and Wastewater Association members for input prior to submission. The Chair of the Canadian Water and Wastewater Association Water Quality Committee is a Program Manager in the DWS.

8. The province has not imposed any charges on Ottawa, but the City has received a few orders. All orders were complied with (most prior to the order actually being received). This is typical of most large municipalities across Ontario (i.e. no charges, and a few orders). Many medium to small municipalities across Ontario are being charged for regulatory infractions.

9. The DWS has an excellent rapport with the local provincial office of the Ministry of the Environment.

10. Both the Planning and Growth Management Department and DWS continue to monitor the province's position and pending future regulation on Source Water Protection (17 of the 93 recommendations in Justice O'Connor's Walkerton Part 2 report dealt with Source Water issues). It is not known how this will impact the Ottawa River (a boundary river for Ontario and Québec). Regulatory impacts are expected on the City communal well systems (well head protection, recharge area, etc.).

11. The possible future drinking water guideline for *Dibromochloromethane* (a member of the Trihalomethane family of disinfection by-products) may require changes at the Carp Water System. The Central Water System and all other communal well systems operated by the City continue to meet or exceed all guidelines and standards and all expected changes to the regulations.

12. The structure of the City has no detrimental impact on how DWS meets their regulatory requirement, or on how the City responds to Environmental Bill of Rights postings.

13. Regulatory impacts on operating or capital budgets are accommodated through the City budget approval process.

Recommendation 1

DWS should evaluate options to modify the Carp Communal Well System in the event regulations change with respect to the parameter Dibromochloromethane.

Management Response

Management agrees with the intent of this recommendation. Staff are continuing to follow the development of this water quality guideline. The actual imposition, level and compliance timeline are unknown at this time. Drinking Water Services will complete a Treatment Feasibility and Functional Design Report by Q4 2006. This information will be used to develop 2007 capital budget requirements for any required upgrades or improvements.

3.2 The extent to which the financial planning processes (rate setting and budgeting) contribute to efficient and effective operations of DWS.

Background

The City of Ottawa has a combined sewer fund and a water fund, although both activities are separately accounted for. The water fund receives revenue from the water rate and the fire supply charge. Direct costs, such as those of DWS, are charged to the water fund. Certain services provided by centres of expertise, such as the Revenue Division, RPAM and Fleet Services are also charged directly to the water fund. Other costs such as information technology, secretariat, council, legal, and finance are allocated to the water fund as part of a corporate overhead charge.

The Sustainable Water and Sewage Systems Act 2002 requires that water and wastewater systems be self-sustaining, covering all associated costs. However, the regulations providing details of the process to be followed have not yet been promulgated.

Focus of the Audit

Our audit focused on the budget and rate-setting processes related to the water fund.

Audit Criteria

The audit was directed to determine the extent to which:

- DWS receives timely, adequate, and reliable information from Financial Services
- Financial plans are linked to strategic objectives of DWS

- The Financial Services water rate setting model supports long-term viability of DWS
  - Cost recovery methodology identifies and allocates the appropriate costs to the water fund
  - Water rates and resulting revenue forecasts achieve full cost recovery
- Budget is effective in providing suitable operational guidance
  - Budget inputs from DWS, centers of expertise, and other relevant groups are complete, accurate, and received on a timely basis
  - Operating and capital budgets are analyzed against actual results
  - Management understands the budget rationale and implications for activities under their control

Findings/Observations of Audit

1. DWS management is very satisfied with the service provided by the Financial Support Unit (FSU), a group of Finance staff assigned to work directly with management on an ongoing basis. In addition to the scheduled monthly reporting, DWS requests reports from the FSU on an ad hoc basis and are satisfied with the accuracy and timeliness of the information received.

2. The consolidation of the City of Ottawa's two laboratory testing groups into one should lead to an increase in timeliness of information and responsiveness to DWS' operational requirements.

3. The only crucial financial information DWS has difficulty accessing on a timely basis are the hydro bills. DWS only has access to Hydro Ottawa's portal service for information related to the two plants. Although SAP includes consumption data that is input manually, DWS requires more detailed information such as consumption by time period to manage their demand for electricity more effectively. DWS would like to receive Hydro Ottawa invoices directly to enable them to make a copy for themselves before the invoice is processed by Accounts Payable. Currently, DWS is obtaining copies of the invoices directly from their Hydro Ottawa representative as it cannot obtain copies on a timely basis from Accounts Payable. The lack of timely information affects DWS' business decisions.

4. DWS senior management does not receive revenue or related volume reporting from the Revenue, Financial Services group on a pre-determined basis. However, they are able to obtain information when requested. Furthermore, there is no formal process for DWS to input into the revenue group's decisions such as the frequency of meter reading.

5. Senior management of DWS and their dedicated FSU have been working on developing and implementing more meaningful performance measures. These would be used at the beginning of the budgeting process to set operational funding requirements in relation to performance measures such as resources required (work crews) per kilometer of watermains. The performance measures would also serve as triggers to review funding

levels and/or to explain variances throughout the year. The City of Ottawa has been looking to performance measures developed by the Ontario Municipal CAO's Benchmarking Initiative and the National Benchmarking Initiative.

6. DWS has not been linking financial plans to its strategic objectives. It is currently undergoing a Business Review Process which will look at the services being delivered. The review is expected to identify DWS' strategic objectives and enable the linking of the financial planning function to strategic objectives. The Business Review Process was expected to be completed in July/August 2005.

7. The Long Range Financial Plan 2 – Rate Supported Programs (LRFP-2) endorsed by City Council on December 8, 2004, included the following principles to improve the financial sustainability of the water and sewer rate supported programs:

> *"a) That the annual Pay-as-you-go contributions be indexed in accordance with the Infrastructure Price Index as published by StatsCan, consistent with the approved policy contained in the tax supported Long Range Financial Plan;*
> *b) That long term debt financing be limited to specific project types – growth, development charge financed, regulatory and major projects with long term benefits, consistent with the approved policy contained in the tax supported Long Range Financial Plan;*
> *c) That the balances in the Water and Sewer Reserve Funds be combined into one reserve fund;*
> *d) That the combined Water & Sewer Reserve Fund retain a minimum balance of $20 million;*
> *e) That the 2005 net water and sewer rate be increased by 9%, comprised of a 12% water rate increase and a 4% reduction in the sewer surcharge;*
> *f) That for longer term sustainability of rate supported programs, City Council endorse net annual water and sewer rate increases of 9% for 2006 and 2007, and 5% for 2008 to 2014, subject to annual budget approval."*

While these principles are generally consistent with the directions taken in new provincial legislation, the legislation would appear to suggest separate accounting for water and wastewater. The recommended rate increases are based on 2004 figures including a corporate overhead allocation of $12.7M for water and $22.9M for sewer. The LRFP-2 does not include guidance as to the calculation of this allocation.

8. On amalgamation, corporate overhead was allocated to the water fund on a proportionate basis. That is, the formula was based on direct spending on water as a percentage of total spending at the City of Ottawa. Since then, the total amount has been rolled forward with specific adjustments made to reflect changes in organizational structure, but not for budget cuts. It is our understanding that the formula for allocating corporate overhead to the water fund has not been re-documented since amalgamation.

9. Some costs that are very directly tied to the water fund, such as the cost of the Financial Services group responsible for billings and collections are not directly allocated, but only covered through the corporate overhead allocation.

10. A contributing factor to the delay in reviewing the allocation of indirect costs to the water fund has been the time lag between the Province of Ontario's passage of Sustainable Water and Sewage System Act and the promulgation of its associated regulations. These regulations will most likely deal with indirect costs and identify what costs must, should or can be allocated to the water fund. The City of Ottawa's review of their allocation method will have to meet future provincial requirements. Please refer to section 4.6 for a further discussion of upcoming provincial regulatory requirements.

11. The budgeting cycle appears to be clearly communicated to and understood by DWS management. The deadlines are tight, a factor compounded by the Universal Program Review exercise in 2004 and by the short timelines for the identification of budget pressures in May/June 2005. The FSU tries to alleviate the time pressures by making estimates and assumptions where they can, i.e. inflation, but ultimately must ensure that DWS staff are sufficiently involved in the preparation of their budgets.

12. Changes, such as locating the FSU with the Director's office, are underway to improve the flow of financial reporting information.

13. There are service level agreements between DWS and some centres of expertise. However, it appears that these agreements have not been updated since they were initially put in place following amalgamation.

14. In certain cases, the service level agreements cover activities formerly carried out by the water department and now provided as services to DWS by the various centres of expertise. Losing control over these activities has frustrated DWS management who feel that, while they are held accountable for the level of service they provide to their customers by regulatory agencies, customers and councillors, they no longer have control over activities, for example RPAM's services, that impact on the level of service they are able to provide.

15. There is also a perception, on the part of DWS management, that they are subject to service level cuts within the centres of expertise even though DWS need to maintain a certain level of service due to regulatory requirements and pay for the services with revenue from the water rate. Financial Services has indicated that this is generally not the case and that the service level cuts within the centres of expertise would mostly affect non-rate activities. A review of service level agreements and annual monitoring of these agreements would clarify the issue of cuts in services.

16. All of the fleet reserves are combined except for those of police and transit. This would appear to be a breach of the principle of allocating water costs (and only water costs) to the water rate. New future regulations related to the Sustainable Water and Sewage Act may impact how these funds are allocated in the future.

17. Operating and capital budgets are analyzed against actual results on a monthly basis by the FSU. Explanations are obtained from DWS managers for significant variances. On a quarterly basis, variances are reviewed with the Director, DWS. Budget versus actual results are reported to Council on a quarterly basis.

18. SAP, the financial reporting system used by the City of Ottawa, has the capability to incorporate seasonality in the monthly profiling of budgets. DWS is working on using this functionality with operating costs that fluctuate on a seasonal basis, such as overtime.

Recommendation 2

That representatives from DWS, the Financial Support Units (FSU) and Accounts Payable develop a mutually acceptable solution to address DWS' information requirements with respect to utility invoices such as Hydro Ottawa.

Management Response

Management agrees with this recommendation. The first priority for Hydro Ottawa invoices is that they be paid within the time limits established. Staff will work together to find a mechanism to provide the consumption information and other data required by DWS by Q3 2006.

Recommendation 3

That the service level agreements between DWS and centres of expertise be reviewed jointly by both parties on an annual basis as part of the budgeting cycle and adjusted to document actual or expected service levels.

See section 4.7 for recommendations related to multiple audit objectives.

Management Response

Management agrees with this recommendation. This review will be initiated in conjunction with the work related to Recommendation 24

3.3   Whether the key risks within the revenue billing and collection process have been mitigated by Financial Services to support DWS objectives and activities and are consistent with water volume accountability requirements.

Background

The main revenue billing and collection process is carried out by the Revenue Division of Financial Services, a group which is also responsible for billing and collecting property

taxes. Financial Services staff also carries out the meter readings which are planned to occur three times a year for residential accounts and every other month for commercial and large consumption accounts. Billings occur every two months for residential accounts, and monthly for commercial and large consumption accounts. Meter reading generally involves visiting each property and connecting a reader to a remote receiver outside the building, which in turn is connected by a wire to the meter itself, which is generally inside the building. CSOS is responsible for maintenance of the meters and remote receivers.

The billing and collection activity is supported by a computerized billing and collection system called Aquacis. CSOS uses an information system known as ITX/IIMS to manage service requests and the maintenance and repair of the water connections and meters. For metered connections, CSOS is responsible for ensuring that the meter information required for customer account set up is obtained and entered in the ITX/IIMS system daily, and Revenue is responsible for uploading it to Aquacis along with information from other sources to set up the customer account for billing purposes

CSOS is responsible for billing the small number of accounts that require water permits to obtain water from flusher hydrants. These customers are on an honor system and are to notify CSOS of the amount they take within 24 hours of the occurrence. Billings are based on the volumes reported.

Focus of the Audit

The scope of our enquiries and documentation review was limited to the Revenue Division's Billing, Customer Accounts, and Collections groups, as well as the Customer Services and Operational Support Division (CSOS) group that is responsible for meter maintenance.

Audit Criteria

The audit was directed to determine the extent to which:

- Mitigation/controls exist to address the following key risk areas:
  a) Accuracy of water billed rates and volumes (estimated and actual)
  b) Completeness of water billings (all billable water usage is billed)
  c) Collections are appropriately accounted for.
  d) Appropriate segregation of duties between meter reading, billings and collections exists.

- Operating procedures and related controls on initiating, processing, and recording water billings and collections exist and are monitored and evaluated periodically

- Practices are consistent with water volume accountability requirements

Findings/Observations of Audit

1. There are a number of issues related to the accuracy and timelines of the volume of water billed.

   - Residential water meter repairs are a continuing problem area, inhibiting the ability to bill in an accurate and timely manner.

   - Obtaining actual meter reads from functioning meters is a key practice to ensure that the water volume being billed is accurate, to provide customers with timely feedback on their water use, to encourage appropriate water use efficiency, and to ensure the accuracy of water loss calculations.

   - Despite recent improvements, there were still approximately 3,300, or approximately 2% of all accounts as at March 31, 2005 where at least the last four consecutive billings had been based on estimated consumption. The vast majority of these are residential connections.

   - The ineffective operation of remote receivers on the outside of buildings and the failure of the wire connecting the remote receivers to the meter is a significant cause of the missed readings.

   - Ensuring that external meter reading devices and meters are functioning is the responsibility of CSOS.

   - Revenue has been seeking a faster response from CSOS on requests for repairs of residential meters and/or remote receivers. Current practices relying on the co-operation of homeowners or building occupants to gain access to meters have made the repair process difficult and expensive relative to the risk to revenues.

   - CSOS indicated that it adjusted its priority in 2004 to the large meter change-out program. However, despite priority placed on calibration of high-volume meters, CSOS has been unable to calibrate all meters on a timely basis. In 2004, 954 large meters were not changed out as scheduled, with management estimating a potential lost annual revenue of $316,537 (based on a combined 2004 water/sewer rate of $1.58/m^3). The cost to repair these meters would be approximately $240,000.

   - The responsibility for fixing the remote sensors along with two staff person resources was temporarily transferred from CSOS to the Billings group to address the backlog. These additional staff helped to increase the number of meter readers during the period of February to September 2004. The meter readers were able to spend more time to get a difficult remote to read or get inside to read the meter. Also, the Billing group purchased new probes which worked better on the remotes. Meter readers changed or repaired 1500 remotes for all the 'quick fixes' from outside and CSOS continued their repairs. This reduced the number of accounts repeatedly billed based on estimates from approximately 7,000 to the current level of approximately 3000.

   - For customers who repeatedly refuse access to correct faulty meters, some estimated water bills have been manually adjusted (up) to attract the attention of the client and encourage granting access.

- CSOS has considered other approaches, such as enforcement of the right to access granted under the By-Law including issuing fines or potentially terminating service, but has not taken such action to date.

2. Recent changes have resolved some issues related to water volume reporting as a part of water loss calculation for water volume accountability requirements.
   - The volume of water consumed by customers is a key input to the calculation of water loss in the distribution system.
   - The reported consumption amount can be affected by billing adjustments that impact the volume billed, by inaccurate meters, and by reporting inaccuracies.
   - The formula used to estimate consumption for bills not based on actual readings is generally accurate, but subject to errors in some specific instances. For example, events such as leaks, or the Let Water Run program which is used during the winter time for water services that may freeze, may affect the consumption amount in a period that the formula uses to estimate consumption. There is no built-in adjustment in the formula for such one-off events.
   - Manual adjustments to the volume billed are made in such instances as the "Let Water Run" program, to adjust for faulty or broken meters, the discovery of meter by-passes and to attract customer attention to gain access for repairs.
   - An appropriate formal manual approval process exists for water consumption adjustments. As well, there are procedures in place to deal with water volume issues such as, for example, imperial unit meters and meter digit inconsistencies
   - In mid-June 2005, the process for manual water volume adjustments was modified to better monitor volume adjustment activity, and ensure billing adjustments do not impact reported consumption except where appropriate.
   - The timing of reported usage is impacted by the underlying reliability of the estimation formula, the frequency of meter reads (and hence degree of reliance on estimates) and by manual adjustments for past errors or those knowingly overestimating consumption, however the net effect is negligible.
   - Water meters will eventually provide incorrect readings, generally reading low due to component deterioration over time. CSOS have been prioritizing their Large Meter Changeout program, providing assurance major customers are billed based on accurate volumes.
   - The Monthly Revenue Billing report contained a consumption billed figure that did not agree to the Aquacis system, hindering efforts to reconcile water loss. This programming fault was corrected in May 2005. The report had historically been approximately 2.5% different from the Aquacis system.
   - Billings management has represented to us that any monetary related transactions or adjustments do not result in an adjustment to the volume recorded.
   - The frequency of meter reading, which is currently every four months for residential accounts and every other month for commercial and large water consumption accounts, was known to be "established some time ago" and no formal policy on meter reading currently exists. London reads all meters monthly, and, based on their

past structure as a "Public Utilities Commission", that meters are read by London Hydro. Halifax reads residential meters every three months and all other meters that are 3" or more monthly, and meters that are less than 3" quarterly. The benefits of recording actual consumption on a more frequent basis were discussed in the March 23, 2005 report to the Corporate Services and Economic Development Committee and included allowing customers to see the impact of their behaviours on consumption, identify leaks or other water loss events more quickly and encourage appropriate water use efficiency based behaviours.

- The business case for a meter/receiver replacement program that would involve an Automated Meter Reading (AMR) system, using a drive-by Radio Frequency (RF) system is currently under review. Such a program would significantly improve the capacity to obtain accurate and timely meter reads and may make it more economical to read meters more frequently; however, the implementation costs of such a program need to be clearly identified and considered.

3. The accountability trail and reporting capabilities of the Aquacis system are deficient.
- Although significant improvements have been made to maintain the integrity of data within Aquacis, the accountability trail to ensure the integrity of water volume consumption and other information is not complete. There is no formal or journalized approval process within Aquacis, no ability to track all overrides, and there exists the ability to by-pass use of the fixed memo pad accounts that are supposed to be used to document what was done to the account.
- The existing reporting capabilities of Aquacis do not allow or do not easily allow for a manual reconciliation or review of entries, overrides, or by-passes.
- Existing reports do not respond to specific requirements of the Billing, Customer Accounts, and Collections groups or report on the basis of the security profiles that were developed for Aquacis in February 2005. For ad hoc reports or inquiries, the information that could be available is too labor intensive to retrieve, and therefore not used.
- The error in reporting of water volumes noted above was detected, and although management was not aware of any other errors, it is not confirmed that other similar errors do not exist.

4. A formal assessment of the Aquacis system is required.
- It is necessary to determine if the Aquacis system can cost effectively meet user needs and ensure the achievement of divisional and strategic objectives.
- A comprehensive formal user needs assessment should be conducted in line with the divisional and strategic objectives and that the resulting outcomes be compared against the current Aquacis system capabilities.
- A review of the system is needed to ensure it calculates and retains information as expected, that reports provide timely accurate information, that the security profiles design and associated control policies and procedures are appropriate and that controls are operating effectively.

- If Aquacis is retained, the reporting and investigative analysis capabilities will require improvement.
- Specific attention should be given to the existing key control weaknesses, and the reporting and analysis capability weaknesses as discussed above. Consideration should also be given to the controls over changes to the system itself (e.g. patches). Any such changes should be independently verified to ensure that no other facets of the system are inadvertently impacted.

5. Reporting capabilities of ITX/IIMS and ITX/IIMS related communication and control processes are deficient.
- The number of meters recorded in the ITX/IIMS system could not be obtained with accuracy. CSOS expressed concern that the ITX/IIMS meter inventory information was not providing reliable data due to recent changes in reporting scripts and has requested IT support to investigate the matter.
- Service requests entered into the ITX/IIMS system by Customer Accounts staff are reviewed and prioritized into work orders as deemed necessary by the CSOS Maintenance Planner. Service requests can be cancelled and this history appears to be tracked within the system, although it requires an experienced system user to identify who cancelled the request. Any service request that has been turned into a work order cannot be cancelled or closed until the work order attached to it is cancelled or completed.
- Customer complaints have been received by Customer Accounts regarding work orders that had been "completed" in the system, but the work itself had not been performed. Specific concern was also raised by Collections that service requests to shut-off water service did not always occur as expected. Verbal follow up between Customer Accounts, Collections and CSOS occurs in lieu of consistent, formal documentation in either the ITX/IIMS or Aquacis systems. As well, the level of detail of information to support the service request is not always sufficient to ensure proper prioritization or appropriate cancellation. There is no comprehensive, periodic reporting of outstanding or cancelled service requests and work orders and the reasons therein.
- CSOS management, as part of its six-part continuous improvement process, will be identifying and analyzing the nature of service request and work order activities in order to implement performance measures for such activities. It is our understanding that all outstanding service requests will be reviewed by the Billings group during Fall 2005 as a step to address such issues.
- This has increased the risk of lost revenues as it increases the amount of time to resolve issues which may overlap changes of ownership and reduce the ability of Customer Accounts to defend billings and maintain customer relationships. It also makes it more difficult to prioritize service requests to ensure the best use of available resources.

6. A formal assessment of the ITX/IIMS system should be conducted.

- An assessment of the existence and appropriate design of controls and whether they are operating effectively and result in reliable reporting is required.
- Given the concerns regarding reliability of information reported by the ITX/IIMS system, users may be inclined to believe that the information in any reports they receive or enquiries they make are inaccurate and may reduce any reliance on such reporting. This is why the controls to ensure data integrity need to be in place and confirmed to be operating effectively before any analysis or performance measurement standard setting can occur. This would also facilitate an understanding of how the deletion of a work order without verification of the work being performed occurred.

7. Communication regarding customer service requests and work orders between the Customer Accounts, Collections and CSOS groups needs to be improved.
   - An agreement is required between Billings, Customer Accounts, Collections and CSOS on the nature and extent of narrative description to include in a service request and the criteria for prioritization or cancellation and how it should be documented in the ITX/IIMS and Aquacis systems.
   - An outstanding service request listing should be made available to Customer Accounts and Collections for their review to facilitate billing processes and monitor and maintain customer relationships.
   - The Billings group should continue with its review of outstanding service requests and Customer Accounts, Collections and CSOS should also be involved throughout the process.

8. Overall, procedures generally exist to address the risk of incomplete water billings and Revenue and CSOS management are aware of the controls that should exist regarding their responsibilities for the completeness of water billings.
   - Key reconciliation controls and preventative activities that would help mitigate the risk of incomplete water billings do not exist. There is no formal or comprehensive reconciliation or comparison between the water accounts in Aquacis and the property tax accounts in VTAX or the ITX/IIMS meter inventory. Unexplained and unreconciled discrepancies between the systems have been identified by Revenue, Utility Services and CSOS.
   - A number of steps have been taken or are being taken to help identify instances where there may be incomplete water billings including, route re-sequencing, improved communication between meter readers and Billing staff regarding items/activities observed by meter readers, tracking of accounts not yet set up, verification of inactive accounts, daily review of the number of bills generated against the number of active and inactive accounts, and ad-hoc comparisons between the water accounts in Aquacis and the property tax accounts in VTAX when a customer calls, or when water or tax certificates are being requested by a lawyer.
   - Further difficulties may arise when initially obtaining information from developers and other contractors to set up billing accounts and charge other fees (e.g. meter

verification/installation). For example, it is possible that a sub-division is split and the civic numbers change without adequate notification by other City departments or by the developer/contractor to CSOS, Billing or Customer Accounts. Although developers/contractors are required to obtain water meter permits from CSOS, if they do not, then it is expected that the account trail will be found again with the building permits. However, there is no cross-reference or reconciliation of building permits to either CSOS or Revenue data which means that billing accounts may be incomplete.

- When developers/contractors are found to be using water or have turned on water without properly notifying the City, a letter explaining why the activity is inappropriate is sent to the company/individual. At this time, water consumption is not necessarily recorded or billed. Fines are issued if inappropriate water usage is found.

- Building permits are issued once an inspection occurs and that currently, there is no formal or informal verification that the meter on the premises has been inspected by CSOS or that it meets meter By-Law specifications.

- The Customer Accounts group relies on their customers to notify them of moving in/out of their premises. As such, this information may not be accurate, timely, or complete. As well, concern was expressed that because overrides of move dates and other move related information may occur in Aquacis without a trail, (unless a 'memo pad' entry is done), there is no way to verify such information even if it is obtained. In Aquacis, when accounts are overridden, Customer Accounts staff will not be able to effect an ownership data change, request a final meter read, and affect the associated billings. There are no completeness and accuracy checks with other City departments or property tax information to verify that all move ins/outs are identified so that final meter reads and associated billings can be performed

- Two summer students monitor flusher hydrant use to ensure permit holders report the water taken; however a test study on one flusher hydrant was performed to help identify underreported consumption by the permit holders. It was found that approximately 50% of consumption was unreported. Although the test was conducted on only one flusher hydrant, if this is representative, the foregone revenue may amount to $150,000 per year. It is not clear if there is a cost-effective approach to improving compliance. CSOS management stated it was not cost-effective to obtain actual consumption from flusher hydrants through installation of meters, surveillance, additional inspection, or automatic shut-off devices.

- Neither London nor Halifax allow the tanker trucks to use fire hydrants to fill their tanks. Each city has designated, secured and metered dispensing stations for tanker trucks. Secure dispensing stations are used primarily to ensure water quality integrity. For example, back flow that intentionally or inadvertently introduces contaminants into the water that could occur at a flusher hydrant will not occur with a secure dispensing station. They also facilitate accounting for water volume and ensuring completeness of billings. Recognizing that there are significant costs and other factors involved in implementing secure dispensing stations (e.g. power

supply, land, ease of access for the water tankers), consideration should be given to stronger By-Law enforcement and/or an increase in the consequences associated with non-compliance. Consideration should also be given to performing an analysis of available data on permit holder customers to estimate the volume of expected use and compare to reported use.

- There is no pro-active or formal program to detect meter by-passes. CSOS management considered metering by-passes and/or removing/closing by-passes for non-essential services as a means to prevent water theft. Meter by-passes observed by meter readers are communicated to CSOS on an ad-hoc basis, but this is infrequent, as meter readers rarely need to access a building to register the water volume consumed.

9. Overall, it appears that an appropriate segregation of duties between meter reading, billings and collections exists.

- Prior to February 2005, the segregation of duties was not robust enough in that anyone with access to Aquacis essentially had the ability to perform all functions. No inappropriate activity was identified as a consequence.

- In February 2005, security profiles and associated functionalities to support this segregation were developed by IT staff and Revenue management and reviewed and approved by Revenue's senior management. Our cursory review of one of the security profiles supports an appropriate segregation. CSOS has read-only access to Aquacis. There has not been an independent full assessment of the security profile design, their operating effectiveness, or of the procedures in place to ensure that they are properly maintained.

10. The internally established collection target is too low.

- The collection target for both water and sewer receivables is 95%. This is considered by Collections management to be in line with other receivables, such as taxes. However, bad debts expense is less than 1% and the fiscal 2004 write-offs were less than 1%, suggesting that the current target should be reconsidered. Halifax currently has bad debt write-offs of less than 0.4% of metered revenue.

- The debt that is currently not secured is the tenant-lease receivables and these are perceived by Collections management to be their highest collection risk area. Total tenant-lease receivable billings for fiscal 2004 were $4,472,128 or approximately 2.9% of total billings. As at December 31, 2004, water and sewer receivables were $5,595,131 of which $264,812 or 4.7% represented tenant-lease receivables. The tenant-lease receivables outstanding at the 2004 year-end are therefore approximately 5.9% of 2004 tenant-lease billings, suggests that a collection target of 95% may be appropriate for this group of accounts.

- Collections are in the process of submitting a proposal to the City to allow securing the debt of tenant-lease receivable accounts, which would support a higher collection target.

Recommendation 4

Responsibility and accountability for the maintenance program for water meters and remote receivers should be clearly defined and acceptable service levels established, with priority given to areas where the potential for lost revenue is greatest.

Management Response

Management agrees with this recommendation. Service Standards need to be established for repair times and better communication introduced between the two work groups. Both groups need to understand the priority setting mechanism and look at the revenue loss and customer service when establishing work plans. A review will be undertaken in 2006.

Recommendation 5

The approach for gaining access to customer premises should be improved by placing more reliance on By-Law enforcement and/or service termination to ensure access to the premises on a timely and efficient basis.

Management Response

Management agrees with this recommendation. A review will be completed by Q3 2006.

Recommendation 6

The rationale for meter reading frequency should be reviewed as part of the study of meter reading technology, taking into account the benefits to customers and water volume accountability of frequent, accurate readings.

Management Response

Management agrees with this recommendation. A study of meter reading frequency will be undertaken to determine the most cost-effective frequency. The frequency issue could be improved dramatically through the introduction of Automatic Meter Reading technology. Consolidated management of all aspects of meter maintenance and meter reading may provide improved productivity, water accountability and information reports.

This initiative is not included in the 2006 work plan or budget and will be included in the 2007 Corporate Services Departmental work plan.

Recommendation 7

A formal assessment of the Aquacis system should be conducted to determine if the system can cost effectively meet user needs and ensure the achievement of divisional and strategic objectives.

Management Response

Management agrees with this recommendation. Once the new meters and reading technology are selected, a review of the Aquacis will be undertaken. This will form part of the 2007 Corporate Services Departmental work plan.

Recommendation 8

A formal assessment of the ITX/IIMS system should be conducted to assess the existence and appropriate design of controls and whether they are operating effectively and result in reliable reporting

Management Response

Management agrees with this recommendation. The recommended assessment will be completed by Q2 2007 as part of the ITX/IIMS replacement project initiated by the Public Works & Services Department.

Recommendation 9

Communication regarding customer service requests and work orders between the Customer Accounts, Collections and Customer Services and Operational Support groups should be improved including agreement on narrative descriptions within a service request and the criteria for prioritization or cancellation of requests.

Management Response

Management agrees with this recommendation. All the tools to enable coordination and communication of work order and service request information are currently available in ITX. Improved training and process implementation will improve results. The review of consolidating management of the groups will also address the issue. This will be addressed in 2006.

Recommendation 10

A formal communication process for by-passes observed by meter readers, or Customer Services and Operational Support maintenance staff, should be developed

by the Customer Services and Operational Support group along with the associated action measures, including notification of By-Law Enforcement.

Management Response

Management agrees with this recommendation. A reporting process is already in place, and used by both Meter Maintenance staff and Meter Readers. Open bypasses are not in compliance with the Water By-law, and each reported offence is followed by issuance of a fine to the building owner. Although the process works and is used by both groups, formal and written documentation of the procedures is lacking. This will be resolved in Q1 2006.

Recommendation 11

Procedures to reconcile water accounts with property tax accounts (VTAX), meters installed (ITX/IIMS) and building permits issued should be developed to help mitigate the risk of incomplete billings.

Management Response

Management agrees with this recommendation. This initiative will assist in ensuring that all customers are being billed. Currently, this cannot be accommodated within existing resources. Additional resources will need to be identified as part of the 2007 Corporate Services Departmental work plan and budget.

Recommendation 12

Processes related to activating accounts for new development should be reviewed to facilitate identification of developers/contractors that may use water that should be billed or that turn on water without notifying the City.

Management Response

Management agrees with the intent of this recommendation. The Water By-law is very clear on that subject: only City staff are allowed to turn on or off water on the system. The By-law is enforced with fines on every reported infraction. Some water that is used in new developments is unauthorized and unbilled. A review, to be completed by Q1 2007, is currently underway to improve compliance on building construction related usage and a process to bill new developments using water.

Recommendation 13

Procedures should be developed to address the issues associated with new meter specifications, communication of new meter information, and potential By-Law impacts

Management Response

Management agrees with the intent of this recommendation. We believe there are no issues with meter specifications. The meter specifications are part of the Water Specifications Guidelines that include all water related parts and materials. They are reviewed regularly following a process managed by the Infrastructure Services Branch. The communication of new meter information issue relates to the transfer of information between Customer Accounts and Meter Maintenance. The issue was addressed in Q4 2005.

Recommendation 14

That CSOS review options to improve compliance (reporting and payment) by flusher hydrant users including the cost-effectiveness of creating dispensing stations and the use of stronger By-Law enforcement

Management Response

Management agrees with this recommendation. The Flusher Hydrant Program is an honour-based system, relying on the user to self-report water usage. It is expected that some users will not report some of their usage. Staff attempted to quantify theft, as reported in the Audit. Staff will be assessing the cost / benefit of constructing bulk water dispensing stations through the City to ensure full metering, regulated water withdrawal flow rates, surge protection and backflow safety features. This assessment will be completed by Q4 2006.

Recommendation 15

The internally established collection target should be re-evaluated by Revenue and Collections management.

Management Response

Management agrees with this recommendation. This target will be reviewed in 2006.

3.4   The assessment of the DWS water distribution system water quality sampling program.

Background

The new drinking water regulations (since 2000) have specific water quality sampling requirements for all water distribution systems in all municipalities across Ontario. These requirements include numerous parameters that must be monitored at specified frequencies. All parameters must be tested by accredited laboratories. The province has specific requirements for notification when specific parameters do not meet regulatory requirements, referred to as an Adverse Water Quality Incident. The notification requirement is imposed on both the Laboratory performing the analysis, and on the operating authority (the DWS in the City). Notification must be immediate and the laboratory must notify the following groups;

- Local health department
- Provincial Ministry of the Environment
- Operating authority (DWS at the City)

The Operating authority must also notify the health department and the Ministry of the Environment, and inform them of the corrective action that is taking place to rectify the Adverse Water Quality Incident.

All Adverse Water Quality Incidents must be documented and summarized in a yearly summary report.

Although the current regulations identify the parameters to be monitored, and the minimum frequency for each parameter, this requirement is not related to the size of the distribution system, or the actual location where various parameters should be tested. Only bacteria sampling, turbidity and chlorine (or chloramines) residual have monitoring frequencies that are based on the size of the population served by a distribution system.

Current best practices suggest that the location of all parameters being sampled, and their frequency, should be considered in any water distribution system water quality sampling program, such that the parameters being monitored appropriately reflect the quality of the water being consumed by water customers at various locations in the system, and also based on the possible seasonal variation of water quality. The United States Environmental Protection Agency is currently imposing the "Initial Distribution System Evaluation" on water purveyors across the United States. This evaluation will most likely lead to future United States Environmental Protection Agency regulations. Ontario will not be far behind in this regard.

With respect to drinking water quality impact on consumers, there are two primary categories; Acute and Chronic drinking water quality concerns. Acute water quality problems essentially mean that there could be an immediate health impact on the consumer if they consume the water, such as what occurred in Walkerton in 2000. This includes harmful bacteria, poisons, etc. The DWS group and the Health Branch have written protocols to follow should an acute parameter be discovered in the drinking water supply.

Chronic water quality problems are long-term health concerns. These could include high concentration of metals, chlorine by-products or other parameters that are above the drinking water guidelines. The guidelines, for chronic parameters that may be in drinking water, are based on a human drinking two litres of water everyday over a 70-year period. Again, both the DWS and the Health Branch have protocols that they follow should a chronic parameter be discovered in the drinking water supply that is above the regulated standard.

Over the last 30 years, technology has progressed where the scientific and medical communities have been able to monitor parameters in drinking water that were not possible in the past. And, not only are they now able to monitor parameters that were unknown in the past, they are also able to monitor these at extremely low concentration levels (parts per billion and parts per quadrillion). With the discovery of this accuracy capability, the health community has been researching the impacts of these parameters on human health through the consumption of drinking water (as well as through other means, such as food and air).

In the case of drinking water, as technology allows the monitoring of parameters that were not possible in the past (or the monitoring of a parameter at a substantial lower concentration), the health community assesses the possible impact on human health and the possible method of transmission to the body. For possible drinking water concerns, the Federal Health Department reviews the scientific evidence, and if required imposes new drinking water guidelines and the Province of Ontario in turn imposes these as standards.

This is one of the main reasons why drinking water quality standards change and water purveyors must make water treatment process changes to their drinking water facilities to meet these new standards.

Focus of Audit

The audit's main focus with respect to this objective was the DWS compliance to the regulatory requirements and the evaluation of the DWS with current best practices related to the distribution system water quality monitoring program. Documented best practices include the United States Environmental Protection Agency Initial Distribution System Evaluation requirements, and the following best practice documents prepared by the InfraGuide (National Guide to Sustainable Municipal Infrastructure);

1. Water Quality in Distribution Systems

2. Monitoring Water Quality in the Distribution System
3. Methodologies for Setting up a Cross-Connection Control Program

The audit also reviewed the City's 2004 Drinking Water Summary Report to confirm that all items were included in this report to Council.

Audit Criteria

Provincial regulations require specific parameters to be sampled, at various frequencies. The audit reviewed general water quality concerns in the distribution system, reviewed the sampling locations in the system, reviewed the annual summary report to Council and compared the City's water quality sampling practices with respect to industry best practices to ensure:

- Sampling is occurring at appropriate locations across the City's system and is representative of the water quality throughout the system

- City's annual water quality report represents the results of the water quality sampling program and meets regulatory requirements

- Distribution system sampling program meets current best practices (based on new United States Environmental Protection Agency Reg. of (i) number of sampling sites, (ii) location of sites, (iii) rational for site selection and (iv) sampling schedule)

- Sampling is in line with current Best Practices (InfraGuide)

Findings/Observations of Audit

1. The City's water quality monitoring program meets all regulations. In most respects the quality sampling program goes far beyond the regulatory requirements, as required by best practices.

2. The City's 2004 Drinking Water Summary Report appropriately reflected the water quality sampling program undertaken throughout that year.

3. The quality of the water entering the Water Distribution System from both the Lemieux Island and Britannia Water Purification Plants is consistently of very high quality.

4. DWS has clear lines of staff accountability for water quality issues (Program Manager – Water Quality).

5. The quantity of Adverse Water Quality Incident in 2004 is considered high (51), but 34 of those incidents were related to one situation that was appropriately dealt with, including a post-mortem on the situation, and changes to procedures to alleviate similar situations in the future. Aside from this one situation, the quantity of Adverse Water Quality Incidents is in line with other large municipal water systems across Ontario.

6. The City (both the DWS and the Health Branch) has clear and strict procedures in place to deal with an Adverse Water Quality Incident, which meet regulatory requirements.

7. The City's water quality sampling program is considered a best-in-class program, based on the method of determining where water quality samples should be taken, the number of samples taken and the chronological pattern of collecting the samples. This program appears to appropriately reflect the water quality that customers are consuming across the water distribution system.

8. The water quality sampling program is regularly changed to meet the expansion of the water distribution system, ongoing improvements within the system, and construction activities that may impact water quality.

9. Water quality sampling in the distribution system is taken at specified locations on a daily basis. The staff performing this task have specific locations to sample from and specific procedures to follow, however, staff have complete autonomy over their work on a daily basis, especially over the weekend and holidays when plant supervisory staff are off.

10. The method of analysis of the data trends from the water quality sampling program, including customer inquiries analysis, is ad-hoc.

11. The City uses simple spreadsheets to analyze water quality trends. This requires regular data input that is frequently delayed due to other pressing workload issues. Industry best practices suggest that the data input and trending should occur regularly by in-house staff or be contracted out to the private sector (DWS are considering this at this time). Halifax and many other municipalities across Canada currently contract out this service.

12. The City does not have a cross-connection control program in place. Both London and Halifax have cross-connection control programs in place. Various City departments will require involvement in such a program, including planning, building inspectors, and DWS. A cross-connection control program reduces the risk of an industrial or commercial building from possibly contaminating a water system by imposing backflow prevention devices on the water service that enters the private facility. Equipment and plumbing configurations inside of industrial and commercial facilities can be complex, and a cross-connection control program educates these facility owners on the possible impact of their plumbing and equipment on the water system, and provides a barrier through the addition of a backflow preventor to stop any industrial or commercial product from entering the central water system should equipment or plumbing be inadvertently misconfigured. Meeting the InfraGuide's best practice "*Methodology for Setting a Cross-Connection Control Program"* would be appropriate. It should be noted that such a program requires stakeholder involvement, substantial cross departmental involvement across the City, staff training and financial support. The program should be phased in over a 3 to 5 year period.

13. The City does not have a proactive lead services change out program. While no program is required by regulation, there are current lead service replacement requirements in the United States, and Justice O'Connor's Part 2 Walkerton Report also recommends lead services lines should be located and replaced over time with safer

materials (recommendation No. 35). Through the City's Water System Rehabilitation Program, lead water services are currently being replaced from the water main to the property line. The City still has between 15,000 and 25,000 lead water services within the water distribution system. The City does have an information letter that is provided to residents with lead water services, informing them on the concerns of lead in drinking water, and on how to minimize any health impacts. When residents follow the recommendations of the information letter, the concentration of lead in the drinking water due to the lead water service meets or is better than drinking water standards.

14. The City is concerned that there is no method of knowing the quality of repairs that are completed on private water distribution systems connected to the City water system. Since some of these systems are "looped", with more than one connection to the City's water distribution system, improper maintenance activity in a private system that may impact water quality could become a water quality issue within the City's public water system. A by-law that requires all private water systems with more than one connection to the City's distribution system to have written maintenance procedures to maintain and repair their private water system is needed. The by-law should also require prior notification to the City of any activities on the private water system that may impact water quality. The City may want to consider offering maintenance and repair services to the private systems on a cost recovery basis. The City should develop this by-law with appropriate consultation with the Private water system owners.

15. The City reports their water quality results to the public through an annual report to Council, and in response to requests from the public. The results are also available on the City's Internet web page. The water quality report is a thorough report addressing all drinking water quality concerns that occurred throughout the year.

16. The City performs Quality Assurance and Quality Control on water samples tested by the laboratories. However, the City does not perform Quality Assurance and Quality Control on the staff that collect the water samples, to ensure they follow the prescribed routine.

Recommendation 16

The data input and trending analysis of all parameters from the distribution system water quality sampling program should occur on a regular basis by dedicating staff time or by contracting out this service to the private sector.

Management Response

Management agrees with intent of this recommendation. With the implementation of the new WaterTrax Water Quality monitoring software, this functionality now allows staff to do this.

Recommendation 17

The City should implement a cross-connection control program, in accordance with the InfraGuide's Best Practice of Methodologies for Implementing a Cross-Connection Control Program.

Management Response

Management agrees with the intent this recommendation. We do not believe this is a high risk item that would require it be a priority action item at this time. Staff if requested would bring a report forward in Q2 2007 outlining a proposed program and long term cost for Committee's consideration.

Recommendation 18

The City should implement a proactive lead services replacement program.

Management Response

Management agrees with intent of this recommendation. The Branch is fully aware of the recommendations contained in the Walkerton Report. The City currently treats drinking water so that it will remain in compliance with all federal and provincial guidelines for lead content in drinking water. Monitoring programs have confirmed the effectiveness of this approach. A report will be presented in Q3 2006 outlining a proposed strategy to Council for addressing lead services.

Recommendation 19

The City should develop a by-law that requires all private water systems with more than one connection to the City's distribution system to have written maintenance procedures and requires prior notification to the City of any activities on the private water system that may impact water quality.

Management Response

Management agrees with the intent of this recommendation. This initiative should be developed in conjunction with the Cross Connection Control Program referred to in Recommendation 17. A proposed by-law will be presented to Council in Q3 2007 addressing perimeter metering and back-flow prevention for private systems.

Recommendation 20

DWS should implement a Quality Assurance/Quality Control program on organizational positions that conduct the water sampling collection program to regularly verify the completeness of their tasks, including the sampling of all sites identified, and on the processes and procedures they must follow.

Management Response

Management agrees with the intent of this recommendation. While staff are confident of the information gathered by our current monitoring program and procedures, we will review our procedures to provide this additional level of security and confidence in our results. This review will be completed by Q4 2006.

3.5 The assessment of the DWS programs to reduce water loss in the distribution system.

Background

The City of Ottawa took proactive measures in the mid 1900's to become a 100% metered water system. The City also meters all water that enters the water distribution system from the two water purification plants. For years, the City has monitored the Unaccounted-For-Water in the system, by calculating the actual water entering the distribution system (from the two plants), less the actual metered consumption (only water that was actually metered – the City, and previously the Region of Ottawa-Carleton, were aware of various unmetered water uses, but estimated unmetered water use was not removed from the total). As such, over the last decade, the City has had an Unaccounted-For-Water figure of between 16.5% and 28%, on a yearly basis. Best practices suggested that a municipality should be in the 10% to 15% range, however this assumes all known uses of water are accounted for, whether metered or not. The method by which municipalities calculate Unaccounted-For-Water is very subjective, and has made comparisons difficult.

The use of the Unaccounted-For-Water value for benchmarking purposes has been used across North America for decades. In the past 5 years, the international water community has adopted a more appropriate method of benchmarking water distribution systems with respect to water loss. The Infrastructure Loss Index is now considered the best practice to determine the state of water system infrastructure with respect to water loss. The Infrastructure Loss Index is determined by following the international approach to water loss management, developed by the International Water Association.

The American Water Works Association (primarily a North American association) has been the leader in setting standards for water utilities around the world. The American Water Works Association is currently in the process of adopting the International Water Association water loss method.

The International Water Association approach to water loss management not only addresses how to determine a water systems Infrastructure Loss Index factor, it also provides detailed strategies on how to reduce real water losses in a water system. The City of Ottawa has been monitoring the international approach to reducing water loss, and is currently focused on adopting many of the water loss principles of the International Water Association best practice.

The Public Works and Services 2006 Departmental Business Plan forwarded to the City' s Joint Committees (Corporate Services, Planning and Environment and Transportation) on September 12, 2005, and to Council on September 28, 2005, identified a few water loss topics. Specifically, the Utility Services Branch (USB) states that it will " develop a water audit tool and infrastructure leakage index" and " update the water loss reduction action plans…" (Environmental *Actions*, p. 30) in 2006.

Focus of Audit

The audit's main focus with respect to this objective was the review of the City programs with respect to water loss and comparing the City's programs to current best practices. The documented best practices reviewed include the International Water Association method, and the best practice documents prepared by the InfraGuide.

Audit Criteria

The City's water distribution system is 100% metered and when water production figures are compared to metered consumption figures, there is the perception of a large quantity of loss water within the distribution system. The audit reviewed the City's approach to dealing with identifying and reducing the actual loss water, and compared the findings with current best practices. The audit reviewed whether:

- DWS has implementation strategies to reduce water loss Unaccounted-For-Water

- DWS has specific monitoring programs to monitor water use and loss

- DWS has implemented past recommendations of Unaccounted-For-Water studies

- DWS strategies and programs meet current best practices (International Water Association water balance for water distribution systems)

Findings/Observations of Audit

1. The City has undertaken many ongoing proactive water loss improvement programs over the years, many of which are typically used by leading water utilities. These include;
   - Water System Rehabilitation Program
   - Water system leak detection program
   - Water meter replacement program

- Service post rehabilitation program
- Water system cathodic protection program
- Proactive service connection repairs program
- Unaccounted-for water program
- Water efficiency strategy program

2. The City has also monitored the frequency of watermain breaks from year to year, and benchmarking data compiled by the National Research Council of Canada has shown that Ottawa has a relatively low quantity of water main breaks per kilometer of watermain (the lower the value, the better) when compared to other cities.

3. The City currently has on staff one of the worldwide leading authorities on the International Water Association water loss process.

4. The City has been implementing some of the management strategies to reduce water loss.

5. The various water loss implementation strategies are spread out across various groups within the City with no group having clear overall responsibility.

6. The Utility Services Branch is undergoing a structural review. Management and group responsibilities may shift in the immediate future and overall responsibility for the water loss reduction program may be determined following the structure review.

7. Although capital and operating programs are in place to address water loss, priority setting by program varies and the programs are not being implemented in a timely fashion.

8. The Customer Services & Operational Support group has 4 staff that have water loss responsibilities, as well as other duties. The percentage of time they spend on water loss issues is estimated to range from 10% to 25% of their daily duties, based on a yearly average.

9. Ottawa is currently a North American "Beta" site (test site) for the review and development of an American Water Works Association Water Loss Reduction Program.

10. Halifax has implemented the International Water Association water loss reduction strategies. London completed the International Water Association water audit in May, 2005.

11. Public Works and Services acknowledge that water loss in the water distribution system is a departmental priority and have addressed this through the 2006 Department Business Plan. Staff are planning to bring a report to Council in late fall 2005 describing their proposed program.

12. The City's Infrastructure Loss Index for 2004 is 5.8, which is in the average Infrastructure Loss Index target for North American systems of similar nature to Ottawa, based on a recent American Water Works Association Water Audit Software

tool. The City's current 5.8 Infrastructure Loss Index still requires refinement, as estimates are currently being considered for some of the input data.

13. Initial findings in the United States note that the major issue with respect to being able to determine a system's Infrastructure Loss Index is the timely accounting of the water at the customers end (meter reads).

14. Ottawa does not normally have any water restrictions imposed on their water customers. Halifax also does not impose any water restrictions on customers. London imposes an odd/even lawn watering restriction during June, July and August.

15. The City has approximately 500 km of watermains located on private property. Maintenance of these systems is the responsibility of the property owner. Very few of these private water systems in Ottawa have perimeter metering. Without perimeter metering, private water systems have no incentive to locate and reduce leaks in their distribution system.

16. The City had approx. 10 private systems with perimeter meters in 2000, and now has 24 private systems with perimeter meters. Staff believe that there are hundreds of private water systems in Ottawa.

17. As outlined in section 4.3, the Utility Services Branch and the Revenue Branch of Finance have different priorities with respect to water meters. Utility Services strive to have accurate operating meters for water accounting and reporting, whereas Revenue strives to have a higher quantity of "actual readings" (as opposed to estimated water meter readings) for billing purposes. As such, Revenue focuses more on getting more residential water meters repaired (188,000 of the 195,000 total). The focus of the Utility Services group is to repair/calibrate the industrial, commercial and institutional sector water meters regularly, as they are the largest water consumers.

18. Large water meters in the City (7,000 of the 195,000) account for over 50% of the water consumed.

19. Water meters tend to under register consumption as they wear out and lose accuracy.

20. No specific group had been assigned to lead and be responsible for all water loss reduction programs.
    - This group should be provided with the appropriate authority to implement the programs.
    - The implementation of the International Water Association's water loss reduction strategies should be the basis of the program.
    - The program should address all water loss issues and should address the water use of private systems connected to the City system, including the appropriate use of perimeter meters of those systems.

21. A comprehensive report to Council is needed to outline all aspects of the City's water loss strategy.

- This report should address staffing resource and budget requirements, the intended target Infrastructure Loss Index and any proposed by-law changes.
- The report should also address the issue of private water systems connected to the City water system, including the need for perimeter metering, repairs and maintenance on private water systems, and the strategy of monitoring water loss on private water systems.

Recommendation 21

The City should identify a specific group to lead and be responsible for all water loss reduction programs.

Management Response

Management agrees with this recommendation. A report came forward in Q1 2006, to outline the Water Loss Control program to reduce water losses. The Branch will coordinate a steering committee to improve overall water accountability. The DWS division will be responsible for water leakage reduction.

Recommendation 22

Utility Services should bring forward a report to Council addressing all elements of their water loss strategy.

Management Response

Management agrees with this recommendation. A report covering this program has been prepared and was tabled with Committee in Q1 2006.

3.6   DWS' status on meeting upcoming Provincial regulatory requirements (Quality Management System & Sustainable Water and Sewage Systems Act).

Background

The Province through the Safe Drinking Water Act has stated that all water systems will be required to have a Quality Management System in place. Such a system would follow the standard "Plan – Do – Check – Improve" cycle, similar to the various ISO Quality Management Systems. Justice O'Connor's Walkerton Inquiry Part 2 report had specific timelines for the province to implement a mandatory Quality Management System (target date for municipalities to be required to have an accredited operating authority: 2006). The province is having difficulty meeting the time frame outlined in the Walkerton Inquiry Part 2 report, but the requirement is imminent. It is expected that submission to the province of Operational Plans will be a requirement of the Quality Management System. It is also

expected that a third party auditing agency will also be a requirement of the approval process.

The province is also moving forward on Bill 175, the Sustainable Water and Sewage Systems Act. Although no regulations have yet been released with respect to this Bill that was initiated in 2002, the province has suggested that a full cost of service report on water and sewage systems will be required, that cost recovery reports will be required, that specific financial management reports will be required and that enforcement of the future regulations can be expected.   The release of any regulations associated with Bill 175 is pending the results of the Province's Water Strategy Expert Panel. The Expert Panel released their report in July 2005, with 51 recommendations.

Focus of Audit

The audit reviewed the status of the DWS with respect to meeting the requirement of a Quality Management System, and with respect to meeting the requirements of the Water and Sewage System Act.

Audit Criteria

The Ontario provincial government is expected to bring in new regulations related to a Quality Management System for drinking water systems and related to Bill 175, the Sustainable Water and Sewage Systems Act. The audit reviewed the status of the City with respect to being able to implement/accommodate these future regulations, and in particular to ensure:

For the upcoming Quality Management System regulations

- DWS has established procedures to meet the future provincial Quality Management System requirements

- DWS achieves conformance with the established procedures

- DWS demonstrates the conformance of the established procedures

For the upcoming regulations associated with the Sustainable Water & Sewage Systems Act

- DWS is preparing for the regulatory reporting requirements

- Management has formally assessed implications

- Dedicated reserves are in place

- City can provide a complete water fund breakdown of costs

- Potential changes in accounting systems, policies, and procedures have been considered

Findings/Observations of Audit

1. The Utility Services Branch (USB) has been leading the Quality Management System review for the City. USB has been monitoring the province's approach to the future Quality Management System.

2. DWS provided a Quality Management System background information report to the Planning and Environment Committee on February 22, 2005.

3. With the movement of staff and the ongoing organization review within the USB, momentum has been reduced with regards to the implementation of the Quality Management System.

4. The City has not identified any staffing or funding requirements to meet the requirements of the future Quality Management System. The USB intends to request any resourcing needs (if required), only when the province imposes the Quality Management System and once the City understands the full scope of the provincial requirements.

5. The USB is currently implementing a Quality Management System for the Biosolids program.

6. Neither the City of London nor the Halifax Regional Water Commission has a formal Quality Management System in place.

7. Once the Quality Management System is imposed on the drinking water system, it can be expected that a similar provincial requirement will be forthcoming on wastewater systems. To be proactive, the City should identify a specific group within the organization to be responsible for all Quality Management System requirements. The group responsible for implementing and monitoring the Quality Management System program should be closely linked to the groups that must implement the Provincial requirements of the program(s).

8. The City is reviewing the recently released recommendations of the province's Water Strategy Expert Panel.

9. The City does not expect any major business practices changes with respect to the Sustainable Water and Sewage System Act, as most current practices follow good business principles.

10. As noted in section 4.2, the City does not have a current breakdown of actual costs for providing water services as the overhead allocation has not been updated to reflect budget changes and some direct costs are simply factored into the overhead allocation. A more detailed breakdown is expected to be required by the sustainable Water and Sewage Systems Act.

Recommendation 23

The Utility Services Branch should implement a full Quality Management System for all environmental programs (Biosolids, Solid Waste, Water and Wastewater).

> **Management Response**
>
> Management agrees with the intent of this recommendation. This initiative is already well underway with the development of the Utility Services Quality Management System and is in place for the Bio-solids Program. Its implementation will be phased in the remaining programs. The Province has recently released the new Drinking Water Quality Management Standard. Staff are currently reviewing this new Standard and expect to report to Committee in Q1 2006 on this issue. Funds were approved in the 2006 Budget to address this likely regulatory requirement.

3.7   Issues Related to Multiple Audit Objectives

Background

A number of our lines of inquiry raised questions about the approach to governance of the water system in Ottawa. The recent report of the Water Strategy Expert Panel in Ontario also identified governance as a key issue. The report recommends that all water utilities be required to develop a business plan for submission to an Ontario Water Board that will outline a governance, financial and accountability model and proposed rate structure for the water service. The report also favours the creation of municipal corporations to manage water services (drinking water and wastewater management). The report recommends that water services should have responsibility for metering, billing and collecting arrangements and should maintain separate accounts from those of the municipality, with transactions between water services (whether established in a separate corporation or not), including allocation of overhead or administrative charges, priced at market value.

In addition, audit objectives 2 and 6 (upcoming regulations) both raised issues concerning the allocation of costs to the water system. Under objective 2 it was noted that some direct water-related costs are not directly charged to the water fund, but rather included in a general overhead allocation. It also noted that the overhead allocation is not based on the City's current cost structure. Under objective 6, it was noted that upcoming regulations are almost certain to require a full cost of service report on water (and sewer) services

Findings/Observations of Audit

1. Important elements of the drinking water system with their own independent mandates are located in different departments, and report through different chains of command to the City Manager. As such, no one below the level of the City Manager has a comprehensive view of drinking water service delivery.

2. This has resulted in some issues that have not yet been addressed, notably the meter and external sensor maintenance program.

3. The independent mandate of the Financial Services group in particular is inconsistent with the "centres of expertise" model as practiced elsewhere in the corporation. Generally service providers are subject to a Service Level Agreement and take direction from the operating departments as "clients". Financial Services does not take direction from DWS, or from Utility Services.

4. The Service Level Agreements that do exist with centres of expertise such as RPAM and Fleet Services have not been updated to reflect changes resulting from budget directions and resulting changes in service levels.

5. Future programs related to Water Quality and Water Loss will have impacts across various City departments. A City staff inspecting an industrial, commercial, or institutional facility in the future could review backflow prevention devices (for a cross-connection control program), could review the internal plumbing arrangements (for improper water plumbing connections as part of the water loss reduction program) and could be reading the water meter as part of the billing cycle. These services cross many departments at this time.

6. *The Expert Panel has discussed the creation of a separate corporate utility for water services. Establishing accountability for the various units involved to a single source, whether through direct reporting or through effective Service Level Agreements, giving the "client" manager the authority to provide direction to the service providers are also options. Any review of the governance structure should consider the implications of new programs, such as a cross-connection control program, the Quality Management System program and the various programs related to the reduction of water loss.*

7. *Observations related to the allocation of costs to the Water fund were discussed in section 4.2 of this report. Direct costs such as those in the Revenue Division should be allocated to the water fund directly, and over-head costs should be allocated to the water fund based on current expenditure levels. While new regulations under the Sustainable Water and Sewage System Act may influence final calculations, they are likely to be consistent with these principles and will require current data in any case.*

Recommendation 24

The governance structure of the delivery of water services should be reviewed and restructured to ensure accountability of an individual below the level of the City Manager for the water fund and services funded by the water fund.

Management Response

Management agrees with the intent of this recommendation. The first step should be to identify a specific individual to oversee the entire system. Whether to move to one distinct separate organization should be fully studied to determine the costs and benefits of doing so. This review will be initiated in Q3 2006.

Recommendation 25

That Financial Services re-examine the allocation of costs to the water fund and identify current costs for all elements.

Management Response

Management agrees with this recommendation. This review will be completed by Q4 2006 consistent with the rules of the report "Watertight: The case for change in Ontario's water and wastewater sector" (if adopted) and allocation methodology adopted through OMBI.

4. Audit Report Conclusions

DWS complies with the relevant federal and provincial regulations governing the safe supply of drinking water to Ottawa residents. In many areas, current operations meet best practices. However the fit within the City's organizational structure is not entirely comfortable, resulting in sub-optimal co-ordination and difficulty in resolving differences of priority or direction. It also appears to be customer friendly to a fault, resulting in some inefficiency and ineffectiveness in order to avoid inconveniencing or challenging customers. There are also inadequacies in the computerized systems used to support billing and collection, and meter inventory and maintenance activities. This report provides recommendation to deal with these concerns.

4.1 Acknowledgments

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

Ottawa

Office of the Auditor General

AUDIT OF THE MANAGEMENT

CONTROL FRAMEWORK

2005 Report

Chapter 3

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Introduction

The City of Ottawa is a large and complex organization:

- Responsible for a multitude of diverse activities

- Large annual budget of approximately $2 billion

- Approximately 12,000 full-time equivalent staff

The audit was undertaken for the purpose of identifying and assessing the key steps that City management uses to manage its operations. The objective of the audit was to conduct a high level assessment of the effectiveness of the management control framework in place at the City, to assess what is working well and what needs to be improved, identify recommended actions for improvement and identify key areas for further audit work.

The management control framework includes the City's resources, systems, processes, culture, structure, and tasks and how they support the achievement of the City's objectives. The scope of the audit addressed the management control framework in place in 2005, and was conducted on an organization-wide basis (excluding Ottawa Police Service).

Key Findings

Key findings for the audit are organized in the following categories:

- Planning and Performance Management

- Centres of Expertise

- Financial Management Control Framework

- Integrated Risk Management

- Policy Framework

- Information Management/Information Technology Strategy

Planning and Performance Management: The City has recently introduced substantial and positive changes to modernize its planning and performance management framework. To be fully effective, the framework will need to continue to evolve to address the remaining deficiencies.

Recommendation 1

That the Chief Corporate Planning and Performance Reporting Officer assess the City Corporate Plan and process, and budgeting process for 2006, once completed, to identify lessons learned, and develop an action plan to address issues or outstanding items, including:

- **the planned introduction of performance measures against the key objectives within the City Corporate Plan**

- **the planned linking of the budget to the City Corporate Plan**

- **incorporating capacity planning in the planning process and the plan**

- **explicitly identifying key assumptions used in the development of the plan**

That the Chief Corporate Planning and Performance Reporting (CCPPR) Officer investigate the opportunity to integrate the Corporate Services priority setting tool more broadly within the corporate planning process.

That the Director of Employee Services monitor and report on the timely and appropriate completion of Individual Contribution Agreements (ICA) across the City.

<u>Management Response</u>

Management agrees with these recommendations in principle. Plans for a post mortem of the City Corporate Plan (CCP) and related activities were established earlier in 2005, with post mortem workshops scheduled for early in Q1 2006. One of the specific questions addressed will be the link between the corporate planning process, the long-range financial plan and the budgeting process. Recommendations for changes to be considered in the next version of the CCP arising from the post mortem will be reviewed and signed off by the Executive Management Committee (EMC) in Q1 2006 and taken into account in the next refresh of the CCP, which will take place in late 2006.

In addition, in parallel with the CCP post mortem, the Office of the Chief Corporate Services Officer will conduct as assessment of the budget process, as it does each year, and bring forward any suggested changes to Council.

Management agrees with the recommendation regarding the planned introduction of performance measures against the key objectives within the City Corporate Plan. Work on these measures has already begun and a report on the proposed performance measurement and reporting framework was submitted to Council in Q1 2006.

Management will be linking the budget to the Corporate Plan as part of its Integrated Planning Framework. Following the next election, a "Term of Council" Plan will be developed and approved along with the next iteration of the City's Long-Range Financial Plan. These will be the basis for multi-year budgeting and for the next version of the Human Resources Plan.

Management notes that capacity planning was included in the planning process and the plan. The planning process followed by Management specifically took capacity constraints into account. The feasibility of implementing each action item included in the CCP and Departmental Business Plans within the existing resource base was evaluated by the City department(s) involved. Where this was not possible, the

additional resources required were highlighted and included in the costing of the plans that were submitted to Council. This is a simple, cost-effective approach to capacity assessment. If in future years Management sees that plans have been over committed, Management will re-assess the approach.

Management agrees with explicitly identifying key assumptions used in the development of the plan. This will be addressed through post mortem – see response above. This will be implemented as part of the CCP refresh that will take place in late 2006.

Regarding the recommendation that the CCPPR Officer investigate the opportunity to integrate the Corporate Services Priority setting tool, see response regarding capacity assessment above. As noted by the Auditor General, the Corporate Planning process was implemented recently and will evolve over time. Through mechanisms such as the post mortem we are taking a continuous improvement approach and will identify areas where the process can be improved.

Management agrees with the recommendation regarding monitoring and reporting on the timely completion of Individual Contribution Agreements across the City by the Director of Employee Services.   As noted in the Auditor General's report, the City just established its Corporate Planning Framework in 2005. In the first year, we developed the City Corporate Plan and Departmental Business Plans. In subsequent years these will cascade down throughout the organization and branch and unit workplans aligned with the CCP and DBPs will be prepared. At that point the link between ICA's and business plans will be clearly demonstrated. For the time being the requirement to establish ICA's for all Management staff remains, but these are based on management accountabilities and negotiated objectives. Management will continue to remind all Branch Management of their responsibility to complete ICA's for their management staff. At the end of the performance cycle Management will report on the number of ICA's completed as compared to the number of employees eligible for the performance pay program. This information will be presented to the Executive Management Committee in Q2 of 2006

Centres of Expertise: The Centres of Expertise model is not properly supported by clearly defined expectations and performance reporting.

<u>Recommendation 2</u>

That the City Manager ensure there is a review to update the Centres of Expertise Service Level Agreements, including definition of performance levels, monitoring requirements and approach for identifying and resolving issues or disputes.

Management Response

Management agrees with this recommendation. A draft proposed process, addressing all of these elements, will be presented to Senior Management Team (SMT) at the January 2006 meeting. This project is a priority identified in the 2006 Corporate Services departmental business plan and will be included in the 2006 workplan of the Office of the Chief Corporate Services Officer.

Financial Management Control Framework: The City's financial management control framework is fragmented. Control procedures, roles, responsibilities and accountabilities are set out in various ways, some formal, some informal. There is no formal framework that explicitly outlines the City's financial management control structure.

Recommendation 3

That the Chief Corporate Services Officer develop a formal financial management control framework that clearly defines financial management accountabilities, control objectives, risks and the related control processes/mechanisms that have been put in place to mitigate the risks. The roles and responsibilities as they relate to shared services (in particular, the Financial Support Units) should link to those set out in the Service Level Agreements (SLA) between Financial Services and client departments.

Management Response

Management agrees with the recommendation to develop an overall framework. If this framework is supposed to be broad and intended to describe general control objectives, levels of responsibility, overall control policies and philosophy, then this exercise is achievable in 2006, likely within existing resources. One specific issue that will be addressed, as part of the SLA updates noted in the response above, will be a clarification of the role of the Financial Support Units, so that services will be provided on a consistent basis and their role will be well understood Management will also establish parameters for review of transactions that will be consistently applied.

Integrated Risk Management: There is no enterprise-wide approach, or ability for the City to consistently assess the level of risk it faces across the organization, to aid in planning and priority setting.

Recommendation 4

That the Chief Corporate Planning and Performance Reporting Officer introduce integrated risk management within the City, as part of the planning and performance management cycle. This would include such activities as:

- **development of an integrated risk management policy**

- **development of tools and approaches for risk management**
- **provision of risk management training**

<u>**Management Response**</u>

Although Management agrees with the Auditor General's recommendation in principle, Management does not believe it would be practical to implement this recommendation at this point. The cost/benefit of implementing a full blown, organization-wide risk management initiative, as suggested by the Auditor General, is not clear, nor is it clear that this is a widely accepted best practice in municipal governance. Recent implementation of these types of programs in the private sector has been driven to a considerable extent by Sarbanes-Oxley requirements in the U.S. To Management's knowledge, in the few cases where Canadian municipalities have experimented with them, implementation has not been successful.

Management's priority at this point, from a management control framework perspective, is on rolling out the planning framework and developing and implementing the performance measurement and reporting framework, throughout the organization over the next 2-3 years. Nonetheless, certain steps Management is taking to enhance the Corporate planning process, such as the presentation of a comprehensive environmental scan, which will identify risks to be considered in developing the City Corporate Plan and Departmental Business plans, will address this issue.

Regarding the development of an integrated risk management policy management, Management believes that the Auditor General's observations in this area should take into account that the City has a risk management policy, which was approved by Council in 2001, confirms the City's commitment to sound risk management processes. Some of the specific measures that Corporate Services has taken to explicitly address risks in different areas are outlined in this policy. For example, risk management principles are explicitly applied in investment decisions, in decisions regarding insurance coverage and in providing and maintaining safe conditions in the workplace. In addition, risk management processes are also applied in other key areas. The Emergency Measures Unit has identified catastrophic risks that could impact the City and has developed a program/plan to address them. Moreover, on an ongoing basis, Public Works staff perform construction/maintenance project risk assessments and procedures have been adopted by the City to ensure that risks are reasonably transferred through the tender, contract and agreement process. Both Real Property Asset Management and Public Works and Services have adopted Comprehensive Asset Management Strategies that have been approved by City Council and that include inventories, gap analyses and strategies for decommissioning and rehabilitating infrastructure reaching the end of its lifecycle.

Policy Framework: The policy framework within the City is fragmented.

Recommendation 5

That the Chief Corporate Services Officer complete plans for reviewing and updating corporate administrative policies and developing a new corporate policy framework, which should include a single point of access, common look and feel, the consolidation of by-laws, and defining a timetable for when the process will be completed.

Departments should monitor their plans to ensure that the harmonization of operational policies and procedures are completed on a timely basis.

> **Management Response**
>
> Management agrees. Plans are currently being developed within Corporate Administrative Policy and Performance Management (CAPPM) for reviewing and updating Corporate Administrative Policies and developing a new corporate policy framework. This framework will be completed and presented to EMC for approval in Q4 2006.
>
> In defining a timetable for when the overall policy update process will be completed, consideration has to be given to availability of resources. The same resources to complete work outlined in 4.2 COE, will be deployed to complete this work. The Management Advisory Committee chaired by the Chief Corporate Services Officer will prioritize the updating of policies.
>
> By-laws are now consolidated on the City's Intranet, work being completed by these same resources.
>
> With regard to departments monitoring of their plans to ensure timely harmonization of operational policies and procedures, management agrees but no specific changes or initiatives are required in response to this recommendation. As noted by the Auditor General, this responsibility rests with each department. CAPPM will work with each department regarding Corporate Administrative Policy to share experience, tools and approaches, however operational policies and procedures at the sub-corporate level (Departmental or Branch) are the responsibility of those policy owners. The CAPPM will monitor the implementation of the corporate framework and report on an annual basis to the Chief Corporate Services Officer.

Information Management/Information Technology Strategy: The City does not have a defined and approved information management/information technology strategy linked to corporate plans.

Recommendation 6

That the Chief Information Officer, supported by the service departments and administrative branches, follow through on plans to develop a City-wide information management/information technology strategy to support the City Corporate Plan, within a defined timeline.

Management Response

Management agrees with this recommendation. ITS initiated the development of a new IT Strategic Plan in the fall of 2004, replacing the original plan approved in 2000 by the Ottawa Transition Board. However, the new Plan was put on hold in 2005 following announcement of the City Corporate Plan and Departmental Business Planning exercise. ITS will complete the new IT Strategic Plan to support the City Corporate Plan by Q1, 2006.

General management response

We appreciate the positive comments made by the Auditor General regarding recent improvements we have made to key management processes, such as the introduction of the corporate planning framework, preparation and approval by Council of the first City Corporate Plan and the development of a performance measurement and reporting framework. As noted by the Auditor General, the management control framework has evolved considerably and we will continue to make further improvements. More specifically, in 2006 we will enhance certain important parts of the framework where there will be the greatest immediate benefits. These include:

- Enhancement of the City Corporate planning process and related activities based on a post mortem of the 2005 exercise;

- Preparation of a comprehensive environmental scan, which will identify risks to be considered in developing the City Corporate Plan and Departmental Business plans;

- Completion of the performance measurement and reporting framework, presentation of the framework to Council and implementation of the 1st key components;

- Updating of the Centre of Expertise Service Level Agreements;

- Establishment of a corporate policy framework, priorities and a timetable for policy revisions and update of selected, key policies; and

- Completion of the IT Strategic Plan

Conclusion

The City is taking significant strides to modernize its management control framework, to match the size and scope of its operations. The detailed observations section of the report includes many of the areas of strength or planned improvements that were identified during the course of the audit. That being said, the weaknesses in the management control framework summarized above reduce effectiveness and may place the organization at some risk over time. Detailed audit observations, including risks and recommendations for improving controls, are provided in Section 4 of this report.

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

RÉSUMÉ

INTRODUCTION

La Ville d'Ottawa est une organisation vaste et complexe :

- Elle est chargée d'une multitude d'activités diverses;
- d'un important budget annuel d'environ 2 milliards de dollars;
- d'un effectif d'environ 12 000 équivalents à plein temps.

La vérification a été entreprise afin de déterminer et d'évaluer les principales étapes utilisées par les gestionnaires de la Ville pour gérer ses activités. L'objectif de la vérification était d'effectuer une évaluation de haut niveau de l'efficacité du cadre de contrôle de gestion en place à la Ville; d'évaluer ce qui fonctionne bien et ce qui doit être amélioré; de déterminer les mesures recommandées pour l'amélioration, ainsi que les principaux secteurs qui doivent faire l'objet d'un travail de vérification plus poussé.

Le cadre de contrôle de gestion comprend les ressources, les systèmes, les processus, la culture, la structure et les tâches de la Ville, et la façon dont ceux ci servent à l'atteinte des objectifs de la Ville. La vérification a porté sur le cadre de contrôle de gestion en place en 2005, et elle a été effectuée dans toute l'organisation (à l'exception du Service de police).

PRINCIPALES CONSTATATIONS

Les principales constatations de la vérification sont regroupées dans les catégories suivantes :

- la planification et la gestion du rendement;
- les centres d'expertise;
- le cadre de contrôle de gestion financière;
- la gestion intégrée des risques;
- le cadre stratégique;
- la stratégie en matière de gestion de l'information et de technologie de l'information.

Planification et gestion du rendement : Récemment, la Ville a apporté des changements importants et positifs afin de moderniser son cadre de planification et de gestion du rendement. Afin d'être complètement efficace, le cadre devra continuer à évoluer pour corriger les imperfections qui restent.

Recommandation 1

Que le chef de la planification municipale et de l'évaluation du rendement évalue le Plan directeur municipal et le processus connexe, ainsi que le processus de budgétisation pour

2006, une fois achevé, afin de déterminer les leçons apprises et d'élaborer un plan d'action pour régler les questions ou les problèmes non résolus, notamment :

- **la mise en place planifiée de mesures du rendement quant aux objectifs principaux du Plan directeur municipal;**

- **la coordination planifiée du budget et du Plan directeur municipal;**

- **l'incorporation de la planification de la capacité dans le processus de planification et dans le plan;**

- **la détermination explicite des principales suppositions utilisées pour l'élaboration du plan.**

Que le chef de la planification municipale et de l'évaluation du rendement (CPMER) examine la possibilité d'intégrer l'outil d'établissement des priorités des Services généraux plus largement dans le processus de planification municipale.

Que le directeur des services aux employés surveille les accords de contribution individuelle (ACI) dans toute la Ville et qu'il rende compte de leurs réalisations en temps opportun et de façon appropriée.

Réponse de la direction

La direction est d'accord avec ces recommandations en principe. Plus tôt en 2005, on avait prévu d'effectuer une analyse rétrospective du Plan directeur municipal (PDM) et des activités connexes, et les ateliers d'analyse rétrospective étaient prévus pour le début du premier trimestre de 2006. Une des questions précises à l'ordre du jour sera le lien entre le processus de planification municipale, le plan financier à long terme et le processus de budgétisation. Le Comité de la haute direction (CHD) examinera et approuvera les recommandations de modifications à considérer pour la prochaine version du PDM découlant de l'analyse rétrospective dans le premier trimestre de 2006, et il en tiendra compte dans la prochaine mise à jour du PDM, laquelle aura lieu à la fin de 2006.

De plus, parallèlement à l'analyse rétrospective du PDM, le bureau du chef des Services généraux effectuera une évaluation du processus de budgétisation, comme chaque année, et présentera toute modification suggérée au Conseil.

La direction est d'accord avec la recommandation relative à la mise en place planifiée de mesures du rendement quant aux principaux objectifs du Plan directeur municipal. On a déjà amorcé le travail relatif à ces mesures et, dans le premier trimestre de 2006, on a présenté au Conseil un rapport sur le cadre d'évaluation et de rapport du rendement proposé.

La direction fera le lien entre le budget et le Plan directeur dans le cadre de planification intégrée. Après la prochaine élection, on élaborera un plan relatif au « mandat du Conseil » et il sera approuvé avec la prochaine phase du Plan financier à

long terme de la Ville. Ils constitueront le fondement du budget pluriannuel et de la prochaine version du plan de ressources humaines.

La direction souligne qu'on a inclus la planification de la capacité dans le processus de planification et dans le plan. Le processus de planification de la direction a tenu compte tout particulièrement des contraintes de capacité. La faisabilité d'appliquer chacun des éléments contenus dans le PDM et dans les plans opérationnels du Service (POS) dans la base de ressources existante a été évaluée par le service de la Ville concerné. Quand il n'était pas possible de le faire, on a mis en évidence les ressources supplémentaires nécessaires et elles ont été comptées dans le coût des plans qui ont été présentés au Conseil. Il s'agit d'une démarche simple et rentable pour évaluer la capacité. Si, dans les années à venir, la direction constate qu'il y a eu des engagements excédentaires au niveau des plans, elle réévaluera la démarche.

La direction est d'accord pour déterminer de façon explicite les principales constatations utilisées pour élaborer le plan. Cette étape se fera à l'analyse rétrospective – voir la réponse ci avant. Cette étape fera partie de la mise à jour du PDM qui aura lieu à la fin de 2006.

Pour ce qui est de la recommandation voulant que le CPMER examine la possibilité d'intégrer l'outil d'établissement des priorités des Services généraux, voir la réponse relative à l'évaluation de la capacité ci avant. Comme l'a souligné le vérificateur général, le processus de planification municipale a été mis en œuvre récemment et continuera d'évoluer avec le temps. Grâce à des mécanismes comme l'analyse rétrospective, nous optons pour une démarche d'amélioration continue et nous reconnaîtrons les domaines dans lesquels le processus peut être amélioré.

La direction est d'accord avec la recommandation voulant que le directeur des Services aux employés surveille les accords de contribution individuelle dans toute la Ville et rende compte de leur réalisation en temps opportun. Comme l'a souligné le rapport du vérificateur général, la Ville vient tout juste de définir son cadre de planification municipale en 2005. Au cours de la première année, nous avons élaboré le Plan directeur municipal et les plans opérationnels du Service. Au cours des années à venir, ces plans seront transférés partout dans l'organisation et à la direction, et on rédigera des plans de travail d'unité alignés avec le PDM et les POS. À cette étape, le lien entre les ACI et les plans opérationnels sera clairement établi. Pour l'instant, la nécessité de définir des ACI pour tout le personnel de la gestion demeure, mais ceux ci sont fondés sur les responsabilités de la direction et les objectifs négociés. La direction continuera de rappeler à tous les gestionnaires de la direction qu'ils sont chargés de passer des ACI pour leur personnel de gestion. À la fin du cycle de rendement, la direction rendra compte du nombre d'ACI réalisés en comparaison du nombre d'employés admissibles au Programme de rémunération au rendement. On présentera cette information au Comité de la haute direction dans le deuxième trimestre de 2006.

Centres d'expertise : Le modèle des centres d'expertise ne bénéficie pas du soutien adéquat que procurent des attentes clairement définies et l'évaluation du rendement.

Recommandation 2

Que le Directeur des services municipaux veille à ce qu'il y ait un examen pour mettre à jour les ententes sur les niveaux de service des Centre d'expertise, notamment la définition des niveaux de rendement, les exigences de surveillance et la démarche visant à reconnaître les problèmes ou les conflits et à les résoudre.

Réponse de la direction

La direction est d'accord avec la présente recommandation. L'ébauche d'un projet de processus contenant tous ces éléments sera présenté au CHD à la réunion de janvier 2006. Le présent projet a été déterminé prioritaire dans le Plan opérationnels du service pour 2006 des Services généraux et il fera partie du plan de travail de 2006 du Bureau du chef des services généraux.

Cadre de contrôle de gestion financière : Le cadre de contrôle de gestion financière de la Ville est fragmenté. Les procédures de contrôle, les rôles et les responsabilités sont fixés de façons diverses, parfois de façon officielle et parfois de façon officieuse. Il n'y a pas de cadre officiel qui dicte de façon explicite la structure de contrôle de gestion financière de la Ville.

Recommandation 3

Que le chef des Services généraux élabore un cadre de contrôle de gestion financière officiel qui définit clairement les responsabilités, les objectifs de contrôle et les risques de la gestion financière, ainsi que les processus ou mécanismes de contrôle connexes qui ont été mis en place pour diminuer les risques. Les rôles et les responsabilités en ce qui a trait aux services partagés (en particulier, les Unités des services financiers (ENS) devraient être liés à ceux fixés par les ententes sur les niveaux de service entre les Services financiers et les services clients.

Réponse de la direction

La direction est d'accord avec la recommandation d'élaborer un cadre global. Si le cadre en question est censé être général et s'il vise à décrire des objectifs de contrôle généraux, des niveaux de responsabilité, une philosophie et des politiques de contrôle globales, alors cet exercice est réalisable en 2006, probablement avec les ressources existantes. L'un des problèmes précis qui sera abordé, dans le cadre des mises à jour des ENS mentionnées dans la réponse ci avant, sera la clarification du rôle des Unités des services financiers, afin qu'on fournisse des services de façon continue et que leur rôle soit très bien compris. La direction fixera aussi des paramètres pour l'examen des transactions, lesquels seront appliqués de façon uniforme.

Gestion intégrée des risques : Il n'y a pas une démarche qui soit étendue à l'ensemble de l'organisation, pas plus que la Ville n'est en mesure d'évaluer de façon uniforme le niveau de risque qui se pose dans l'ensemble de l'organisation afin de faciliter la planification et l'établissement des priorités.

Recommandation 4

Que le chef de la planification municipale et de l'évaluation du rendement mette en place une gestion intégrée des risques dans la Ville, dans le cadre du cycle de gestion du rendement et de la planification. Cette étape comprendrait notamment les activités suivantes :

- **l'élaboration d'une politique sur la gestion intégrée des risques;**
- **l'élaboration d'outils et de démarches pour la gestion des risques;**
- **l'offre d'une formation en gestion des risques.**

Réponse de la direction

Bien que la direction soit d'accord avec la recommandation du vérificateur général en principe, ils ne croient pas que la mise en œuvre de la présente recommandation soit réalisable pour le moment. Le coût et l'avantage de la mise en œuvre d'une initiative de gestion des risques complète, à l'échelle de l'organisation, comme l'a suggéré le vérificateur général, ne sont pas clairement définis. De plus, il n'est pas clair s'il s'agit d'une meilleure pratique généralement acceptée dans la régie municipale. La mise en œuvre récente de ces types de programme dans le secteur privé découle en grande partie des exigences de Sarbanes Oxley aux É. U. À la connaissance de la direction, dans les quelques cas où des municipalités canadiennes ont fait l'expérience de ces programmes, leur mise en œuvre n'a pas été fructueuse.

À ce stade, dans le contexte du cadre de contrôle de gestion, la priorité de la direction consiste à mettre en pratique le cadre de planification, ainsi qu'à élaborer et à appliquer le cadre d'évaluation et de rapport de rendement dans toute l'organisation, au cours des deux ou trois prochaines années. Néanmoins, certaines mesures prises par la direction pour améliorer le processus de planification municipale corrigeront le problème. À titre d'exemple, la présentation d'une analyse complète de l'environnement permettra de déterminer les risques à considérer au moment de l'élaboration du Plan directeur municipal et des plans opérationnels du Service.

Pour ce qui est de l'élaboration d'une politique sur la gestion intégrée des risques, la direction croit que les remarques du vérificateur général dans ce domaine devraient tenir compte du fait que la Ville a une politique sur la gestion de risques, qui a été approuvée par le Conseil en 2001 et qui confirme l'engagement de la Ville en matière de processus valables pour la gestion des risques. Certaines des mesures précises prises par les Services généraux pour s'attaquer directement aux risques dans différents domaines sont exposées dans la présente politique. À titre d'exemple, les

principes de gestion des risques sont appliqués clairement dans les décisions d'investissement, dans les décisions relatives à la couverture d'assurance, et pour offrir et conserver des conditions de travail sécuritaires. De plus, les processus de gestion des risques sont aussi appliqués dans d'autres domaines clés. L'Unité des mesures d'urgence a déterminé les risques catastrophiques qui pourraient avoir des conséquences pour la Ville et a élaboré un programme/plan pour y remédier. En outre, le personnel des Travaux publics effectue constamment des évaluations des risques relatifs aux projets de construction ou d'entretien, et la Ville a adopté des procédures pour faire en sorte que les risques soient transférés de façon raisonnable grâce au soumissionnaire, au contrat et au processus d'entente. La Gestion des actifs et des biens immobiliers ainsi que Services et Travaux publics ont adopté des stratégies globales de gestion des actifs qui ont été approuvées par le Conseil municipal et qui comprennent des inventaires, des analyses d'écarts et des stratégies pour la mise hors service et la réhabilitation d'infrastructures qui arrivent à la fin de leur cycle de vie.

Cadre politique : Le cadre politique de la Ville est fragmenté.

<u>Recommandation 5</u>

Que le chef des Services généraux élabore des plans pour l'examen et la mise à jour des politiques administratives municipales et pour l'élaboration d'un nouveau cadre politique municipal, lequel devrait comprendre un unique point d'accès, une présentation uniforme, la consolidation des règlements et la définition d'un échéancier pour la réalisation du processus.

Les services devraient surveiller leurs plans pour faire en sorte que l'harmonisation des procédures et des politiques opérationnelles soit effectuée en temps opportun.

> **<u>Réponse de la direction</u>**
>
> La direction est d'accord avec cette recommandation. Le personnel de Politiques générales, Gestion du rendement (PGGR), élabore actuellement des plans pour examiner et mettre à jour les politiques administratives municipales et pour élaborer un nouveau cadre stratégique municipal. Dans le quatrième trimestre de 2006, ce cadre sera achevé et présenté pour approbation au CHD.
>
> Au moment de la définition d'un échéancier pour le processus de mise à jour de la politique globale, il faut tenir compte de la disponibilité des ressources. Pour réaliser ce travail, on utilisera les mêmes ressources qui auront servi à réaliser le travail décrit dans le CE 4.2. Le Comité consultatif de direction (CCD) présidé par le chef des Services généraux donnera priorité à la mise à jour des politiques.
>
> Les règlements sont maintenant consolidés dans l'intranet de la Ville; ce sont les mêmes ressources qui effectuent le travail.

Pour ce qui est des services qui surveillent leurs propres plans pour s'assurer de l'harmonisation des procédures et des politiques opérationnelles en temps opportun, la direction est d'accord, mais aucune initiative ni modification précise n'est nécessaire en réponse à cette recommandation. Comme l'a souligné le vérificateur général, cette responsabilité incombe à chaque service. Le personnel de PGGR travaillera de concert avec chaque service en ce qui a trait à la politique administrative municipale afin de partager l'expérience, les outils et les démarches; cependant, les procédures et les politiques opérationnelles au niveau des Services ou de la Direction relèvent de ces responsables de la politique. Le personnel de PGGR surveillera l'application du cadre municipal et rendra compte annuellement au chef des Services généraux.

Stratégie en matière de gestion de l'information et de technologie de l'information : La Ville n'a pas défini ni approuvé une stratégie pour la gestion de l'information et pour la technologie de l'information reliée aux plans municipaux.

Recommandation 6

Que le directeur de l'information, appuyé par les services et les directions administratives, poursuive les projets d'élaboration d'une stratégie pour la gestion de l'information et pour la technologie de l'information à l'échelle de la Ville afin d'appuyer le Plan directeur municipal, et ce, selon un échéancier défini.

Réponse de la direction

La direction est d'accord avec la présente recommandation. Les STI ont amorcé l'élaboration d'un nouveau plan stratégique relatif de la TI à l'automne de 2004, en remplacement du plan original approuvé en 2000 par le Conseil de transition d'Ottawa. Cependant, le nouveau plan a été mis en attente en 2005 après l'annonce du Plan directeur municipal et de l'exercice de planification des activités du Service. Les STI achèveront le nouveau plan stratégique de la TI pour le premier trimestre de 2006, afin d'appuyer le Plan directeur municipal.

Réponse générale de la direction

Nous apprécions les commentaires positifs du vérificateur général relatifs aux améliorations récentes que nous avons apportées aux principaux processus de gestion, comme la mise en place d'un cadre de planification municipal, l'élaboration et l'approbation par le Conseil du premier Plan directeur municipal et l'élaboration d'un cadre d'évaluation et de rapport du rendement. Comme l'a souligné le vérificateur général, le cadre de contrôle de gestion a évolué considérablement et nous continuerons à le perfectionner davantage. Plus précisément, nous améliorerons en 2006 certaines parties importantes du cadre afin d'en retirer les meilleurs résultats immédiats. Ces améliorations comprendront ce qui suit :

- Amélioration du processus d'élaboration du Plan directeur municipal et des activités connexes en fonction d'une analyse rétrospective de l'exercice de 2005;

- Élaboration d'une analyse complète de l'environnement, laquelle déterminera les risques à considérer dans l'élaboration du Plan directeur municipal et des plans opérationnels du Service;

- Achèvement du cadre d'évaluation et de rapport du rendement, présentation du cadre au Conseil et application des premiers éléments clés;

- Mise à jour des ententes sur les niveaux de service des centres d'expertise;

- Définition d'un cadre stratégique municipal, de priorités et d'un échéancier pour la révision des politiques et la mise à jour de certaines politiques clés; et

- Achèvement du plan stratégique de la TI.

CONCLUSION

La Ville fait des efforts importants pour moderniser son cadre de contrôle de gestion, afin qu'il corresponde à la taille et à l'étendue de ses activités. La partie observations détaillées du rapport mentionne bon nombre des points forts et des améliorations planifiées qui ont été énumérés au cours de la vérification. Cela dit, les points faibles du cadre de contrôle de gestion résumés ci avant diminuent l'efficacité et peuvent exposer l'organisation à certains risques au fil du temps. La section 4 du présent rapport contient les observations détaillées de la vérification, y compris les risques et les recommandations pour améliorer les contrôles.

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1.0   Background

The City of Ottawa is a large and complex organization responsible for a multitude of diverse services and activities. The City has approximately 12,000 full-time equivalent staff, and an annual budget of $2 billion.

City services are provided primarily by three main operational services departments: Community and Protective Services, Public Works and Services, and Planning and Growth Management. Corporate Services contains most of the enabling functions of the organization (except for Fleet Services and Marketing and Communications), including Financial Services, Employee Services, Information Technology Services, Real Property Asset Management, Legal Services, as well as the City Clerk's Branch. Figure 1 below identifies the organizational structure of the City's administration.
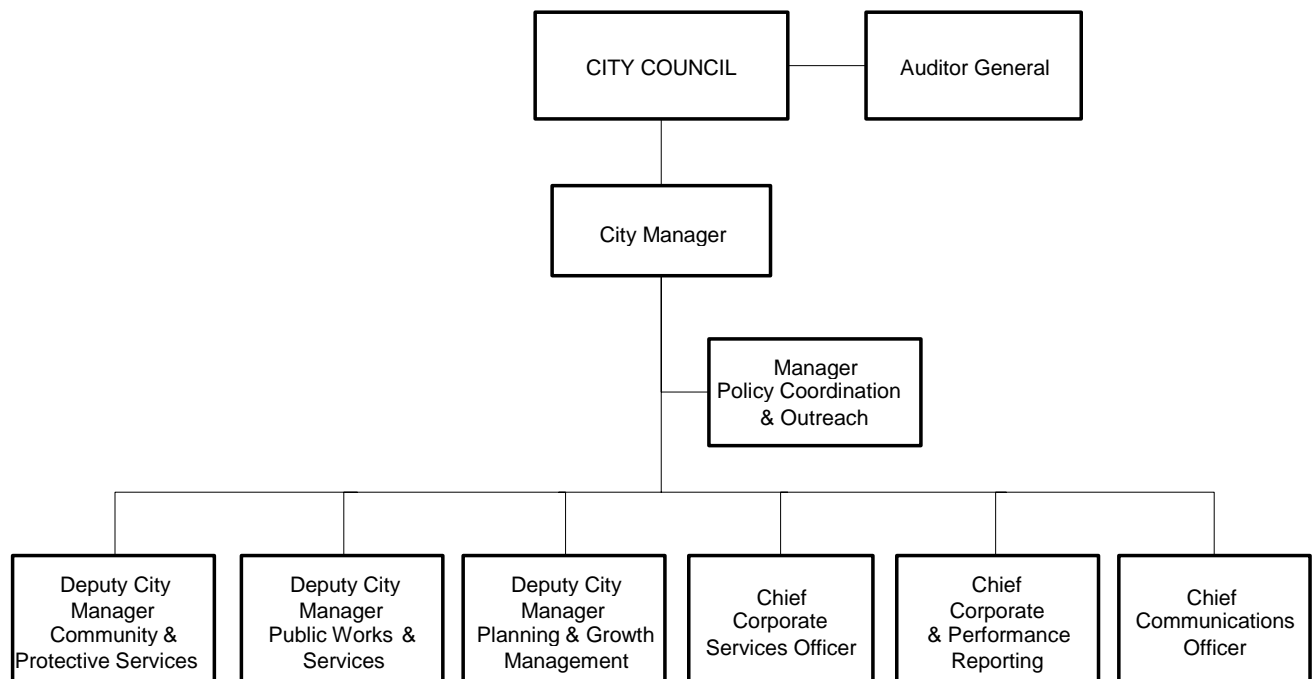
Figure 1 : City of Ottawa Organization Chart

The administration of the City of Ottawa has undergone significant change since amalgamation in 2000, including the institution of a new organizational structure, a significant investment in the SAP enterprise resource management system, and recent introduction of a new corporate planning and performance measurement regime.

2. Audit Objectives and Scope

2.1 Audit Objectives

The objectives of the audit were to conduct a high level assessment of the effectiveness of the management control framework in place at the City, to:

- assess what is working well and what needs to be improved;
- identify recommended actions for improvement; and
- identify key areas for further audit work.

2.2 Audit Scope

The scope of the audit addressed the management control framework currently in place. The management control framework is the City's resources, systems, processes, culture, structure, and tasks and how they support the achievement of the City's objectives. The audit, which encompassed a more detailed review of financial management controls within the overall framework, was conducted on an organization-wide basis, excluding Ottawa Police Service.

2.3   Audit Criteria

The audit criteria are based on the Canadian Institute of Chartered Accountants Criteria of Control model, outlined in figure 2 and figure 3 below.
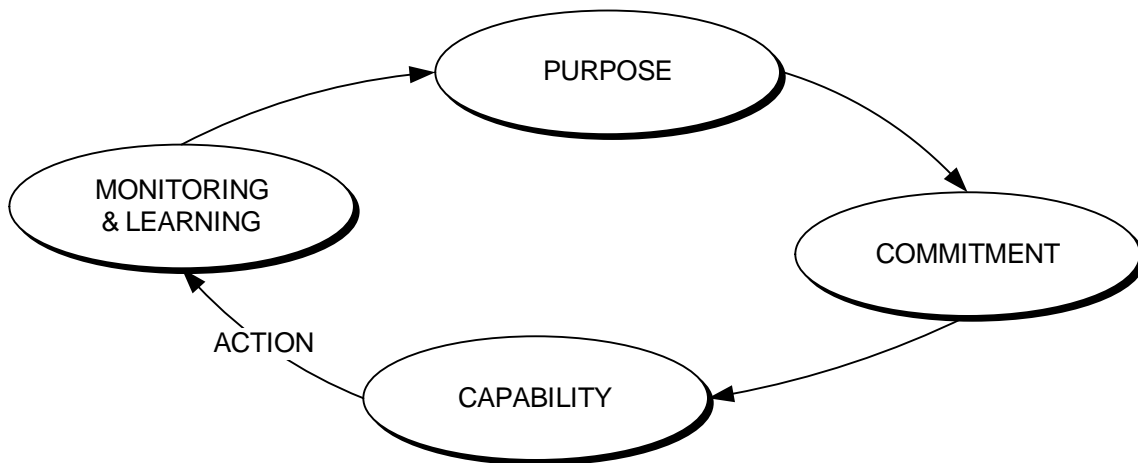
Figure 2 : Criteria of Control Model[1]

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[1] CICA, Guidance in Assessing Control (April 1999) p. 4

Domain	Description
Purpose	Groups criteria that provide a sense of the organization's direction. They address: objectives (including mission, vision and strategy); risks (and opportunities); policies; planning; and performance targets and indicators.
Commitment	Groups criteria that provide a sense of the organization's identity, values and willingness to achieve its purpose. They address: ethical values, including integrity; human resource policies and practices; authority, responsibility and accountability; and mutual trust.
Capability	Groups criteria that provide a sense of the organization's competence. They address: knowledge, skills and tools; communication processes; information; coordination; and control activities.
Monitoring and Learning	Groups criteria that provide a sense of the organization's evolution. They address: monitoring internal and external environments; monitoring performance; challenging assumptions; reassessing information needs and information systems; follow-up procedures; and assessing the effectiveness of control.

Figure 3 : Criteria of Control Definitions[2]

Detailed criteria are presented in Appendix A. It should be noted that not all criteria are explicitly addressed in the audit report, as the report is limited to those areas where key findings were identified.

2.4 Report Structure

Findings from the audit are presented in Section 4, under the following headings:

4.1 Planning and Performance Management
4.2 Centres of Expertise
4.3 Financial Management Control Framework
4.4 Integrated Risk Management
4.5 Policy Framework
4.6 Information Management/Information Technology Strategy

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[2] CICA, Guidance on Assessing Control (April 1999) p. 4

3.0   Detailed Observations

3.1   Planning and Performance Management

The City has recently introduced substantial and positive changes to modernize its planning and performance management framework. To be fully effective, the framework will need to continue to evolve to address the remaining deficiencies.
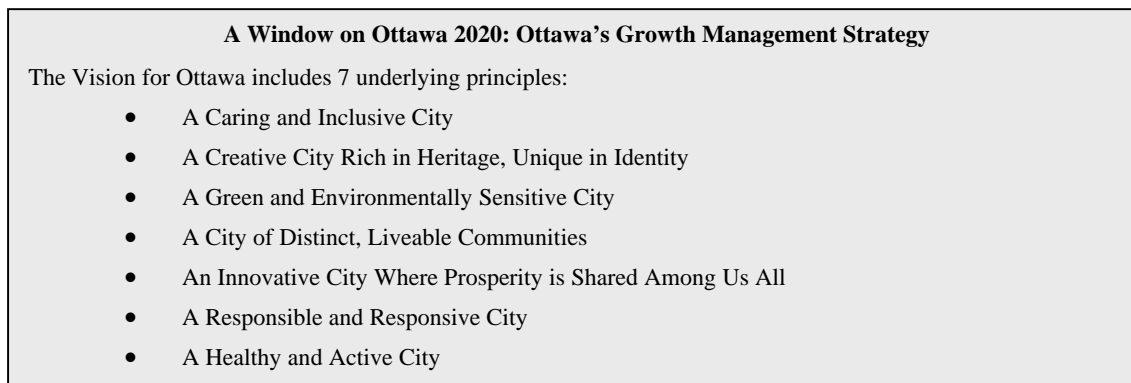
Criteria

- Objectives should be established and communicated.
- Plans to guide efforts in achieving the organization's objectives should be established and communicated.
- Objectives and related plans should include measurable performance targets and indicators.
- Performance should be monitored against the targets and indicators identified in the organization's objectives and plans.
- The assumptions behind an organization's objectives should be periodically challenged.

Observations

Planning

A clear vision, shared throughout an organization, is a fundamental component in the development of an integrated management control framework. It sets out the overall purpose and direction for the organization. The vision for the City, highlighted in figure 4 below, has been documented in *A Window on Ottawa 2020: Ottawa's Growth Management Strategy (Ottawa 20/20)*, published in 2003.

A Window on Ottawa 2020: Ottawa's Growth Management Strategy

The Vision for Ottawa includes 7 underlying principles:

- A Caring and Inclusive City
- A Creative City Rich in Heritage, Unique in Identity
- A Green and Environmentally Sensitive City
- A City of Distinct, Liveable Communities
- An Innovative City Where Prosperity is Shared Among Us All
- A Responsible and Responsive City
- A Healthy and Active City

Figure 4 : Ottawa 20/20[3]

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[3] A Window on Ottawa (2003) p. 45

Once the vision is established, more detailed objectives are needed to direct the organization, and to give people an understanding of what is expected of them. To that end, the City has recently introduced a Corporate Planning Framework, which defines the components of the City Corporate Plan, its relationship to other planning documents (Ottawa 20/20, the Official Plan, Long-Range Financial Plan, Budget Documents), and the process to be used to develop the City Corporate Plan. See figure 5 below for a description of these documents.

Document	Description
Ottawa 20/20	A long-term vision, or blueprint, of where the City wants to be in 20 years, comprised of a series of plans.
Official Plan	The Official Plan provides a vision of the future growth of the City and a policy framework to guide its physical development to the year 2021. It is a legal document that addresses matters of provincial interest defined by the Provincial Policy Statement under the Ontario *Planning Act*.
Long-Range Financial Plan	Long-Range Financial Plan provides a high level funding strategy for the capital program of the City.
Budget Documents	Includes the annual Operating Budget and Capital Budget of the City. Operating Budget - An outline, organized by department and branch, of the City's budget for its day-to-day operations, including programs and services such as policing, public health, recycling and recreation. Capital Budget - An outline of the City's budget for buildings, vehicles and infrastructure, such as roads, community centres and parks.

Figure 5 : Key Planning Documents

The current City Corporate Plan contains 10 "Agendas" and associated actions, linked to Ottawa 20/20, which define the priorities for the City for the next four years. The City Corporate Plan is to be used to:

- set the agenda for 3 years, to match the term of Council (due to the timing of its introduction, the initial City Corporate Plan defines priorities for 4 years);
- provide the foundation for on-going refreshment of the Long-Range Financial Plan and development of annual draft budgets; and
- form the basis for departmental business plans.

The Corporate Planning Framework includes the development of annual departmental business plans that are directly tied to the City Corporate Plan and Ottawa 20/20. For example, the draft Community and Protective Services departmental plan has 12 strategic priorities that are linked to the City Corporate Plan and Ottawa 20/20. The draft Public Works and Services departmental plan has 35 priorities, explicitly linked to 6 of 10 City Corporate Plan agendas. Also the draft Planning and Growth Management departmental plan has 65 actions linked to 9 of 10 of the City Corporate Plan agendas. Previously, it was not mandatory for departmental plans to link to Ottawa 20/20.

The intent is that plans will continue to cascade down through the organization, from departmental plans, to branch and divisional plans, with managers' Individual Contribution Agreements tied to business plans. The completion of this process across the City has not been consistent; while it has been completed in some areas, in others Individual Contribution Agreements are being used as the basis for develop business plans, which is not the correct or intended approach for cascading down planning through the organization. Finally, in some areas, individuals do not have Individual Contribution Agreements for 2005.

The introduction of the Corporate Planning Framework and the City Corporate Plan represents a positive step forward in the City's planning and performance management framework. The City Corporate Plan provides more tangible expression of the Ottawa 20/20 vision, which can be used to drive the budget process. Previously, the budget was the de facto strategic plan presented to Council. Links between the budget and the Ottawa 20/20 vision were not evident, constraining the ability to make coherent resource decisions consistent with the vision. At the same time, however, the new planning process is not yet fully integrated with the budgeting process, and it remains to be seen how well the City Corporate Plan and related process will tie into the 2006 budget process and approvals. The current year's process is behind the planned cycle of having departmental plans completed by April/May 2005 to feed into the budget process in June 2005. The success of the City Corporate Plan depends on how well it informs the budget process. If the budget continues to be the driving force, and the City Corporate Plan does not influence the budget decisions, the intended benefits from developing the City Corporate Plan will have largely dissipated.

There is a need to better link plans to resource capacities, particularly the support required from the Centres of Expertise. As the City Corporate Plan is not yet fully integrated with the budget process, there is also the risk that the plans exceed the capacity of City staff to deliver. This lack of capacity planning contributes to an issue outlined later in the report regarding the Centres of Expertise and the related Service Level Agreements, which identifies that there are gaps between the services being provided by the Centres of Expertise and the expectations of their internal clients.
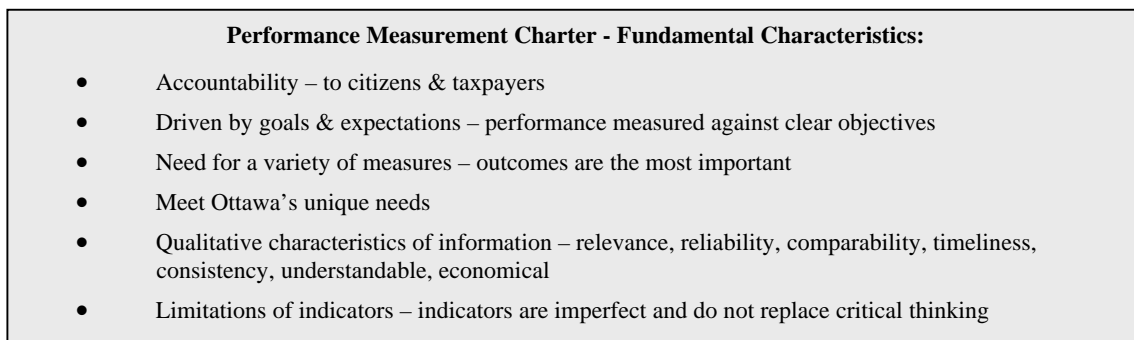
One of the key challenges for any organization is the allocation of scarce resources among multiple competing priorities. As the planning, budgeting and resource management processes mature, the trade-offs required between alternative or competing initiatives will become increasingly apparent. A consistent and objective criteria-based approach is needed to assist in establishing priorities. Within Corporate Services, the Information Technology

Services Branch has adopted a priority setting tool (called a Value Assessment Instrument) that is being used to support decision-making in where to invest limited information systems resources. There is an opportunity to expand the use of this type of tool to support the planning process.

Finally, planning involves uncertainty and the requirement to make assumptions, e.g., about the environment in which the organization will be operating. While the corporate planning processes and discussions may involve identification of assumptions, these are not clearly documented in the corporate plans. Without the clear identification of assumptions, the City will be limited in its ability to update the plans as conditions change, and fully analyze performance against the plan.

Performance Management

Linked to its new planning approach, the City has demonstrated a commitment to improving its performance measurement and monitoring. A new corporate function has been created to address performance measurement and monitoring and a Performance Management Framework is being developed that includes a performance measurement charter. The Performance Management Framework defines that the primary users of performance measurements will be City management and staff, with Council, and citizens and taxpayers, as additional users of this information. The key performance measurement characteristics described in the charter are provided in figure 6 below.

Performance Measurement Charter - Fundamental Characteristics:

- Accountability – to citizens & taxpayers

- Driven by goals & expectations – performance measured against clear objectives

- Need for a variety of measures – outcomes are the most important

- Meet Ottawa's unique needs

- Qualitative characteristics of information – relevance, reliability, comparability, timeliness, consistency, understandable, economical

- Limitations of indicators – indicators are imperfect and do not replace critical thinking

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Figure 6 : Performance Measurement Characteristics

At a City-wide level, the main performance measure historically has been the financial performance against the budget. Beginning in the current year, operational budget updates are now being provided to Council on a quarterly basis and capital updates are provided semi-annually. Without a strategic plan, there was little in the way of organization-wide measurement of performance against objectives. The City Corporate Plan includes a performance measurement section. At this time, however, the plan does not include definition of the measures that will be used. The intent is that high level performance measures will be developed for each of the 10 agendas in the plan.

At the operational level, current performance measurement varies significantly across the City, with some departments and branches actively seeking ways to measure performance. For example:

- Building Services has extensive monitoring of performance to support compliance with performance standards embedded in the governing legislation;

- Transit Services has a number of indicators that it uses to monitor performance and to track service statistics;

- Long Term Care conducts an annual resident family satisfaction survey;

- Ottawa Public Library reports on activity levels across all locations;

- Information Technology Services Branch and Real Property Asset Management Branch report on Total Cost of Ownership for information technology and property investments respectively; and

- A Human Resources "dashboard" has been developed to monitor the overall health of the organization in terms of such things as absenteeism, etc.

Beyond specific performance measures adopted within some City services, the City also participates in the Municipal Performance Measurement Program, a provincial program that requires municipalities to collect specific data on core service areas, with the objective of measuring and reporting on the efficiency (cost) and effectiveness (quality) of core services. The City has also recently rejoined the Ontario Municipal Benchmarking Initiative, a collaborative project of Ontario municipalities to share performance measures to allow benchmarking service specific performance measures.

All these activities have value in allowing the City and its stakeholders to evaluate its performance. The challenge will be to expand and upgrade the relevance of the performance measurement activity, so that it provides valuable information on the performance of the City relative to its priorities as outlined in the City Corporate Plan.

Recommendation 1

That the Chief Corporate Planning and Performance Reporting Officer assess the City Corporate Plan and process, and budgeting process for 2006, once completed, to identify lessons learned, and develop an action plan to address issues or outstanding items, including:

- **the planned introduction of performance measures against the key objectives within the City Corporate Plan;**

- **the planned linking of the budget to the City Corporate Plan;**

- **incorporating capacity planning in the planning process and the plan; and**

- **explicitly identifying key assumptions used in the development of the plan.**

That the Chief Corporate Planning and Performance Reporting (CCPPR) Officer investigate the opportunity to integrate the Corporate Services priority setting tool more broadly within the corporate planning process.

That the Director of Employee Services monitor and report on the timely and appropriate completion of Individual Contribution Agreements across the City.

<u>**Management Response**</u>

Management agrees with these recommendations in principle. Plans for a post mortem of the City Corporate Plan (CCP) and related activities were established earlier in 2005, with post mortem workshops scheduled for early in Q1 2006. One of the specific questions addressed will be the link between the corporate planning process, the long-range financial plan and the budgeting process. Recommendations for changes to be considered in the next version of the CCP arising from the post mortem will be reviewed & signed off by EMC in Q1 2006 and taken into account in the next refresh of the CCP, which will take place in late 2006.

In addition, in parallel with the CCP post mortem, the Office of the Chief Corporate Services Officer will conduct as assessment of the budget process, as it does each year, and bring forward any suggested changes to Council.

Management agrees with the recommendation regarding the planned introduction of performance measures against the key objectives within the City Corporate Plan. Work on these measures has already begun and a report on the proposed performance measurement and reporting framework was submitted to Council in Q1 2006.

Management will be linking the budget to the Corporate Plan as part of its Integrated Planning Framework. Following the next election, a "Term of Council" Plan will be developed and approved along with the next iteration of the City's Long-Range Financial Plan. These will be the basis for multi-year budgeting and for the next version of the Human Resources Plan.

Management notes that capacity planning was included in the planning process and the plan. The planning process followed by Management specifically took capacity constraints into account. The feasibility of implementing each action item included in the CCP and DBPs within the existing resource base was evaluated by the City department(s) involved. Where this was not possible, the additional resources required were highlighted and included in the costing of the plans that were submitted to Council. This is a simple, cost-effective approach to capacity assessment. If in future years Management sees that plans have been over committed, Management will re-assess the approach.

Management agrees with explicitly identifying key assumptions used in the development of the plan. This will be addressed through post mortem – see response

above. This will be implemented as part of the CCP refresh that will take place in late 2006.

Regarding the recommendation that the CCPPR Officer investigate the opportunity to integrate the Corporate Services Priority setting tool, see response regarding capacity assessment above. As noted by the Auditor General, the Corporate Planning process was implemented recently and will evolve over time. Through mechanisms such as the post mortem we are taking a continuous improvement approach and will identify areas where the process can be improved.

Management agrees with the recommendation regarding monitoring and reporting on the timely completion of Individual Contribution Agreements across the City by the Director of Employee Services. As noted in the Auditor General's report, the City just established its Corporate Planning Framework in 2005. In the first year, we developed the City Corporate Plan and Departmental Business Plans. In subsequent years these will cascade down throughout the organization and branch and unit workplans aligned with the CCP and DBPs will be prepared. At that point the link between ICA's and business plans will be clearly demonstrated. For the time being the requirement to establish ICA's for all Management staff remains, but these are based on management accountabilities and negotiated objectives. Management will continue to remind all Branch Management of their responsibility to complete ICA's for their management staff. At the end of the performance cycle Management will report on the number of ICA's completed as compared to the number of employees eligible for the performance pay program. This information will be presented to the Executive Management Committee in Q2 of 2006

3.2   Centres of Expertise

The Centres of Expertise model is not properly supported by clearly defined expectations and performance reporting.

Criteria

- Authority, responsibility and accountability should be clearly defined and consistent with an organization's objectives so that decisions and actions are taken by the appropriate people.

- The decisions and actions of different parts of the organization should be coordinated.

Observations

For an organization to function well there needs to be clearly defined accountabilities, both vertically cascading down through the organization, as well as horizontally across the different parts of the organization (i.e., the departments, branches, divisions, etc.).   For example, the Management Accountability Framework from Treasury Board within the federal government defines the following accountability expectation: "accountabilities for results are clearly assigned and consistent with resources, and delegations are appropriate to capabilities". The Canadian Institute of Chartered Accountants states that "an individual or group must be provided with the authority and responsibility for a task, output or outcome in order to be held accountable".   Figure 7 below provides definitions for authority, responsibility and accountability.

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Authority, Responsibility and Accountability

Authority: the power to make certain decisions and/or perform certain tasks within defined limits
Responsibility: the duty to perform certain tasks
Accountability: the obligation to answer for the performance of responsibilities

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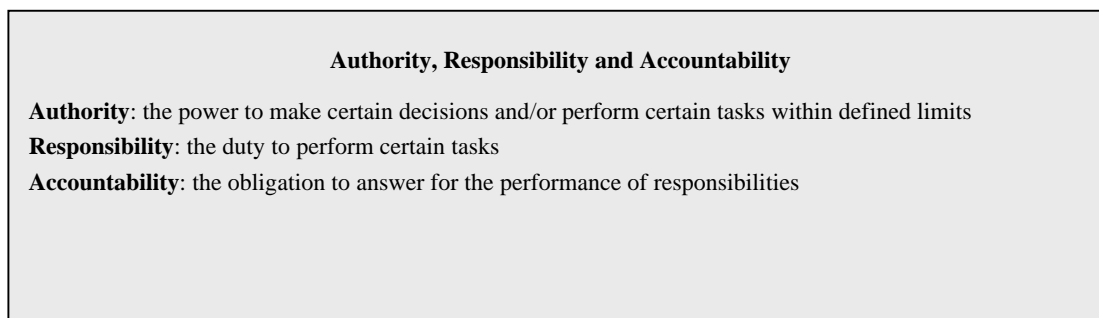
Figure 7 : Accountability Definitions[4]

Within the City, authorities, responsibilities and accountabilities are defined through a series of documents. The City organization structure provides a fundamental building block in

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[4] Canadian Institute of Chartered Accountants: Guidance on Control

establishing responsibilities across the organization. The objectives and services provided by each department and branch are described in the City's budget. The City Corporate Plan and departmental plans further describe key objectives and responsibilities. Individual responsibilities and accountabilities are defined in Individual Contribution Agreements.

Authorities are set out through various means, including by-laws, e.g., Purchasing By-law, Delegation of Authority By-law, the City budget and numerous policies.

From an organizational structure standpoint, the City has implemented a Centres of Expertise model, which separates operations from administration by assigning administrative responsibilities to corporate Centres of Expertise. These include:

- Communications and Marketing;

- Financial Services;

- Fleet Services;

- Employee Services;

- Information Technology Services;

- Legal Services;

- Real Property Asset Management; and

- Secretariat Services.

Matching accountability with responsibility and authority becomes more challenging under a matrix organization, which the Centres of Expertise approach represents. For example, Transit Services are accountable for delivery of service to riders, but the Branch does not have authority/direct control over the fleet used to deliver the service, which is the managed by the Fleet Services Centre of Expertise. To address this type of division of responsibility, the City adopted a Service Level Agreement approach. The purpose of the Service Level Agreements is to outline the roles and responsibilities for provision of services by a Centre of Expertise to an internal client department. Separate agreements have been established between each Centre of Expertise and department.

The Service Level Agreements have not been an effective tool in managing the relationships between Centres of Expertise and internal clients. There was fairly universal indication from individuals interviewed during the audit that the Service Level Agreements are not referenced or followed and that performance under the Centres of Expertise model has been inconsistent. This appears to result from a number of causes, including limitations in the content of the Service Level Agreements (there were no performance standards defined), no defined consequences if services were not delivered, competing or imprecise priorities among internal clients, no linkage of plans and service levels to resource capacity (outlined earlier in the section on Planning and Performance Management), and reduction in Centres of Expertise resources without adjustment of the Service Level Agreements. A consistently recurring example raised was the reduction in the level of service provided by Employee Services.

Without clearly defined and agreed upon responsibilities between Centres of Expertise and clients, there is an increased risk of breakdowns in accountability within the management structure.

Recommendation 2

That the City Manager ensure there is a review to update the Centres of Expertise Service Level Agreements, including definition of performance levels, monitoring requirements and approach for identifying and resolving issues or disputes.

Management Response

Management agrees with this recommendation. A draft proposed process, addressing all of these elements, will be presented to Senior Management Team (SMT) at the January 2006 meeting. This project is a priority identified in the 2006 Corporate Services departmental business plan and will be included in the 2006 workplan of the Office of the Chief Corporate Services Officer.

3.3 Financial Management Control Framework

The City's financial management control framework is fragmented. Control procedures, roles, responsibilities and accountabilities are set out in various ways, some formal, some informal. There is no formal framework that explicitly outlines the City's financial management control structure.

Criteria

- An approved internal control framework is in place that identifies and documents internal control requirements and internal control activities.

- Responsibility, accountability and authority for processing financial transactions are assigned.

Observations

Financial management and internal control over financial transactions is an important part of overall management control. It is also important to note that financial management is not the exclusive domain of financial officers; it is every manager's responsibility. An important aspect of implementing good financial control is understanding of roles and responsibilities and the ability for finance and operational management to work together.

The roles, responsibilities and accountabilities of financial management activities are set out in various ways. For example:

- within Finance, roles and responsibilities are assigned through generic job descriptions and specifically assigned duties;

- the various policies and by-laws, e.g., the Purchasing By-law, Purchasing Manual and Delegated Authorities By-law, also set out responsibilities for financial transactions; and

- built-in access controls have been established within the administrative and financial applications of the City's corporate management information system, SAP.

SAP and a number of other feeder systems, processes and procedures support the City's financial management activities. At the time of implementing SAP, business process maps were developed and financial transaction controls were established as part of the system design and documentation. In addition to the programmed system controls within SAP, individual managers with financial management responsibilities have put in place financial control procedures to help ensure transactions are processed in accordance with policy, legislation, and by-laws.

The control framework established at the time of implementing SAP is an important element of the City's control framework. However, it does not provide a complete picture of the control requirements for overall financial management activities within the City. In other

words, other than what exists in the SAP systems documentation, there is no clearly documented corporate framework that explicitly outlines the City's internal control requirements, risk considerations and accountability structure for financial management. What is currently in place is a fragmented framework, consisting of control procedures and documentation that is spread across the organization. You would have to look at individual processes by department to determine the controls that are in place.

The existing financial control framework is essentially as follows:

Preventative Controls (controls over processing of inputs)

- The City's financial management model is very decentralized. Reliance is placed on the Financial Support Units to ensure manual internal control procedures (e.g., delegated signing authorities, contracting requirements for quotes) are applied. As the extent of review on the transactions and processes is at the discretion of the Financial Support Units, there is a large variance in the amount of review that takes place.

- For processing individual financial transactions, reliance is placed on programmed processing controls within SAP.

Detective Controls (controls to detect control breakdowns subsequent to processing transactions)

There is a Policy and Compliance Unit within Financial Services that conducts compliance reviews. While a perception may exist that this unit can provide assurance that controls are working as intended, the Program Manager responsible for this area views its purpose as more limited, to include the following:

- to select a sample of transactions, using a risk-based approach, for review of compliance with financial policies, procedures and legislation;

- to examine and evaluate financial policies and controls and recommend changes or improvements where necessary; and

- to analyze issues and problem areas identified by corporate management and finance staff and recommend solutions.

In addition, various functional units (e.g., Accounts Payable, Revenue, Travel, and Cash Receipts) also have developed policy and control procedures for their operations. For example, the payment of all invoices is centralized in Accounts Payable and policies and procedures have been developed to assist in carrying out this function.

There is no formal documentation of roles and responsibilities between operational managers and the Financial Support Units. Procedures have been established but not formally documented. In some cases, these may have been established through the Service Level Agreements, but the Service Level Agreements are out of date and are not being applied. In practice, the level of service provided by the Financial Support Units varies significantly.

A coordinated and comprehensive financial management control framework helps to manage the risks of errors or omissions going undetected, exposure to fraud or inappropriate use of City assets, or inefficient or ineffective control practices not being detected. This is particularly important in an organization of the size of the City where the nature of the operations is quite diversified, decentralized, and supported by numerous feeder systems and processes.

In addition to helping to mitigate risks, a formal and coordinated financial management control framework helps to ensure that control procedures are firmly entrenched in the organization, and that the processes are repeatable and sustainable. This is fundamental requirement in demonstrating mature financial management capabilities. According to the Office of the Auditor General of Canada regarding financial management capabilities:

> *The lack of repeatable, sustainable practices of financial management and control means that any data produced may not be complete, accurate or reliable. Similarly, without an adequate control framework, assets may not be adequately protected or resources adequately controlled.[5]*

As part of the year-end audit, the Manager, Accounting and Reporting, City Treasurer and Chief Corporate Services Officer sign a letter of representation regarding the adequacy of the system of internal controls to permit the preparation of accurate financial statements in accordance with generally accepted accounting principles. A formal financial management control framework would help senior management in fulfilling this responsibility by providing assurance to senior management on the extent of internal control activities.

Another important aspect to consider is public perception and the City's ability to demonstrate the adequacy of its financial management control processes. For example, changes are occurring in public expectations for complete and accurate financial reporting as an increasing amount of private sector companies experience significant breakdowns in internal control. To address this, new laws have been enacted in the United States and Ontario (i.e., the Sarbanes-Oxley Act in the United States and Ontario Bill 198) that require managers of publicly traded companies to make certifications with respect to the company's internal controls over financial reporting. The experience in the private sector is starting to create expectations for improved accountabilities for internal control and financial reporting for other types of organizations, including those in the public sector. There are indicators that similar requirements may be introduced in the public sector. Indeed, within the federal government of Canada, Treasury Board has proposed similar certification requirements for Crown Corporations.

In summary, the City has many internal controls in place aimed at ensuring completeness, accuracy, authorization, etc. However, the overall framework that exists is fragmented and not coordinated. Consistent with this, Ernst & Young communicated several internal control

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[5] Financial Management Capability Model published by the Office of the Auditor General of Canada, 1999.

weaknesses to management after completion of their audit of the City financial statements for 2003[6]. Large, diverse and decentralized organizations require more mature financial management practices to be in place to assist in achieving corporate objectives. It is appropriate for the City to take steps to better coordinate the financial management control activities by establishing a more formal and modern financial management control framework in keeping with an organization of its size and diversity.

Recommendation 3

That the Chief Corporate Services Officer develop a formal financial management control framework that clearly defines financial management accountabilities, control objectives, risks and the related control processes/mechanisms that have been put in place to mitigate the risks. The roles and responsibilities as they relate to shared services (in particular, the Financial Support Units) should link to those set out in the Service Level Agreements between Financial Services and client departments.

Management Response

Management agrees with the recommendation to develop an overall framework. If this framework is supposed to be broad and intended to describe general control objectives, levels of responsibility, overall control policies and philosophy, then this exercise is achievable in 2006, likely within existing resources. One specific issue that will be addressed, as part of the SLA updates noted in the response above, will be a clarification of the role of the Financial Support Units, so that services will be provided on a consistent basis and their role will be well understood Management will also establish parameters for review of transactions that will be consistently applied.

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[6] At the time of this audit, the management letter accompanying the 2004 audit of the financial statements has not been received.

3.4   Integrated Risk Management

There is no enterprise-wide approach, or ability for the City to consistently assess the level of risk it faces across the organization, to aid in planning *and priority setting.*

Criterion

- The significant internal and external risks faced by an organization in the achievement of its objectives should be identified and assessed.

Observations

Integrated Risk Management involves a proactive, systematic and explicit organization-wide approach that identifies, assesses, manages and communicates risks that can affect the achievement of organizational objectives. In an effective integrated risk management regime, the organization's integrated risk management objectives are tied directly to the strategic, operational and project objectives. Risk management practices are integrated with existing management practices such as standard operating procedures, business planning and performance management. The risk-related activities of various organizational groups are coordinated and consistent with one another – typically through the use of a common risk management framework, policy and practices.

To effectively and efficiently achieve its objectives, an organization needs to understand and manage the risks to achieving the objectives. Since it is rarely practical or cost effective to reduce risk of failure to zero, all management decisions involve consideration of risk, whether explicitly or implicitly. The challenge is to create a management approach whereby consideration of risk is done consistently across the organization, with managers understanding what risks are acceptable to senior management and Council. When risk management is practiced in a comprehensive and integrated fashion, management's planning process is strengthened. On an enterprise-wide basis, resources can be allocated to the areas of highest risk, which not only supports the achievement of objectives, but also greatly increases efficiency by streaming resources to the area of greatest need.

Within the City, there is no City-wide enterprise risk management strategy or plan, nor is there an organization or manager assigned accountability for implementing integrated risk management. As a result, the approach to risk management varies widely across the City, from little or no explicit identification of risk, to instances of risk management focused on specific operational issues, to very formal integrated risk management approaches. Some instances of risk management activity include:

- The Library has conducted a formal risk assessment and from that developed a risk profile for the organization, with associated risk mitigation actions that are regularly monitored;

- The Community and Protective Services department is developing accountability plans for its 12 strategic priorities, that include consideration of the achievability of

the task (can it be done?), the availability of resources, and identification of risks to not achieving the objective;

- Long Term Care have organized an occupational heath and safety risk management program;

- There is a risk management function within the Financial Services Branch, which focuses on health and safety issues, and related insurance requirements;

- The development of the Long-Range Financial Plan, which involved assessing the level of capital funding available compared to defined investment needs, represents a risk management approach. At the same time, the Long-Range Financial Plan did not specifically identify risks if the proposed level of spending not undertaken; and

- Within Building Services, design of service levels and procedures includes consideration of risk.

Even when risk management is being addressed in some fashion, the approaches, scope of activity, tools used, definitions, and outputs vary widely. There is limited opportunity to leverage this activity to support planning and decision-making across the organization. It also increases the risk that key issues may not be escalated to senior management on a timely basis.

Recommendation 4

That the Chief Corporate Planning and Performance Reporting Officer introduce integrated risk management within the City, as part of the planning and performance management cycle. This would include such activities as:

- **development of an integrated risk management policy;**

- **development of tools and approaches for risk management; and**

- **provision of risk management training.**

Management Response

Although Management agrees with the Auditor General's recommendation in principle, Management does not believe it would be practical to implement this recommendation at this point. The cost/benefit of implementing a full blown, organization-wide risk management initiative, as suggested by the Auditor General, is not clear, nor is it clear that this is a widely accepted best practice in municipal governance. Recent implementation of these types of programs in the private sector has been driven to a considerable extent by Sarbanes-Oxley requirements in the U.S. To Management's knowledge, in the few cases where Canadian municipalities have experimented with them, implementation has not been successful.

Management's priority at this point, from a management control framework perspective, is on rolling out the planning framework and developing and implementing the

performance measurement and reporting framework, throughout the organization over the next 2-3 years. Nonetheless, certain steps Management is taking to enhance the Corporate planning process, such as the presentation of a comprehensive environmental scan, which will identify risks to be considered in developing the City Corporate Plan and Departmental Business plans, will address this issue.

Regarding the development of an integrated risk management policy management, Management believes that the Auditor General's observations in this area should take into account that the City has a risk management policy, which was approved by Council in 2001, confirms the City's commitment to sound risk management processes. Some of the specific measures that Corporate Services has taken to explicitly address risks in different areas are outlined in this policy. For example, risk management principles are explicitly applied in investment decisions, in decisions regarding insurance coverage and in providing and maintaining safe conditions in the workplace. In addition, risk management processes are also applied in other key areas. The Emergency Measures Unit has identified catastrophic risks that could impact the City and has developed a program/plan to address them. Moreover, on an ongoing basis, Public Works staff perform construction/maintenance project risk assessments and procedures have been adopted by the City to ensure that risks are reasonably transferred through the tender, contract and agreement process. Both Real Property Asset Management and Public Works and Services have adopted Comprehensive Asset Management Strategies that have been approved by City Council and that include inventories, gap analyses and strategies for decommissioning and rehabilitating infrastructure reaching the end of its lifecycle.

3.5 Policy Framework

The policy framework within the City is fragmented.

Criteria

- Policies designed to support the achievement of an organization's objectives and the management of its risks should be established, communicated and practiced so that people understand what is expected of them and the scope of their freedom to act.

- Accounting policies and procedures should be documented and understood.

Observations

Policies governing the administration and operations of the City are set out in a variety of ways. These are summarized below.

Corporate Administrative Policy

There are several different types of corporate policies, including:

- Human Resources;

- Financial and Accounting;

- Information Technology; and

- Corporate Administrative policies (e.g., Records Management).

The Chief Corporate Services Officer has overall responsibility for establishing and managing corporate administrative policy. The Manager, Corporate Administrative Policy and Performance Management, which reports to the Chief Corporate Services Officer, is a new position that was created in 2005 to provide support for carrying out this responsibility. In addition to this, the Management Advisory Committee addresses administrative policies as part of its mandate. The Committee, which is chaired by the Chief Corporate Services Officer, meets monthly and includes representatives from other departments. In some cases, policies will be referred to Executive Management Committee.

In terms of financial management, the Manager of Accounting and Reporting in Financial Services is responsible for managing the financial accounting and reporting policies. Support for carrying out this responsibility is provided by the Policy and Compliance Unit within the division.

Operational Policies

Operational policy is driven from Deputy City Managers and branch directors and/or division managers. Each department has its own policy function. Each department, or branch or division within a department develops its own operating policies and guidelines.

Documentation/Communication

The City's policies are located and communicated in a number of locations, including:

- Corporate policies posted on the City intranet (some within corporate menus and others within the functional areas e.g., Information Technology, Purchasing);

- Specific City by-laws (e.g., Purchasing By-law, Delegated Authorities By-law);

- Individual interpretation and guidelines developed within the various Centres of Expertise (e.g. some policies are broadly stated and must be interpreted by users. For example, the application of the Delegation of Authority By-law has been interpreted and tailored by individual Financial Support Units for their operational clients, with some Financial Support Units developing guidelines based on positions, while others developing guidelines based on individuals); and

- Department, branch or division operating policies and guidelines manuals or documents.

Development/Revision

Since 2000, considerable effort has been spent on the amalgamation of the various municipalities into one. The amalgamation process has required extensive harmonization of policies and procedures of the predecessor municipalities. Some branches are still completing their harmonization activities (e.g., Infrastructure Services is still working on the project management manual, Fleet Services still has some harmonization to be done, and Surface Operations is still harmonizing processes and building a branch policy manual). In many cases, the ongoing service delivery pressures have meant that some of the updating and completion of harmonization plans has had to be delayed.

Business process owners are responsible for developing and revising any related policies. As part of the implementation of SAP, business process owners have been defined for all SAP modules. Hence, process owners establish policies around the SAP modules. As well, this same approach is used for other business systems, such as the GIS (geographical information systems).

Reliance is placed on policy owners to ensure policies are up to date and effective.

Since amalgamation, there have been changes in the organization structure and business processes. However, there has not been a corporate process to ensure that corporate policy is updated accordingly and on a timely basis.

Also, there is no standard format or process for developing corporate policies. Indeed, some managers have noted there is inadequate consultation in the development and roll-out of corporate administrative policies.

In summary, the City's policy framework is fragmented. For example:

- the responsibility has been spread throughout the organization;

- policy development and approval is not standard across the City;

- the organization of policy is confusing;

- the formats are not consistent;

- some policies are in need of updating;

- there is no formal monitoring process to ensure policies are current and relevant; and

- by-laws and related amendments are not consolidated together on the City's intranet to provide individuals certainty that they are referencing the most current version of the by-law.

A clearly articulated and up to date corporate policy framework is important. Without one, there are increased risks that:

- staff are not clear on policy requirements;

- policies do not reflect current plans and objectives of the City; and

- decisions are made that are not consistent with policy or corporate objectives.

In addition, a formal, coordinated corporate framework establishes defined processes that helps to ensure that corporate policies are firmly entrenched within the operations rather than being reliant on efforts of individuals. This helps to prevent corporate knowledge and know-how from being lost in the event of staff turnover.

City management has recognized weaknesses in the corporate administrative framework and initiatives are underway to make improvements. These include:

- The Manager of Corporate Administration Policy and Performance Management has been tasked with developing a new corporate policy framework/process and for reviewing and updating corporate administrative policy.

- Financial Services has identified a review of financial policies and procedures as one of its key initiatives. As part of this initiative, guidelines have been drafted (but not yet finalized) for the development/revision of financial policies/procedures.

As well, various departments are continuing their efforts to complete the harmonization of operational policies and procedures within their responsibilities, on a priority basis relative to service delivery requirements.

Recommendation 5

That the Chief Corporate Services Officer complete plans for reviewing and updating corporate administrative policies and developing a new corporate policy framework, which should include a single point of access, common look and feel, the consolidation of by-laws, and defining a timetable for when the process will be completed.

Departments should monitor their plans to ensure that the harmonization of operational policies and procedures are completed on a timely basis.

Management Response

Management agrees. Plans are currently being developed within CAPPM for reviewing and updating corporate administrative policies and developing a new corporate policy framework. This framework will be completed and presented to EMC for approval in Q4 2006.

In defining a timetable for when the overall policy update process will be completed, consideration has to be given to availability of resources. The same resources to complete work outlined in 4.2 COE, will be deployed to complete this work. The Management Advisory Committee chaired by the Chief Corporate Services Officer will prioritize the updating of policies.

By-laws are now consolidated on the City's Intranet, work being completed by these same resources.

With regard to departments monitoring of their plans to ensure timely harmonization of operational policies and procedures, management agrees but no specific changes or initiatives are required in response to this recommendation. As noted by the Auditor General, this responsibility rests with each department. CAPPM will work with each department regarding Corporate Administrative Policy to share experience, tools and approaches, however operational policies and procedures at the sub-corporate level (Departmental or Branch) are the responsibility of those policy owners. The CAPPM will monitor the implementation of the corporate framework and report on an annual basis to the Chief Corporate Services Officer.

3.6   Information Management/Information Technology Strategy

The City does not have a defined and approved information management/information technology strategy linked to corporate plans.

Criterion

- Information needs and related information systems should be reassessed as objectives change or as reporting deficiencies are identified.

Observations

The City relies heavily on information systems to deliver services and support administration. Information Technology Services Branch supports over 400 systems, many of which are critical to services, e.g., dispatch system for Paramedic Services, circulation system for the Ottawa Public Library, registration system for Parks and Recreation facilities, permit application system for Building Services, etc. In addition, the City has made a significant investment in SAP, an enterprise resource planning system used primarily to support administration (e.g., finance, payroll, human resources, and materiel management).

A strategic information management/information technology plan is needed to ensure that the use of information management/information technology is aligned with the vision and strategies of the organization, with processes used to develop plans including both information management/information technology management and business process owners. Plans need to take into account organizational strategies, current information management/information technology infrastructure, and information technology directions and markets.

Information Technology Services created a strategic information management/information technology plan for the period 2000-03. When the time came to renew the strategic plan, a decision was made to hold-off on plans until the City Corporate Plan was developed. The purpose was to build the new information management/information technology strategy to support the broader City strategies outlined in the City Corporate Plan. For the interim period, Information Technology Services identified some high-level strategic directions.

Due to the significant range of systems and support requirements for both operational and administrative systems, much of the resource base within information management/information technology is needed simply to keep existing systems running. Assigning resources is very challenging. To aid in decision-making, Information Technology Services has adopted a value management methodology to assess proposed initiatives to ensure they meet needed threshold to invest. Nevertheless, without a current information management/information technology strategy targeted at supporting corporate plans and strategies, there is an increased risk that the level and allocation of resources will not be appropriate. As well, operational areas may not be clear about what directions they can take for their operational systems.

Recommendation 6

That the Chief Information Officer, supported by the service departments and administrative branches, follow through on plans to develop a City-wide information management/information technology strategy to support the City Corporate Plan, within a defined timeline.

Management Response

Management agrees with this recommendation. ITS initiated the development of a new IT Strategic Plan in the fall of 2004, replacing the original plan approved in 2000 by the Ottawa Transition Board. However, the new Plan was put on hold in 2005 following announcement of the City Corporate Plan and Departmental Business Planning exercise. ITS will complete the new IT Strategic Plan to support the City Corporate Plan by Q1, 2006.

General Management Response

We appreciate the positive comments made by the Auditor General regarding recent improvements we have made to key management processes, such as the introduction of the corporate planning framework, preparation and approval by Council of the first City Corporate Plan and the development of a performance measurement and reporting framework. As noted by the Auditor General, the management control framework has evolved considerably and we will continue to make further improvements. More specifically, in 2006 we will enhance certain important parts of the framework where there will be the greatest immediate benefits. These include:

- Enhancement of the City Corporate planning process and related activities based on a post mortem of the 2005 exercise;

- Preparation of a comprehensive environmental scan, which will identify risks to be considered in developing the City Corporate Plan and Departmental Business plans;

- Completion of the performance measurement and reporting framework, presentation of the framework to Council and implementation of the 1st key components;

- Updating of the Centre of Expertise Service Level Agreements;

- Establishment of a corporate policy framework, priorities and a timetable for policy revisions and update of selected, key policies; and

- Completion of the IT Strategic Plan.

Appendix A - Audit Criteria[7]

PURPOSE groups criteria that provide a sense of the organization's direction.

A1   Objectives should be established and communicated.

A2   The significant internal and external risks faced by an organization in the achievement of its objectives should be identified and assessed.

A3   Policies designed to support the achievement of an organization's objectives and the management of its risks should be established, communicated and practised so that people understand what is expected of them and the scope of their freedom to act.

A4   Plans to guide efforts in achieving the organization's objectives should be established and communicated.

A5   Objectives and related plans should include measurable performance targets and indicators.

COMMITMENT groups criteria that provide a sense of the organization's identity, values and willingness to achieve its purpose.

B1   Shared ethical values, including integrity, should be established, communicated and practised throughout the organization.

B2   Human resource policies and practises should be consistent with an organization's ethical values and with the achievement of its objectives.

B3   Authority, responsibility and accountability should be clearly defined and consistent with an organization's objectives so that decisions and actions are taken by the appropriate people.

B4   An atmosphere of mutual trust should be fostered to support the flow of information between people and their effective performance toward achieving the organization's objectives.

CAPABILITY groups criteria that provide a sense of the organization's competence.

C1   People should have the necessary knowledge, skills and tools to support the achievement of the organization's objectives.

C2   Communication processes should support the organization's values and the achievement of its objectives.

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[7] CICA, Guidance on Control (November 1995) p. 9

C3   Sufficient and relevant information should be identified and communicated in a timely manner to enable people to perform their assigned responsibilities.

C4   The decisions and actions of different parts of the organization should be coordinated.

C5   Control activities should be designed as an integral part of the organization, taking into consideration its objectives, the risks to their achievement, and the inter-relatedness of control elements.

MONITORING & LEARNING groups criteria that provide a sense of the organization's evolution.

D1   External and internal environments should be monitored to obtain information that may signal a need to re-evaluate the organization's objectives or control.

D2   Performance should be monitored against the targets and indicators identified in the organization's objectives and plans.

D3   The assumptions behind an organization's objectives should be periodically challenged.

D4   Information needs and related information systems should be reassessed as objectives change or as reporting deficiencies are identified.

D5   Follow-up procedures should be established and performed to ensure appropriate change or action occurs.

D6   Management should periodically assess the effectiveness of control in its organization and communicate the results to those to whom it is accountable.

Ottawa

Office of the Auditor General

AUDIT OF THE PROCUREMENT PROCESS

2005 REPORT

Chapter 4

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EXECUTIVE SUMMARY

Introduction

The Audit of the Procurement Process was part of the 2005 audit plan brought forward by the City's Auditor General and received by Council on December 15, 2004.

Background

At the City of Ottawa, the Supply Management Division is responsible for conducting centralized procurement and contracting activities. Financial Support Units and the different departments are responsible for decentralized procurements and the use of procurement cards.

In 2004, Purchase Orders were issued for a total value of $437 million: $381 million through Corporate Purchase Orders and $56 million as Departmental Purchase Orders. Additionally, aproximately 980 Purchasing Cards, including those used by the Ottawa Police Service, are active, and expenditures were $10.5 million in 2004.

Audit Objectives

The objectives of this audit were to provide an independent and objective assessment to:

- Ensure that appropriate processes are in place to track, manage and control procurement and contracting carried out by City employees.

- Provide assurance that procurement and contracting activities comply with established policy and procedures; that they limit the City's exposure to risk, and to identify mitigating strategies when appropriate and to identify best practices.

- Determine whether procurement achieves value for money.

- Determine whether recommendations in the 2003 Audit of the Corporate Card and Purchasing Card Programs have been implemented and are operating as intended.

Audit Scope

The scope of the audit included an examination of the City's contracting policy, management practices, internal controls, and procedures pertaining to contracting and procurement, including Purchasing Cards, and their compliance with established policies and procedures. The audit reviewed procurement and contracting activities carried out in 2004 in all departments, including the Ottawa Police Service.

In addition to contacting and procurement, files relating to purchases made using Payments without Reference to a Purchase Orders were reviewed.

Key Findings

1. For activities under the direct control of Supply Management, the audit determined that the number of material infractions was relatively low.

   Under the By-Law, all contracts greater than $10,000 are to be processed by Supply Management staff. An existing feature of the corporate financial system effectively forces transactions greater than $10,000 to be released through Supply Management.

   A Contract Approval Request (CAR) has been put in place and is operating with a risk-based approach to review procurement requirements. As the dollar value increases, so does the requirement for senior management review and approval. This represents a significant step in accountability and management control. However, the CAR should be integrated within the procurement model of the financial system.

2. The overall process for reporting to Council needs improvement. The exact value of contracting services acquired through Standing Offers and Payments without Reference to a contract could not be readily extracted from the financial system. Information on these transactions is not reported in full to Council.

   Steps have been initiated to improve the quality, completeness and timeliness of information, however additional refinements are required to establish procedures to monitor and report contracting activity for compliance and performance. The format could be improved with a high level summary by transaction type and highlighting any major exceptions to policy and procedure, particularly as they relate to the inappropriate use of Payments without Reference. In order to improve the timeliness of reporting, the process for review and editing needs to be streamlined with fewer edits to the nature of the actual goods or services acquired.

3. The choice of methodology in evaluating proposals does not always reflect price differentials. This means significant premiums can be paid for proposals with minor differences in quality. For example, we found an instance where proposals received the same score for price even though one was $140,000, while the other was $70,000. The methodology for evaluating price should be changed so that marks awarded for the price component of the proposal clearly reflect differentials in price.

4. Value for money could be enhanced through raising the price component in Requests for Proposals, including Requests for Standing Offers, from 15% to 30%, providing there is a change in the evaluation methodology as stated above. These practices could lead to significant cost savings. For example, Supply Management estimates that based on the award of twelve engineering assignments valued at $5.2 million during the summer of 2005, cost savings of $580,000 could have been realized if the price component on their proposals had been raised to 30%, and the evaluation methodology changed. This represents significant

potential savings, especially in the area of engineering services, which are currently estimated to cost $40 million annually.

5. Better management of Standing Offers would enhance fairness and transparency and contribute to obtaining better value. Currently, Standing Offers are awarded to relatively large numbers of suppliers, yet work is concentrated with a few firms with little consideration of cost differentials. This means that premiums may be paid for work of similar quality and that work is not awarded in a fashion that is open, fair and transparent.

    We also found some areas where Standing Offers could be implemented. We noted several significant examples where Fleet Services had aggregate expenditures greater than $250,000 with firms that had no Standing Offer in place. A minimum of $2 million dollars worth of purchases for Fleet parts requirements and a further $4 million for service requirements are made without use of Standing Offers, and opportunities may be lost to obtain discounts. Standing Offers should be established for these commonly purchased low dollar value items.

6. Purchasing cards are generally well managed with a well-defined process in place for the procurement and payment of low dollar value goods and services. Almost all recommendations pertaining to Purchasing Cards in the 2003 Audit of the Corporate Card and Purchasing Card Program have been implemented and are operating as intended. However, some computer purchases continue to be paid for using Purchasing Cards contrary to the 2003 audit recommendations.

7. Payments without Reference are made for goods or services that have been acquired without a Purchase Order, without the involvement of Supply Management. The audit revealed that this type of transaction has significant rates of non-compliance with existing policy and procedure.

    These transactions are not adequately monitored, nor are they included in Supply Management reports to Council. Additionally, an exception report for Payments without Reference is not currently prepared for the City Manager, in order to minimize their occurrence.

8. Standard contractual Terms and Conditions are occasionally waived by Directors and/or Supply Management, without the input of Risk Management, thereby exposing the City to greater risk than necessary.

9. Amendments can create situations where sole source contracts exceed the intended $50,000 limit of the By-Law. In addition, amendments for Follow-on Work can lead to the value of projects being several times greater than the original scope of the initiative.

Recommendations and Management Responses

Recommendation 1

That Supply Management not process any contracts for goods or services which have already been delivered, or for which work has begun.

Management Response

Management agrees with this recommendation.

Management does not endorse processing any contract "after the fact", where Purchasing has not been properly involved in the process.

This recommendation is clearly supportable, however the outcome is that without purchasing involvement, no Purchase Order may be issued. Within SAP, that limits the payment tool to only "payment without reference", which is unfortunately not always an acceptable option. Some contracts, even those incorrectly initiated outside of purchasing, require that purchasing find a means of supporting them, in order to allow the issuance of a Purchase Order contract. A review of the cost of removing this limitation from SAP will be pursued with the Information Systems Branch in Q2 2006.

Recommendation 2

When a contract has been entered into on a sole source basis, the total value of the contract, including all amendments, should not exceed $50,000 without the approval of the City Manager.

Management Response

Management agrees with the intent of this recommendation.

Sole source contracting at the City, although permitted in the Purchasing By-Law under stipulated conditions, is strongly discouraged by Corporate Purchasing. It is estimated that approximately 10% of all purchases are sole sourced which is representative of best practices industry wide. Amendments occur when there are scope changes and when it would be counter-productive to put the additional work to tender. Management will examine the need to establish any additional thresholds for amendments and, if necessary, proceed with the revisions to the Purchasing By-law.

Management does not support the City Manager approving sole source contracts over $50,000 and believes existing due diligence which includes review by either the Chief Corporate Services Officer or Deputy City Manager when necessary would continue to suffice.

Recommendation 3

Supply Management should ensure the total value of amendments to the scope of work of any contact should not exceed 50% of the original contracted amount without the approval of the City Manager.

Management Response

Management disagrees with this recommendation.

Amendments to contracts are typically in light of unforeseen changes in scope, and are scrutinized closely, in both the operating department and by Purchasing, with a view to ensuring that fair value is received by the City. The current approval process includes both the Manager of Supply Management and level 2 approval of either the Chief Corporate Services Officer or Deputy City Manager, and continues to be appropriate.

Recommendation 4

That Supply Management adopt evaluation methodologies that better reflect price differences in proposals for professional services, such as standard deviation, low bid or price per point.

Management Response

Management agrees with this recommendation.

The recommended methodology is currently used for most contracts whereas the benchmark average methodology is used for consulting engineering assignments. Management will implement a methodology that better reflects price differences. This will be initiated in Q2 2006 in conjunction with Recommendation 5.

Recommendation 5

That Supply Management ensure that the pricing component in Requests for Proposals of professional services is immediately standardized at a minimum of 30%.

Management Response

Management agrees with the intent of this recommendation.

Currently, the weighting for the price component varies depending upon the type of professional service being contracted. In many cases the pricing component is in fact above 30%. Our experience has been that considerable flexibility is required. This is an area that staff has reviewed frequently and over the years the weighting for the factor has moved from cost not being a factor (i.e. 0%) to a minimum weighting of 15%. One of the areas where concern regarding the establishment of a 30% minimum exists is in the studies and infrastructure design services.

Management has reviewed the threshold for the pricing component based on the practices used in other Canadian municipalities and government departments. That review indicates that 20% is a common threshold for infrastructure design and engineering, and the City will move up to that threshold immediately. It should be noted that an initiative to benchmark best practices for procuring engineering services is being conducted by InfraGuide (National Guide for Sustainable Municipal Infrastructure) whose guiding principles Council endorsed in 2003. InfraGuide expects to publish its draft report for review and comment in March 2006. At that time, management will review the results with the Auditor General to determine what other changes may be necessary to best provide the City with value for money when procuring engineering services.

Recommendation 6

Supply Management should ensure that a reasonable number of firms are eventually awarded Standing Offers, using price as a significant component (a minimum of 30%) in the evaluation process.

Management Response

Management disagrees with this recommendation.

Management has completed the review and believes that the current process does provide some assurance that firms will receive some work.

The majority of Standing Offers use a price component of 100%, and are awarded based on lowest bid. A list of authorized firms is available on the basis that the lowest cost service provider will be called first. Management attempts to limit the number of firms to a level that would ensure that most or all will receive work; however, Standing Offers are set up in advance of actual assignments being known. The basic premise of a Standing Offer, clearly stipulated in each procurement solicitation, is that no guarantee of work is provided. In addition, in the case of translation, those firms that are listed on the Standing Offer have the quality of their work monitored on a regular basis. If two pieces of work are returned that are substandard, the firm is removed from the Standing Offer listing.

The various firms represented on a Standing Offer can vary significantly in size, resources, and capability. Therefore, it is not unreasonable to suggest that a larger firm with more staff and a wider expertise base may be used more often than a smaller vendor authorized on the same Standing Offer. In areas such as translation this can result in some firms receiving greater volumes of work due to their ability to provide specific skills or quicker turnaround due to their size and expertise. Conversely, some smaller firms offer specialized, technical translation services (for issues in health, engineering or finance for example). These types of request occur less frequently, but the specialized firms receive that work over the generalist firms.

Additionally, as an outcome of the recent successful Rural Summit, the concept of geographic representation of service providers, in the rural segments of the City, has been recommended as a possible procurement initiative. If adopted, this approach would result in additional firms being added to Standing Offers, with more choice to

the various urban and rural sections of the City, in order to ensure that contractors providing service have knowledge of the diverse and often specialized requirements that pertain to those different areas.

Recommendation 7

Supply Management ensure that all new Standing Offers have effective evaluation criteria established in order to rank proponents to ensure the City achieves "best value".

Management Response

Management agrees with this recommendation.

This is reflective of current purchasing practice, and a focus on new Standing Offer opportunities will be implemented by Q3 2006.

Recommendation 8

For existing Standing Offers, Supply Management should develop specific management processes in order to ensure that work is allocated equitably.

Management Response

Management agrees with this recommendation.

This is reflective of current purchasing practice, and a focus on new Standing Offer opportunities will be implemented by Q3 2006.

Recommendation 9

When evaluating proposals for Standing Offers, Supply Management should ensure the various categories of professional are weighted to reflect usage.

Management Response

Management agrees with this recommendation.

This will be implemented by Q3 2006.

Recommendation 10

Supply Management should ensure that all call-ups against Engineering Standing Offers be required to bid resources against the classifications contained in their Standing Offer Agreement or that the bids be deemed non responsive.

Management Response

Management agrees with the intent of this recommendation.

Management generally concurs with the recommendation but believes that certain situations may require flexibility.

Standing Offers by their very nature, are issued in advance of specific assignments being fully scoped, or in some cases known at all. The resources therefore, against which proponents commit firm per diem rates, tend to be typical, generic classifications; however, they do cover the majority of "down stream" needs which follow and become call-ups against the Standing Offer.

It should be recognized that occasionally an authorized firm may have the need to include a specialized resource on a proposal in order to respond to the specific needs of an assignment, and that in-house expertise exists in Supply Management Division to ensure that the City is getting the best cost.

Recommendation 11

When Information Technology Services calls for bids and the individual selected (originally submitted for evaluation by the winning proponent) is unavailable for work, the second qualified bid be selected (rather than the original firm substituting another individual).

Management Response

Management agrees with this recommendation. A review by Information Technology Services indicates that this is a current practice; however, it is acknowledged that a deviation to the practice occurred inadvertently only once (in 2003). The Standing Offer has been in use for five years.

Recommendation 12

When Information Technology Services issues calls for proposals, that all invitees be reminded of the criteria against which they will be assessed.

Management Response

Management agrees with this recommendation.

This will be implemented immediately.

Recommendation 13

Supply Management ensure that all Standing Offer Agreements have an original maximum cap for call-up of $100,000, with the total value of amendments not to exceed a further $50,000, or 50% of the original call-up, without the approval of the City Manager.

Management Response

Management agrees with the intent of this recommendation.

Management agrees that the total value of amendments to call-ups should not exceed 50% of the value of the original call-up. In addition, most standard call-ups have a threshold of $120,000, which we feel is reasonable. Although most existing call-ups are typically limited to the $100-$120,000 range, establishing a specific dollar threshold does not reflect the very real differences in the types of goods and services that the City purchases. For example, a $100,000 cap may be too much for the purchase of office supplies, but would not begin to meet the needs to secure SAP resources or purchase steel.

Information Technology, for example, frequently has instances where contracts for SAP related resources require more than 100 days of commitment, because the resources are difficult to find, the per diem rates are high, and vendors require longer commitments in order to guarantee availability.

While management agrees that there should be a 50% cap on amendments to call ups, it recognizes that, at least in the case of Infrastructure Services and Public Works, there are instances where there may be a need to exceed these limits to deal with follow-on work where changing firms is not in the City's interest financially. These exceptions should have the City Manager's approval.

Recommendation 14

Supply Management should review purchasing activities related to Fleet Services and develop appropriate Standing Offers and/or tenders.

Management Response

Management agrees with this recommendation.

This will be implemented by Q3 2006.

Recommendation 15

Where organizations make call-ups directly, a copy should be forwarded to Supply Management for monitoring purposes

Management Response

Management agrees with this recommendation.

This will be implemented by Q2 2006.

Recommendation 16

That Supply Management regularly reviews the Standing Offer site to ensure that all information is up to date.

Management Response

Management agrees with this recommendation. This process is now in place.

Recommendation 17

Supply Management should ensure that all purchasing activity is included in its report to Council, regardless of the source of the information or the means of acquisition and be presented in a clear and easily understood format.

Management Response

Management agrees with the intent of this recommendation.

Management believes that the current reporting meets the standards established within the City Purchasing By-Law, which requires that Supply Management submit to Council on a quarterly basis the details of contracts in excess of $25k which were awarded under delegated authority.

The recommendation here suggests an expansion beyond those works that are below $25,000 or do not flow through Supply Management. This reporting is possible but not within existing resources as this additional requirement will require the on-going analysis of all other payment types, and may not provide the kind of information Council needs for financial oversight.

A much simpler and more cost effective approach would be for Accounts Payable to produce an annual listing of all vendors to whom payments totalling $25,000 or more in aggregate were made, together with the total payments made for the year. SAP can readily produce such a report, however, the need to remove the numerous non-discretionary payments such as those to other governmental levels, benefit service providers, pension plans, school boards, etc., to name but a few, and to portray the data in a meaningful manner, will require an additional administrative level of effort.

Management agrees that it is time to look at how reporting standards to Council for contracts and purchasing could be improved. Supply Management will investigate best-practice reporting for Council oversight and bring recommendations for improvement forward for the next term of Council.

Recommendation 18

Supply Management should facilitate reporting by including specific fields in the Procurement Module to identify specific transaction types such as: Call-up against Standing Offers, Request for Quotation, Request for Tender, Request for Proposal, and Request for Standing Offer, Payments without Reference, etc.

Management Response

Management agrees with this recommendation.

This upgrade to the Procurement Module in SAP would be a valuable addition to the data reporting capability, and Supply Management will initiate a working committee to include the IT Enterprise Application Management Division and the SAP Support Center to investigate the possibility of implementing the suggested upgrades. This application will, however, undergo the same analysis and business case evaluation as

all other Information Technology requests and be prioritized against all other requests.

Recommendation 19

Supply Management should ensure Payments without Reference to a Purchase Order are adequately monitored, in order to identify and include cases of non-compliance in regular reports to Council, and the City Manager, in order to minimize their occurrence.

Management Response

Management agrees with the intent of this recommendation.

Management believes that a reasonable level of monitoring is currently in place. The expansion to 100% review as suggested will have resource implications.

The Finance Branch conducts on-going compliance reviews of all payments made by credit cards, petty cash and payment without reference to a purchase order, which are an essential component of the City's Financial Management Control Framework. The reports are provided to management as an information item. The Financial Services Branch and the involved parties deal with all cases of non-compliance.

To expand the reviews to 100% of all payments without reference in order to report on Standing Offers and non-compliance will require a significant increase in staffing requirements in Accounts Payable, as well as potentially expensive customization to the SAP application.

The implementation of this recommendation will be identified in the 2007 Departmental Business Plan and resources sought as part of the 2007 budget.

Recommendation 20

That Supply Management ensure the quarterly reports to Council reflect the actual nature of the purchase. Program Managers may make corrections to errors only, rather than "editorialize" the description of what was purchased, which must remain as described in the Contract Approval Request.

Management Response

Management agrees with this recommendation.

Corrections will be restricted to providing clarity to the description. This will be implemented immediately.

Recommendation 21

Supply Management should review their standard contract formats and clauses to remove duplication.

Management Response

Management agrees with this recommendation.

This will be implemented by Q3 2006.

Recommendation 22

Supply Management should not amend Terms and Conditions without the explicit approval of Risk Management.

Management Response

Management agrees with this recommendation.

This will be implemented immediately.

Recommendation 23

Supply Management and Financial Support Units should ensure Terms and Conditions are sent out with both Corporate and Departmental Purchase Orders, regardless of value, and their receipt and acknowledgement by suppliers kept on record.

Management Response

Management disagrees with this recommendation.

Management believes that the process currently being followed is preferable to the recommendation.

Currently, all bid solicitation documents, Tender, Standing Offer, Proposal, etc, contain up to 40 standard terms and conditions (6 to 7 pages typically), designed by Purchasing, Risk Management, and Legal Services to protect the City from a number of perspectives. Issues addressed include Conduct of Work, Insurance, Indemnification and Liability, Workplace Safety, Occupational Health, MFIPPA, Conflict of Interest, Need for Confidentiality, Audit and Reporting Requirements, among others. Bidders, in their proposal or tender submission, are obligated (at the bidding stage, where the City clearly has leverage in that regard), to accept the City terms and conditions.

Once a vendor is selected as either the lowest responsive bidder, or best value proponent, a Purchase Order is issued. The Purchase Order includes, by direct reference, an order of precedence, which lists amongst other documents, the initial City bid document (which contains the complete legal terms and conditions), and the bidder response (which has accepted those conditions), within a legally acceptable validity period.

This approach, endorsed by the City's Legal Services Branch, appears to be appropriate and preferable to the collection of signed statements, which would occur after the award was determined, and the leverage of the City to impose sometimes onerous conditions on the vendor, may be reduced. Additionally the smaller

Departmental Purchase Orders include a condensed version of the main legal terms and conditions, which print automatically in SAP, and are provided to the vendor.

Recommendation 24

Supply Management should ensure that all Requests for Proposal contain a clause requiring bidders to certify that the rates offered are those offered to their best/most favoured client, and that this be subject to verification.

Management Response

Management agrees with this recommendation and will expand the recommendation to include all bid solicitation proposals.

This will be implemented by Q3 2006.

Recommendation 25

Supply Management should work to integrate the Contract Approval Request within the Procurement Module of the Financial System.

Management Response

Management disagrees with this recommendation.

The Contract Approval Request is an MS Word based template used to approve all contracts under delegated authority. The CAR, as it is known, flows well through the outlook e-mail function, and the timeline associated with contract approval, even at the highest levels of City management, is an impressively short one. Imbedding the CAR "Word" document in SAP would not be cost-effective.

General Management Response:

In most instances staff are in agreement with the recommendations and where there is a difference of viewpoint further comments have been provided.

Throughout the audit of procurement, Supply Management Division was involved in many discussions, which led to the recommendations contained herein, many of which run parallel to the objectives of Purchasing within the City.

The focus of the recommendations on reporting completeness, and process improvement, is recognition that there was an absence of more high profile errors in contracting which is very positive.

Since amalgamation the involvement of Purchasing in City contracts has risen from the 2001 baseline of $484.5 million, to a 2005 level which exceeded $1 billion. The processes and procedures implemented since 2001 have added value and ensured a consistent purchasing approach with valuable controls for the vast majority of City spending.

A number of the recommendations contained herein would add considerably to the level of effort needed within Purchasing, and will be analyzed in relation to the value added to the current state. In order to implement all recommendations it is anticipated that Purchasing would need an additional four FTE's, one clerical, one buyer, and two purchasing officers, at an estimated total cost of $273k annually, along with a one time set-up cost of about $100k. Additional resources will also be required in the Accounting area if all recommendations regarding reporting were implemented.

Management will be examining where efforts could be refocused, as in the case of reporting, to minimize costs while enhancing the information. The implementation of these efforts will be identified in the 2007 Departmental Business Plan and resources sought as part of the 2007 budget.

Conclusion

Current processes and procedures provide Council a reasonable level of assurance that contracting activities are in compliance with City policy.

Overall there are opportunities to effect operational improvements in reporting and to enhance value for money through increasing the price component in contracting, utilizing more appropriate methodologies in evaluating price submissions and more effective management of Standing Offers.

The Supply Management Division must fully exercise their control responsibilities to ensure all of the recommendations are implemented.

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

RÉSUMÉ

Introduction

La vérification du processus d'acquisition faisait partie du plan de vérification 2005 soumis par le vérificateur général de la Ville et reçu par le Conseil municipal le 15 décembre 2004.

Contexte

La Division de la gestion des approvisionnements de la Ville d'Ottawa est responsable des activités des contrats et d'acquisition centralisée. L'Unité des services financiers et les différents services sont responsables des acquisitions décentralisées et de l'utilisation des cartes d'achats.

En 2004, la valeur totale des bons de commande émis a atteint 437 millions de dollars, soit 381 millions de dollars en bons de commande centralisés et 56 millions de dollars de en bons de commande décentralisés. En outre, environ 980 cartes pour petits achats étaient actives, y compris les cartes d'achats du Service de police, et les dépenses se chiffraient à 10,5 millions de dollars en 2004.

Objectifs de la vérification

La présente vérification vise à offrir une évaluation objective et indépendante pour :

- s'assurer qu'il existe des procédures adéquates de suivi, de gestion et de contrôle des contrats et des acquisitions faites par les employés de la Ville;

- s'assurer que les activités d'acquisition et de contrats respectent la politique et les procédures établies, qu'elles limitent l'exposition au risque de la Ville, qu'elles déterminent des stratégiques d'atténuation et qu'elles recensent les pratiques exemplaires;

- déterminer si l'acquisition optimise les ressources;

- déterminer si les recommandations formulées lors de la vérification des programmes des cartes d'achat et des cartes corporatifs de 2003 ont été mises en œuvre et si elles produisent les résultats attendus.

Portée de la vérification

La portée de la vérification prévoit un examen de la politique d'impartition, des pratiques de gestion, des contrôles internes et des procédures relatives à l'acquisition et aux contrats de la Ville, ce qui comprend les cartes d'achats, et de leur conformité aux politiques et aux procédures établies. La vérification a permis d'examiner les activités d'acquisition et de contrats réalisées en 2004 par tous les services, y compris le Service de police.

Outre l'acquisition et les contrats, les dossiers concernant les achats faits à l'aide de paiements sans renvoi à un bon de commande ont également fait l'objet d'un examen.

Principales constatations

1. En ce qui concerne les activités sous l'autorité directe de la Gestion des approvisionnements, la vérification a révélé que le nombre d'infractions matérielles était relativement faible.

    En vertu du règlement, tous les contrats supérieurs à 10 000 $ doivent être traités par le personnel de la Gestion des approvisionnements. Une fonction du système financier de la Ville force l'autorisation des transactions supérieures à 10 000 $ par la Gestion des approvisionnements.

    Une demande d'approbation des contrats a été instaurée et elle s'inspire d'une approche axée sur le risque pour examiner les demandes d'achat. Plus la valeur du contrat est élevée, plus il est important de soumettre la demande à l'examen et à l'approbation de la haute direction. Il s'agit d'une étape importante de la reddition des comptes et du contrôle de gestion. Toutefois, la demande d'approbation des contrats devrait être intégrée dans le modèle d'acquisition du système financier.

2. Il faut améliorer la procédure générale de communication de rapports au Conseil. Il est difficile d'extraire du système financier la valeur exacte des contrats acquis au moyen de bons de commande ou de paiement sans renvoi à un bon de commande. Les renseignements sur ces transactions ne sont pas transmis intégralement au Conseil.

    Des mesures ont été prises pour améliorer la qualité, l'exhaustivité et la pertinence des renseignements, mais d'autres changements s'avèrent nécessaires pour mettre en œuvre des procédures de suivi et de production de rapports sur la conformité et le rendement des activités de contrats. Le format pourrait tirer avantage d'un résumé de haut niveau et mettre en évidence les principales attentes envers la politique et la procédure, particulièrement si elles concernent l'utilisation inappropriée des paiements sans renvoi. Dans le but d'améliorer le caractère opportun des rapports, il faut simplifier la procédure de révision et de modification pour réduire le nombre de changements apportés à la nature des biens ou des services achetés.

3. Le choix de la méthode d'évaluation des propositions ne reflète pas toujours les écarts de prix. Cela signifie que des primes considérables peuvent être versées pour des propositions ayant de légères différences sur le plan de la qualité. Par exemple, nous avons découvert que des propositions avaient reçu un pointage identique pour le prix, alors que la première se chiffrait à 140 000 $ et que l'autre

totalisait 70 000 $. Il faut modifier la méthode d'évaluation des prix afin que les points attribués reflètent clairement les écarts de prix.

4. Il est possible d'améliorer l'optimisation des ressources en haussant de 15 % à 30 % la composante du prix dans les demandes de propositions, y compris les demandes d'offre à commandes, à condition que la méthode d'évaluation soit modifiée, tel qu'il a été indiqué précédemment. Ces pratiques pourraient engendrer d'importantes économies de coûts. Par exemple, selon les estimations de la Gestion des approvisionnements concernant l'attribution de 12 contrats pour travaux d'ingénierie d'une valeur de 5,2 millions de dollars au cours de l'été 2005, une hausse de 30 % de la composante du prix des propositions et la modification de la méthode d'évaluation auraient pu donner lieu à des économies de coûts de 580 000 $. Il s'agit d'économies possibles et considérables, particulièrement dans le domaine des services techniques qui coûtent approximativement 40 millions de dollars chaque année.

5. Une meilleure gestion des offres à commandes rehausserait l'équité et la transparence et augmenterait la valeur. Actuellement, les offres à commandes sont attribuées à un nombre relativement élevé de fournisseurs, mais le travail est confié à quelques entreprises avec peu d'égard pour les écarts de prix. Cela signifie que des primes peuvent être versées pour du travail de même qualité et que le travail n'est pas attribué d'une manière ouverte, juste et transparente.

Nous avons aussi découvert certains secteurs qui pourraient recourir aux offres à commandes. Nous avons observé plusieurs exemples probants pour lesquels les Services du parc automobile ont accumulé un coût total d'acquisition d'une valeur supérieure à 250 000 $ avec une même entreprise sans employer d'offres à commandes. Des achats de pièces automobiles d'une valeur minimale de 2 millions de dollars et de services d'une valeur de 4 millions de dollars ont été faits sans utiliser d'offres à commandes et sans songer à l'obtention possible de rabais. Il faut mettre en place des offres à commandes pour ces articles qui ont peu de valeur, mais qui sont achetés fréquemment.

6. Les cartes d'achats sont habituellement bien gérées avec la mise en place d'une procédure bien définie pour l'acquisition et le paiment de biens et de services de faible valeur. Presque toutes les recommandations concernant les cartes d'achats formulées lors de la vérification des programmes des cartes d'achat et des cartes corporatives de 2003 ont été mises en œuvre et elles produisent les résultats attendus. Toutefois, certains ordinateurs sont encore achetés avec des cartes d'achats, ce qui va à l'encontre des recommandations de la vérification de 2003.

7. Des paiements sans renvoi sont faits pour des biens ou des services acquis sans bon de commande, sans la participation de la Gestion des approvisionnements. La vérification a révélé que ce type de transaction affichait des taux élevés de non-conformité de la politique et de la procédure existantes.

Ces transactions ne sont pas surveillées adéquatement et ne sont pas incluses dans les rapports remis au Conseil par la Gestion des approvisionnements. De plus, aucun rapport d'exception sur les paiements sans renvoi n'est préparé actuellement pour le directeur des services municipaux dans le but d'en réduire au minimum la fréquence.

8. La Gestion des approvisionnements ou les directeurs renoncent parfois aux modalités contractuelles standard sans consulter la Gestion des risques, ce qui expose la Ville à un risque plus important que prévu.

9. Les modifications peuvent donner lieu à des situations pour lesquelles les contrats à fournisseur unique dépassent la limite de 50 000 $ prescrite par le règlement. En outre, les modifications pour les travaux de suivi peuvent faire augmenter considérablement la valeur des projets jusqu'à plusieurs fois la portée originale de l'initiative.

Recommandations et réponses de la direction

Recommandation 1

La Gestion des approvisionnements ne devrait traiter aucun contrat de biens ou de services déjà attribué ou en cours d'exécution.

Réponse de la direction

La direction accepte la recommandation.

La direction ne sanctionne pas le traitement des contrats « après coup » quand les services d'achat n'ont pas pris part adéquatement à la procédure.

Cette recommandation est clairement supportable, mais, sans une participation des services d'achat, aucun bon de commande ne peut être émis. Dans le SAP, cela restreint l'outil de paiement au « paiement sans renvoi », ce qui n'est malheureusement pas toujours une solution acceptable. Certains contrats, et même ceux amorcés hors des services d'achat, exigent de ces mêmes services d'achat qu'ils trouvent une façon de les soutenir pour permettre l'attribution du contrat du bon de commande. La Direction des systèmes informatiques évaluera le coût de suppression de cette limite du SAP au cours du deuxième trimestre de 2006.

Recommandation 2

La valeur totale d'un contrat à fournisseur unique ne devrait pas dépasser 50 000 $ (modifications incluses) sans l'approbation du directeur des services municipaux.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

Les services d'achat de la Ville déconseillent fortement l'attribution de contrats à fournisseur unique, même si cette pratique est autorisée dans le *Règlement municipal sur les marchés* à certaines conditions. Environ 10 % de tous les achats sont faits auprès d'un fournisseur unique, ce qui correspond aux pratiques exemplaires dans l'ensemble de l'activité économique. On effectue des modifications lorsqu'il y a des changements de portée et lorsqu'il serait improductif de soumettre les travaux supplémentaires à un appel d'offres. La direction étudiera le besoin d'établir d'autres seuils de modifications et, si nécessaire, donnera suite aux modifications du règlement sur les marchés.

La direction n'appuie pas le fait que ce soit le directeur des services municipaux qui approuve les contrats à fournisseur unique de plus de 50 000 $ et croit que le niveau de diligence raisonnable actuel, qui se caractérise par une étude du chef des services généraux ou du directeur municipal adjoint au besoin, suffira.

Recommandation 3

La Gestion des approvisionnements devrait s'assurer que la valeur totale des modifications de la portée du travail d'un contrat n'excède pas la moitié du montant initial de ce contrat sans l'autorisation du directeur des services municipaux.

Réponse de la direction

La direction rejette la recommandation.

Les modifications apportées aux contrats s'expliquent généralement par des changements de portée imprévus et sont analysées de près par le Service et le Service de l'approvisionnement, qui font en sorte que la Ville profite de la juste valeur du marché. Le processus d'approbation actuel comprend le gestionnaire des approvisionnements et l'approbation de niveau 2, soit du chef des services généraux ou du directeur municipal adjoint et demeure justifié.

Recommandation 4

La Gestion des approvisionnements devrait adopter des méthodes d'évaluation qui reflètent mieux les écarts de prix des propositions de services professionnels, comme l'écart-type, la soumission moins-disante ou le prix par point.

Réponse de la direction

La direction accepte la recommandation.

La méthode recommandée est utilisée actuellement pour la majorité des contrats, alors que la méthode de référence moyenne sert aux services d'ingénierie. La direction examinera l'utilisation d'une méthode qui reflète mieux les écarts de prix. Cette initiative commencera pendant le deuxième trimestre de 2006, de concert avec la recommandation 5.

Recommandation 5

La Gestion des approvisionnements devrait veiller à ce que la composante du prix des demandes de propositions de services professionnels soit normalisée immédiatement à un niveau minimal de 30 %.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

Actuellement, la pondération de la composante du prix dépend du type de service professionnel à impartir. Dans bien des cas, cette composante du prix est, en fait, supérieure à 30 %. Notre expérience nous a appris l'importance d'une grande flexibilité. Il s'agit d'un secteur souvent examiné par le personnel. Au fil des ans, la pondération de ce facteur est passée de 0 % (sans importance) à un minimum de 15 %. L'un des secteurs préoccupants sur le plan de la fixation d'un minimum de 30 % est celui des études et des services de conception de l'infrastructure.

La direction a étudié le seuil de la composante du prix selon les pratiques utilisées par d'autres municipalités et ministères du Canada. Les résultats de cette étude démontrent que 20 % est un seuil courant pour la conception de l'infrastructure et l'ingénierie, et la Ville adoptera ce seuil immédiatement. Il est à noter qu'une initiative visant à établir des pratiques exemplaires d'acquisition de services techniques vient d'être entreprise par InfraGuide (Guide national pour des infrastructures municipales durables), dont le Conseil a adopté les principes directeurs en 2003. InfraGuide prévoit publier son rapport provisoire en mars 2006 pour recueillir des commentaires. À ce moment-là, la direction examinera les résultats avec le vérificateur général pour voir s'il faut effectuer d'autres changements pour optimiser les ressources de la Ville lors de l'achat de services d'ingénierie.

Recommandation 6

La Gestion des approvisionnements devrait veiller à ce qu'un nombre raisonnable d'entreprises obtiennent des offres à commandes et utiliser le prix comme une composante importante (au moins 30 %) de la procédure d'évaluation.

Réponse de la direction

La direction rejette la recommandation.

La direction a terminé l'examen et constate que la procédure actuelle garantit que les entreprises recevront du travail.

La plupart des offres à commandes utilisent une composante de prix à 100 % et elles sont accordées au soumissionnaire moins-disant. Une liste des entreprises autorisées est disponible; selon cette liste, le fournisseur de services les moins chers sera appelé en premier. La direction tente de restreindre le nombre d'entreprises à un niveau qui garantira du travail à la majorité, sinon à la totalité des entreprises. Toutefois, les offres à commandes sont préparées avant la divulgation des véritables attributions. Le principe de base d'une offre à commandes, comme l'indique chaque invitation

d'achat, est qu'aucune garantie de travail n'est donnée. De plus, en ce qui a trait à la traduction, les entreprises qui font partie de la liste d'offre à commandes font examiner la qualité de leur travail régulièrement. Si deux documents sont rejetés parce qu'ils sont inférieurs aux normes, l'entreprise est supprimée de la liste d'offre à commandes.

La taille, les ressources et les capacités des entreprises participant à une offre à commandes peuvent varier considérablement. Il est donc raisonnable d'affirmer que les grandes entreprises possédant de nombreux employés et une vaste expertise peuvent recevoir plus de travail qu'un petit fournisseur autorisé pour une même offre à commandes. Dans des secteurs comme la traduction, des entreprises recevront davantage de travail parce que leur taille et leur expertise leur permettront d'acquérir des compétences particulières ou d'offrir des délais d'exécution plus courts. Inversement, certaines petites entreprises offrent des services de traduction spécialisée et technique (pour les domaines de la santé, de l'ingénierie ou des finances par exemple). Ces requêtes sont moins fréquentes, mais les entreprises spécialisées reçoivent ces requêtes au détriment des entreprises généralistes.

De plus, à la suite du récent Sommet rural, on a recommandé le concept de la représentation géographique des fournisseurs de services des secteurs ruraux de la ville comme initiative d'acquisition. Si cette approche est adoptée, elle permettra d'ajouter des entreprises aux offres à commandes, ce qui offrira davantage de choix aux régions urbaines et rurales de la Ville et fera en sorte que les entrepreneurs qui fournissent des services connaissent les diverses exigences qui sont souvent spécialisées de ces différents secteurs.

Recommandation 7

La Gestion des approvisionnements devrait s'assurer que les nouvelles offres à commandes possèdent des critères d'évaluation efficaces pour faciliter le classement des propositions et garantir la « meilleure valeur » pour la Ville.

Réponse de la direction

La direction accepte la recommandation.

Cela reflète les pratiques d'achat actuelles, et une étude des offres à commande sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 8

Pour les offres à commandes existantes, la Gestion des approvisionnements devrait élaborer des procédures de gestion particulières pour garantir une attribution équitable du travail.

Réponse de la direction

La direction accepte la recommandation. Cela reflète les pratiques d'achat actuelles, et une étude des offres à commande sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 9

Lors de l'évaluation des propositions pour les offres à commandes, la Gestion des approvisionnements devrait tenir compte des différentes catégories de professionnels pour qu'elles correspondent à l'usage.

Réponse de la direction

La direction accepte la recommandation.

Cette recommandation sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 10

La Gestion des approvisionnements devrait veiller à ce que les commandes subséquentes à des offres à commandes techniques soumissionnent les ressources selon les classifications contenues dans la convention de l'offre à commandes, à défaut de quoi les soumissions seront jugées non conformes.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

La direction est généralement d'accord avec la recommandation, mais elle est d'avis que certaines situations peuvent exiger de la souplesse.

Les offres à commandes sont, par nature, la détermination ou la description complète de la portée du travail requis. Par conséquent, les ressources servant à fixer un taux quotidien dans les propositions appartiennent à des catégories types ou génériques; toutefois, elles couvrent la majorité des besoins « en aval » qui se manifestent par la suite et qui deviennent des commandes subséquentes à une offre à commandes.

Il faut accepter le fait qu'une entreprise autorisée devra parfois inclure une ressource spécialisée dans sa proposition pour répondre aux besoins précis d'une tâche et qu'il y a des personnes compétentes sur place à la Gestion des approvisionnements pour faire en sorte que la Ville obtienne le meilleur coût.

Recommandation 11

Quand les Services de technologie de l'information font des appels d'offres et la personne identifiée (soumise initialement à une évaluation par l'auteur de la proposition) n'est pas disponible pour le travail, alors il faut sélectionner la deuxième soumission (au lieu de choisir la première entreprise et lui demander de trouver une autre personne).

Réponse de la direction

La direction accepte la recommandation. Un examen des Services de technologie de l'information révèle qu'il s'agit d'une pratique courante. On reconnaît toutefois qu'il y a une seule occasion où, par mégarde, cette pratique n'a pas été suivie (en 2003); l'offre à commandes était en vigueur depuis cinq ans.

Recommandation 12

Quand les Services de technologie de l'information font des appels d'offres, ils doivent rappeler aux soumissionnaires les critères qui seront évalués.

Réponse de la direction

La direction accepte la recommandation, qui sera mise en œuvre immédiatement.

Recommandation 13

La Gestion des approvisionnements doit s'assurer que les conventions d'offre à commandes ont une limite maximale initiale pour les commandes subséquentes de 100 000 $ et que la valeur totale des modifications n'excède pas un montant supplémentaire de 50 000 $ ou 50 % de la commande subséquente initiale sans l'autorisation du directeur des services municipaux.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

La direction reconnaît que la valeur totale des modifications aux commandes subséquentes ne devrait pas surpasser 50 % de la valeur de la commande subséquente initiale. De plus, la plupart des commandes subséquentes ordinaires ont un seuil de 120 000 $, que nous trouvons raisonnable. Même si la plupart des commandes subséquentes comportent habituellement une limite variant de 100 000 $ à 120 000 $, l'établissement d'un seuil précis en dollars ne reflète pas la vraie différence des produits et services que la Ville achète. Par exemple, le plafond de 100 000 $ peut être trop élevé pour l'achat de fournitures de bureau, mais ne répondrait pas aux exigences pour conserver les ressources du SAP ou pour faire l'achat d'acier.

Par exemple, en technologie de l'information, il arrive souvent que des contrats de ressources liées au SAP exigent plus de 100 jours, parce que les ressources sont difficiles à trouver, les tarifs journaliers sont élevés et les fournisseurs demandent des engagements plus longs pour assurer la disponibilité.

Bien que la direction admette qu'il devrait y avoir une limite de 50 % aux modifications des commandes subséquentes, elle reconnaît que, du moins dans le cas des services d'infrastructure et des travaux publics, il pourrait y avoir des cas où il serait nécessaire de surpasser ces limites pour effectuer des travaux de suivi où le changement d'entreprise n'est pas dans le meilleur intérêt de la Ville sur le plan

financier. Ces exceptions doivent être approuvées par le directeur des services municipaux.

Recommandation 14

La Gestion des approvisionnements devrait revoir les activités d'achats des Services du parc automobile et préparer des offres à commandes ou des soumissions appropriées.

Réponse de la direction

La direction accepte la recommandation.

Elle sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 15

Quand les organisations passent des commandes directement, elles doivent en envoyer une copie à la Gestion des approvisionnements à des fins de suivi.

Réponse de la direction

La direction accepte la recommandation.

Elle sera mise en œuvre d'ici au deuxième trimestre de 2006.

Recommandation 16

La Gestion des approvisionnements devrait régulièrement examiner le site des offres à commandes pour s'assurer qu'il est à jour.

Réponse de la direction

La direction accepte la recommandation. Cette procédure est actuellement en œuvre.

Recommandation 17

La Gestion des approvisionnements devrait inclure toutes les activités d'achat dans son rapport au Conseil, sans égard à la source de renseignements ou à la méthode d'acquisition, et les présenter d'une manière claire et simple à comprendre.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

Selon la direction, les rapports actuels respectent les normes établies dans le Règlement municipal sur les marchés qui demande à la Gestion des approvisionnements de remettre au Conseil un rapport trimestriel détaillé sur les contrats qui dépassent 25 000 $ et qui ont été attribués par délégation de pouvoir.

La recommandation propose d'inclure les travaux qui sont inférieurs à 25 000 $ ou qui ne passent pas par la Gestion des approvisionnements. La production de rapports comme ceux-là est possible, mais irréaliste compte tenu des ressources actuelles parce que cette exigence supplémentaire nécessiterait une analyse continue de tous les autres types de paiements, et pourrait omettre de fournir les renseignements dont le Conseil a besoin pour effectuer la surveillance financière.

Il serait beaucoup plus simple et économique si les employés des comptes fournisseurs produisaient une liste annuelle de tous les fournisseurs ayant reçu des paiements totalisant 25 000 $ ou plus, sur laquelle figurerait le total des paiements faits durant l'année. Le SAP peut produire aisément ce type de rapport, sauf que le besoin de supprimer les paiements non discrétionnaires comme ceux versés aux autres niveaux de gouvernement, fournisseurs de services de prestations, fonds de pension, conseils scolaires, etc., et de présenter les données de façon réaliste exigera un niveau d'effort administratif supplémentaire.

La direction reconnaît qu'il est temps d'étudier la façon dont on pourrait améliorer l'établissement de rapports au Conseil pour les contrats et les achats. La Gestion des approvisionnements étudiera les pratiques exemplaires de supervision pour les rapports du Conseil et présentera les améliorations qu'elle propose pour le prochain mandat du Conseil.

Recommandation 18

La Gestion des approvisionnements devrait faciliter la production de rapports en intégrant des champs spéciaux dans le module des acquisitions du SAP afin de recenser des types de transactions précis : commandes subséquentes à des offres à commandes, demandes de prix, demandes de soumissions, demandes de propositions, demandes d'offres à commandes, paiements sans renvoi et autres.

Réponse de la direction

La direction accepte la recommandation.

Cette mise à jour du module des acquisitions du SAP constituerait un précieux atout pour la capacité de production de rapports sur les données. La Gestion des approvisionnements mettra sur pied un groupe de travail pour examiner l'implémentation des mises à jour proposées; ce groupe comprendra la Division de la gestion des applications d'entreprise de la TI et le Centre de soutien du SAP. Toutefois, cette demande sera soumise à l'analyse et à l'évaluation des dossiers administratifs, comme toutes les autres demandes de technologie de l'information, et classée selon son ordre de priorité par rapport aux autres demandes.

Recommandation 19

La Gestion des approvisionnements devrait veiller à ce que les paiements sans renvoi soient surveillés adéquatement de manière à cibler et à inclure les cas

d'inobservation dans les rapports périodiques présentés au Conseil et au directeur des services municipaux afin d'en réduire le nombre.

Réponse de la direction

La direction est d'accord avec l'objectif de la recommandation.

La direction croit que le niveau de surveillance actuel est adéquat. L'adoption d'un examen complet aura des conséquences sur les ressources.

La Direction des services financiers vérifie continuellement la conformité de tous les paiements par cartes de crédit, avec la petite caisse ou sans renvoi à un bon de commande; il s'agit d'une composante essentielle du cadre de contrôle de gestion financière de la Ville. Les rapports sont remis à la direction à titre d'information. La Direction des services financiers et les parties visées s'occupent de tous les cas non conformes.

L'examen de tous les paiements sans renvoi dans le but de produire des rapports sur les offres à commandes et l'inobservation exigera une augmentation considérable du nombre d'employés des comptes fournisseurs ainsi qu'une adaptation potentiellement coûteuse de l'application du SAP.

La mise en œuvre de cette recommandation sera intégrée dans le plan d'activités des services pour 2007, et les ressources seront demandées dans le cadre du budget 2007.

Recommandation 20

La Gestion des approvisionnements devrait veiller à ce que les rapports trimestriels reflètent la véritable nature des achats. Les gestionnaires de programme ne devraient que corriger les erreurs au lieu d'« interpréter » la description des achats, qui doit être la même que dans la demande d'approbation du contrat.

Réponse de la direction

La direction accepte la recommandation.

Les corrections devront uniquement clarifier la description. Cette recommandation sera mise en œuvre immédiatement.

Recommandation 21

La Gestion des approvisionnements devrait revoir les clauses et les formats de leurs contrats pour éviter tout dédoublement.

Réponse de la direction

La direction accepte la recommandation. Elle sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 22

La Gestion des approvisionnements ne devrait pas modifier les modalités sans l'autorisation explicite de la Gestion des risques.

Réponse de la direction

La direction accepte la recommandation. Elle sera mise en œuvre immédiatement.

Recommandation 23

La Gestion des approvisionnements et l'Unité des services financiers devraient s'assurer d'envoyer les modalités avec les offres à commandes des services et de la Ville, sans égard à leur valeur, et de conserver l'accusé de réception des fournisseurs dans le dossier.

Réponse de la direction

La direction rejette la recommandation.

La direction est d'avis que la procédure actuelle est préférable à la recommandation.

Actuellement, les documents d'appel d'offres, les soumissions, les offres à commandes, les propositions et autres documents semblables renferment une quarantaine de modalités standard (pages 6 et 7 habituellement) préparées par les services des achats, la Gestion des risques et les Services juridiques afin de protéger la Ville contre un certain nombre de risques. Parmi les points soulevés, il y a, entre autres, la réalisation du travail, l'assurance, l'indemnisation, la responsabilité, la santé et la sécurité au travail, la *LAIMPVP*, les conflits d'intérêts, la confidentialité et les exigences en matière de rapports. Dans leur proposition, les soumissionnaires sont obligés d'accepter les modalités de la Ville (à l'étape du dépôt des soumissions, moment où la Ville possède une force de négociation).

Après le choix du fournisseur (soumissionnaire moins-disant ou offrant la meilleure valeur), le bon de commande est émis. Ce bon de commande comprend, de manière explicite, la liste des priorités qui énumère parmi d'autres documents le dossier d'appel d'offres initial de la Ville (qui contient les modalités juridiques complètes) et la réponse du soumissionnaire (qui a accepté les modalités) pour une période de validité acceptable du point de vue juridique.

La Direction des services juridiques de la Ville a approuvé cette approche qui semble adéquate. Cette approche est d'ailleurs préférable à la collecte de déclarations signées qui survient après l'attribution du contrat et qui réduit la possibilité pour la Ville d'imposer des conditions parfois onéreuses au fournisseur. De plus, les bons de commande des services comprennent une version condensée des principales modalités juridiques qui s'imprime automatiquement dans le SAP et qui est remise au fournisseur.

Recommandation 24

La Gestion des approvisionnements devrait s'assurer que toutes les demandes de propositions contiennent une clause demandant aux soumissionnaires de certifier que les taux offerts sont ceux accordés à leurs meilleurs clients et précisant que cette confirmation peut faire l'objet d'une vérification.

Réponse de la direction

La direction est d'accord avec cette recommandation et l'étendra même à toutes les propositions d'appels d'offres.

Cette recommandation sera mise en œuvre d'ici au troisième trimestre de 2006.

Recommandation 25

La Gestion des approvisionnements devrait s'efforcer d'intégrer la demande d'approbation des contrats dans le module des acquisitions du système financier.

Réponse de la direction

La direction rejette la recommandation.

La demande d'approbation des contrats est un modèle Word utilisé pour approuver tous les contrats sous délégation de pouvoir. Cette demande s'adapte bien à la fonction du courrier électronique d'Outlook, et l'échéance associée à l'approbation des contrats, même dans les hauts échelons de la direction de la Ville, est étonnamment courte. L'intégration du document « Word » de la demande d'approbation des contrats dans le SAP ne serait pas rentable.

Réponse générale de la direction

Dans la plupart des cas, le personnel est d'accord avec les recommandations, et lorsqu'il y a une divergence d'opinions, d'autres commentaires sont offerts.

Pendant la vérification des achats, la Division de la gestion des approvisionnements a participé à de nombreuses discussions qui ont donné lieu aux recommandations de ce document, dont beaucoup s'alignent sur les objectifs des services d'achat de la Ville.

L'importance accordée par les recommandations à l'exhaustivité des rapports et à l'amélioration des procédures confirme l'absence de graves erreurs quant à l'impartition, ce qui est très encourageant.

Depuis la fusion, la participation des services d'achat aux contrats de la ville est passée d'un niveau de base de 484,5 millions de dollars en 2004 à un montant estimé à 900 millions de dollars en 2005 qui surpasse un milliard de dollars. Les procédures et les processus mis en œuvre depuis 2001 ont ajouté de la valeur et garanti une approche uniforme des achats et des contrôles très utiles pour la grande majorité des dépenses de la Ville.

Les recommandations du présent document exigeraient beaucoup plus d'efforts de la part des services d'achat et elles doivent être analysées pour qu'on en connaisse les avantages. Pour mettre en œuvre toutes les recommandations, les services d'achat auraient besoin de quatre équivalents temps plein (ETP) supplémentaires (un commis, un acheteur et deux agents des achats), ce qui représente un coût annuel total estimé à 273 000 $, ainsi qu'un montant ponctuel de mise en place de 100 000 $. D'autres ressources seront nécessaires dans le secteur des services comptables si toutes les recommandations relatives à la production de rapports sont adoptées.

La direction cherchera à savoir où les efforts pourraient être réorientés, comme dans le cas des rapports, pour limiter les coûts tout en améliorant les renseignements. La mise en œuvre de ces efforts sera déterminée dans le plan d'activités du service pour 2007, et les ressources seront demandées dans le cadre du budget 2007.

Conclusion

Les procédures et processus existants assurent raisonnablement au Conseil que les activités d'impartition respectent la politique municipale.

Dans l'ensemble, il est possible d'apporter des changements opérationnels à la production de rapports et d'améliorer l'optimisation des ressources en augmentant la composante du prix lors de l'impartition, en utilisant des méthodes d'évaluation des propositions de prix et en gérant plus efficacement les offres à commandes.

La Division de la gestion de l'approvisionnement doit exercer pleinement ses pouvoirs de contrôle pour garantir la mise en œuvre de toutes les recommandations.

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1.0 Introduction

The Audit of the Procurement Process was part of the 2005 audit plan brought forward by the City's Auditor General and received by Council on December 15, 2004.

2.0 Background

In February 2001, Council approved the City of Ottawa Purchasing By-Law. The policies contained in the By-Law are designed to support managers in carrying out contracting activities and to ensure that City standards of accountability, risk management and good business practices are followed. The By-Law allows for both centralized and decentralized contracting and procurement activities.

The Supply Management Division of the Financial Services Branch is responsible for conducting centralized procurement and contracting activities under the direction of the Financial Services. Financial Support Units and departments are responsible for decentralized procurements.

Supply Management's main activities consist of the following:
- Establishing and administering policy;
- Reporting all procurement and contracting activities; and
- Direct procurement and contracting services for requirements greater than $10,000.

Financial Services, in conjunction with the department(s) are responsible for:
- Procurements of $10,000 or less (Departmental Purchase Orders);
- Payments without Reference to a Purchase Order; and
- Procurement Cards.

There are four main transaction types utilized to acquire goods and services.

- Corporate Purchase Orders are issued by Supply Management to acquire goods, services and construction in accordance with the Purchasing By-law where the estimated value is greater than $10,000.

- Departmental Purchase Orders are utilized by a Department to purchase goods, services and construction in accordance with the Purchasing By-law where the estimated value is $10,000 or less.

- Purchasing Card Transactions are used to acquire goods and services in accordance with the Purchasing By-law where the estimated value is $5,000 or less.

- Payments Without Reference are made for goods or services that have been acquired without a Purchase Order, generally without the involvement of Supply Management.

In 2004, Purchase Orders were issued for a total value of $437 million and $10.5 million worth of goods and services were acquired using Purchasing Cards. Approximately 980 Purchasing Cards (including those used by the Ottawa Police Service) are active with an average 2,800 transactions per month. The following table outlines details of the Purchase Prders:

Corporate Purchase Orders (PO)	$381 million
Departmental Purchase Orders (DPO)	$ 56 million
Total Purchase Orders (2004)	$437 million

3.0   Audit Objectives

The objectives of this audit were to provide an independent and objective assessment to:

- ▪ ensure that appropriate processes are in place to track, manage and control procurement and contracting carried out by City employees;

- ▪ provide Council with assurance that procurement and contracting activities comply with established policy and procedures; that they limit the City's exposure to risk, and to identify mitigating strategies when appropriate and to identify best practices;

- ▪ determine whether procurement achieves value for money; and,

- ▪ determine whether recommendations pertaining to Purchasing Cards, in the 2003 Audit of the Corporate Card and Purchasing Card Program have been implemented and are operating as intended.

4.0   Audit Scope

The scope of the project included an examination of the City of Ottawa's contracting policy as well as management practices, system of internal controls, policies, and procedures pertaining to the administration's contracting and procurement practices, including Purchasing Cards, and their compliance with established policies and procedures.

The audit also reviewed procurement and contracting activities carried out in 2004 in all departments, including the Ottawa Police Service. The audit examined management practice(s) in planning, controlling, and monitoring of all related activities.

In addition to reviewing Corporate Purchase Orders, files relating to Departmental Purchase Orders, Payments without Reference and Purchasing Cards were examined. Also included was a follow-up of recommendations pertaining to Purchasing Cards made

in the 2003 Audit of the Corporate Card and Purchasing Card Program, conducted by the former Audit and Consulting Services Branch.

5.0   Approach

Our approach included the following audit steps:

1. Review of documentation collected (policies affecting the management of procurement and contracting, including Purchasing Cards).
2. Planning and conducting interviews with departmental managers and staff.
3. Assessment of tools/mechanisms used by managers to monitor and control processes.
4. File review which included:
   - Random sample of 48 Purchase Orders;
   - Judgmental sample of higher risk procurements – e.g. – Professional Services (approximately 27 Purchase Orders);
   - Supplemental testing of Departmental Purchase Orders and Payments without Reference (approximately 50 each), and
   - Purchasing Cards (approximately 50 transactions).

6.0   Acknowledgement

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

7.0 Detailed Observations, Findings and Recommendations

7.1 Results of Contract File Review

7.1.1 Corporate Purchase Orders

Procurement and contracting activities generally comply with established policy and procedures. Forty-eight (48) contract files were randomly selected for review. These were supplemented by an additional twenty-seven (27) higher risk contracts, primarily for professional services.

The following table summarizes the transactions that were found to be non-compliant with the Purchasing Policy:

Summary of Inappropriate / Non-compliant Purchasing Transactions		
Exception to Policy and/or Procedure	Qty	Comment
After the Fact ($25,000 contract) – Purchase Order established after services delivered	1	Low/Moderate Risk Services were delivered
Waiver of Standard Clauses – involvement of Risk Management not documented	1	Potentially High Risk due to the nature of the procurement
Verification of Standing Offer Rates	2	Moderate Risk Potential overpayment $15,000 (of a total value of $153,000)
Failure to include Standard Terms & Conditions	1	Low Risk Low dollar goods contract
Hard copy file not located (electronic version made available)	1	Low/Moderate Critical information was subsequently provided from electronic sources
Total	6	

The error rate in both sets of contracts was approximately 8%.

Recommendation 1

That Supply Management not process any contracts for goods or services which have already been delivered, or for which work has begun.

Other specific recommendations related to the above table are addressed in the text of this report at Section 7.3, Standard Terms and Conditions. For the other areas, no specific recommendations are believed necessary as they were exceptions to standard processes deemed appropriate and adequate, and not due to a lack of policy or procedure.

Management Response

Management agrees with this recommendation.

Management does not endorse processing any contract "after the fact", where Purchasing has not been properly involved in the process.

This recommendation is clearly supportable, however the outcome is that without purchasing involvement, no Purchase Order may be issued. Within SAP, that limits the payment tool to only "payment without reference", which is unfortunately not always an acceptable option. Some contracts, even those incorrectly initiated outside of purchasing, require that purchasing find a means of supporting them, in order to allow the issuance of a Purchase Order contract. A review of the cost of removing this limitation from SAP will be pursued with the Information Systems Branch in Q2 2006.

7.1.2 Departmental Purchase Orders

Departmental Purchase Orders are utilized by a department to purchase goods, services and construction in accordance with the Purchasing By-law where the estimated value is $10,000 or less.

A total of 50 Departmental Purchase Orders were drawn as a statistical sample. The rate of inappropriate transactions within the sample of Departmental Purchase Orders was also 8%.

During the period under review, about August 1, 2004, a new feature of the financial system was introduced. The "release strategy" permits the Financial Support Units to create a requisition for any dollar amount, but effectively limits their ability to release a transaction to under $10,000. All other requirements must be released through Supply Management. This feature effectively forces transactions greater than $10,000 to be released through Supply Management.

7.1.3 Payments without Reference

Under accounting policies and procedures, payments may be made for goods or services that have been acquired without a Purchase Order. The invoices for such purchases are therefore without reference to a Purchase Order and such payments are classified by Financial Services as "Payments without Reference". A list of representative Payments without Reference is provided in the policy. The list includes charges such as petty cash, employee reimbursements, refunds, statutory remittances, grant payments and utility services. We recognize that payments without reference are an appropriate payment mechanism for such charges, however we found that some of the payments without reference should have been completed using Purchase Orders.

A total of 50 Payments without Reference were also drawn as a sample. The rate of inappropriate transactions within the sample of Payments without Reference was a significant 24%, or 12 transactions. These inappropriate transactions included the following:

- One case where services were procured without the involvement of Supply Management (Value $179,000);

- Two cases where option years on contracts were exercised without the involvement of Supply Management (Value $202,000);
- Two cases where services provided under Purchase Orders were expanded without the involvement of Supply Management (Value $115,000);
- One case where the approving officer exceeded their delegated authority of $5,000 (Value $22,000); and
- Six cases (which were under $10,000 each) where there was no evidence that appropriate quotes were obtained or departmental Purchase Orders issued.

Furthermore, these transactions are not currently incorporated into the overall Supply Management reporting activities. Some significant transactions are currently not brought to the attention of Council.

The situation with a high rate of inappropriate Payments without Reference is attributable to the current checks and balances within the overall process. As a result, virtually all non-compliant transactions are processed as Payments without Reference as there is no other authorized means to effect payment.

These transactions need to be adequately monitored and included in Supply Management reports to Council. Additionally, an exception report of inappropriate Payments without Reference needs to be prepared, for Council and the City Manager, in order to minimize their occurrence.

Recommendations relating to reporting of these transactions are included under section 7.2 Reporting.

7.1.4 Purchasing Cards

A well-defined process is in place for the procurement and payment of low dollar value goods and services. Almost all the recommendations pertaining to Purchasing Cards, in the 2003 Audit of the Corporate Card and Purchasing Card Program, have been implemented and are operating as intended, based on our review and testing. Details are attached as Appendix A. However some computer purchases continue to be paid for using Purchasing Cards contrary to the 2003 audit recommendations.

Approximately 980 Purchasing Cards (including cards used by the Ottawa Police Service) are active with an average 2,800 transactions per month. Total expenditures were $10.5 million in 2004.

A random sample of 32 transactions was selected for detailed testing plus an additional 10 transactions selected on a judgmental basis. All transactions were supported by appropriate receipts. With the exception of one transaction, all transactions were further supported by an itemized receipt or invoice indicating the type of good/service procured.

The April 2005 issue of the *Internal Auditor Journal* highlighted a number of good practices for fraud resistant Purchasing Cards. With the exception of the face-to-face

training for a new cardholder, the City's purchasing card program has incorporated each of these good practices. While purchasing card training is provided to cardholders on an annual basis it is not provided before the purchasing card is issued. We do not believe this is a problem as adequate information is provided when the card is issued and there are adequate checks in the current system.

7.1.5 Amendments for Sole Source Contracts

Under the Purchasing By-Law, paragraph 20(3), "The Director and Supply Management may jointly select a supplier to provide professional services where a) the estimated total cost does not exceed $50,000, and b) the cost of preparing detailed proposals would deter suppliers from submitting proposals."

However, once a sole source contract is in place, there can be requirements to alter the scope of work. Subsequently, amendments can be processed which effectively circumvent the intent of limits established for sole source contracts. Therefore, to be consistent with the By-Law, controls should be placed on amendments to sole source contracts.

Recommendation 2

When a contract has been entered into on a sole source basis, the total value of the contract, including all amendments, should not exceed $50,000 without the approval of the City Manager.

Management Response

Management agrees with the intent of this recommendation.

Sole source contracting at the City, although permitted in the Purchasing By-Law under stipulated conditions, is strongly discouraged by corporate purchasing. It is estimated that approximately 10% of all purchases are sole sourced which is representative of best practices industry wide. Amendments occur when there are scope changes and when it would be counter-productive to put the additional work to tender. Management will examine the need to establish any additional thresholds for amendments and, if necessary, proceed with the revisions to the Purchasing By-law.

Management does not support the City Manager approving sole source contracts over $50,000 and believes existing due diligence which includes review by either the Chief Corporate Services Officer or Deputy City Manager when necessary would continue to suffice.

7.1.6 Amendments for Follow-on Work

Current policy permits the continuation or amending of contracts for directly related follow-on work. This permits Project Managers to effectively double or triple the value of work without recourse to the competitive bidding process.

We reviewed 22 files for engineering related professional services which were active, i.e., which had been awarded or amended, during 2004. The initial value of the contracts was $5.9 million. Through amendment, the value was increased to nearly $22 million, an increase of almost 375%. Amendments were issued to provide for Detailed Design, Contract Administration or both, without using the competitive process to ensure best value. In keeping with public sector values of ensuring openness, fairness and transparency, the total value of amendments to the scope of work of any contact should be limited.

Recommendation 3

Supply Management should ensure the total value of amendments to the scope of work of any contact should not exceed 50% of the original contracted amount without the approval of the City Manager.

Management Response

Management disagrees with this recommendation.

Amendments to contracts are typically in light of unforeseen changes in scope, and are scrutinized closely, in both the operating department and by Purchasing, with a view to ensuring that fair value is received by the City. The current approval process includes both the Manager of Supply Management and level 2 approval of either the Chief Corporate Services Officer or Deputy City Manager, and continues to be appropriate.

7.1.7 Pricing Methodology

The competitive process is the normal way to establish best value and price.

There are two issues worth reviewing in the allocation of points in the evaluation of proposals. First is the percentage of points allocated for price, and secondly is the methodology to determine how those points will be allocated.

The choice of evaluation methodology in evaluating proposals does not always reflect price differentials. This means significant premiums can be paid for proposals with minor differences in quality.

Currently there are two practices in place to allocate points in the evaluation process for the cost element. One is referred to as "benchmarking", whereby all submitted bids are totalled then averaged and bidders within fixed percentages above this benchmark, or average, receive all or a portion of the available points for the price component. In this methodology, firms having widely differing price proposals can receive the same points, as no "extra" points are awarded for being below the average cost. Therefore, it would be possible to pay significantly more money for a marginally better proposal. For example, we found an instance where proposals received the same score for price even though one was $140,000, while the other was $70,000.

This identical allocation of points would continue even if the points for the financial proposal were 10% or 40%, therefore changing the price component on its own would be ineffective.

Another methodology that better reflects price differences is referred to as "standard deviation", whereby the lowest qualified bidder receives full marks for their financial proposal and all others are effectively pro-rated against this price. This methodology would assist in obtaining better value.

A third alternative methodology is "price per point". Under this alternative, bids or offers must meet the mandatory requirements and score the stated minimum in the Request for Proposal to be considered responsive. The responsive bid/offer with the lowest price per rated point will be recommended for the award of a contract. The "price per rated point" would be determined by dividing the submitted price of each responsive bid by their final point rating.

During the course of our review, we also noted that some professional service Requests for Proposal are subject to a pre-qualification phase. Since all the firms who proceed to the next phase in the process are effectively deemed qualified to conduct the work, even greater emphasis should be placed on obtaining financial value. In these cases, once firms are pre-qualified, they could be selected for specific proposals on the basis of the lowest bid.

Adoption of evaluation methodologies that better reflect price differences in proposals for professional services, such as standard deviation, low bid or price per point could lead to significant cost savings. During the summer of 2005, Supply Management increased the price component from 10% to 15% of the evaluation criteria on twelve engineering service procurements. Supply Management estimated that the cost savings were $606,000 due to this change in price component on these assignments, valued at $5.2 million. In addition, Supply Management estimates that further cost savings of $580,000 could have been obtained if the price component on these proposals had been raised to 30% and the evaluation methodology changed to standard deviation. This represents significant potential savings, especially in the area of engineering services, which are currently estimated to cost $40 million annually.

Recommendation 4

That Supply Management adopt evaluation methodologies that better reflect price differences in proposals for professional services, such as standard deviation, low bid or price per point.

Management Response

Management agrees with the intent of this recommendation.

The recommended methodology is currently used for most contracts whereas the benchmark average methodology is used for consulting engineering assignments. Management will review the use of a methodology that better reflects price differences. This will be initiated in Q2 2006 in conjunction with Recommendation 5.

7.1.8 Percentage of Points Allocated to Financial Proposals

This must be considered in conjunction with the methodology as discussed above. The percentage is virtually irrelevant without a meaningful methodology. Currently there are two basic thresholds for the allocation of points for the financial aspects of proposals. For most professional services it is 20%, whereas for engineering it was 10% during the period under review (recently increased to 15%). In the occasional instance where the price component has been at 20% for engineering related requirements, there has been no shortage of competition. Increasing the allocation of points for the financial aspect of any Request for Proposal to a minimum 20% has been a long standing goal for Supply Management.

Recommendation 5

That Supply Management ensure the pricing component in Requests for Proposals of professional services is immediately standardized at a minimum of 30%.

Management Response

Management agrees with the intent of this recommendation.

Currently, the weighting for the price component varies depending upon the type of professional service being contracted. In many cases the pricing component is in fact above 30%. Our experience has been that considerable flexibility is required. This is an area that staff has reviewed frequently and over the years the weighting for the factor has moved from cost not being a factor (i.e. 0%) to a minimum weighting of 15%. One of the areas where concern regarding the establishment of a 30% minimum exists is in the studies and infrastructure design services.

Management has reviewed the threshold for the pricing component based on the practices used in other Canadian municipalities and government departments. That review indicates that 20% is a common threshold for infrastructure design and engineering, and the City will move up to that threshold immediately. It should be noted that an initiative to benchmark best practices for procuring engineering services is being conducted by InfraGuide (National Guide for Sustainable Municipal Infrastructure) whose guiding principles Council endorsed in 2003. InfraGuide expects to publish its draft report for review and comment in March 2006. At that time, management will review the results with the Auditor General to determine what other changes may be necessary to best provide the City with value-for-money when procuring engineering services.

7.1.9 Standing Offer Utilization / Management

We reviewed several areas where Standing Offers are in place to facilitate the acquisition of professional services: Translation, Information Technology Services, Legal Services and Engineering. There are a variety of practices in place to establish and manage Standing Offers.

In Information Technology Services, there is a concerted effort made to further obtain best value, by having pre-qualified suppliers on the Standing Offer submit proposals where price is 40% of the final score.

In both Translation and Engineering there is a trend to allocate the bulk of the work to a small pool of consultants. If this is the intent, then the method of purchasing should be altered to reflect that. This would mean a significant price component in order to rank submitted proposals.

For several key engineering related Standing Offers, detailed statistics are maintained by Procurement Officers reflecting which firms have received call-ups for work. This clearly demonstrates the equity or disparity in the distribution of contracts against these Standing Offers. This information should be shared regularly with responsible staff and Project Managers to enhance their ability to equitably distribute work in an "open, fair and transparent process".

Engineering requirements are divided into nine categories. The total value of call-ups for the 21 month period from April 1, 2003 to December 31, 2004 was $8.1 million. The total amount for the most active category, Design & Construction Roads, Sewers and Watermains, for the same period was $4.3 million, which represents 53% in the total Engineering Standing Offer amount awarded. Of this amount, three firms received 44% ($1.9 million) of the call-ups while the remaining 13 firms shared 56% ($2.4 million).

Translation Services include thirty-one (31) vendors. The total value of purchases for 2004 was $518,000. Of this, the top five vendors received 50% ($259,000) of the business, the next 5 vendors received 30% ($155,000) and the remaining 19 firms shared 20% ($104,000).

The interests of all parties would be better served if the contracting process ensured that a reasonable number of firms are awarded Standing Offers and given some assurance that they will receive some work. This would require that appropriate evaluation criteria be developed to rank proposals and that price be a significant part of the evaluation process.

In the interim, for existing Standing Offers, specific management processes be developed and implemented in order that the work be allocated equitably (such as tracking each award to ensure there is rotation and that firms furthest from the median value of call-ups receive the next contract automatically or running competitions within the group of pre-qualified suppliers).

Recommendation 6

Supply Management should ensure that a reasonable number of firms are eventually awarded Standing Offers, using price as a significant component (a minimum of 30%) in the evaluation process.

Management Response

Management disagrees with this recommendation.

Management has completed the review and believes that the current process does provide some assurance that firms will receive some work.

The majority of Standing Offers use a price component of 100%, and are awarded based on lowest bid. A list of authorized firms is available on the basis that the lowest cost service provider will be called first. Management attempts to limit the number of firms to a level that would ensure that most or all will receive work; however, Standing Offers are set up in advance of actual assignments being known. The basic premise of a Standing Offer, clearly stipulated in each procurement solicitation, is that no guarantee of work is provided. In addition, in the case of translation, those firms that are listed on the Standing Offer have the quality of their work monitored on a regular basis. If two pieces of work are returned that are substandard, the firm is removed from the Standing Offer listing.

The various firms represented on a Standing Offer can vary significantly in size, resources, and capability. Therefore, it is not unreasonable to suggest that a larger firm with more staff and a wider expertise base may be used more often than a smaller vendor authorized on the same Standing Offer. In areas such as translation this can result in some firms receiving greater volumes of work due to their ability to provide specific skills or quicker turnaround due to their size and expertise. Conversely, some smaller firms offer specialized, technical translation services (for issues in health, engineering or finance for example). These types of request occur less frequently, but the specialized firms receive that work over the generalist firms.

Additionally, as an outcome of the recent successful Rural Summit, the concept of geographic representation of service providers, in the rural segments of the City, has been recommended as a possible procurement initiative. If adopted, this approach would result in additional firms being added to Standing Offers, with more choice to the various urban and rural sections of the City, in order to ensure that contractors providing service have knowledge of the diverse and often specialized requirements that pertain to those different areas.

Recommendation 7

That Supply Management ensures all new Standing Offers have effective evaluation criteria established in order to rank proponents to ensure the City achieves "best value".

Management Response

Management agrees with this recommendation.

This is reflective of current purchasing practice, and a focus on new Standing Offer opportunities will be implemented by Q3 2006.

Recommendation 8

For existing Standing Offers, Supply Management should develop specific management processes in order to ensure that work is allocated equitably.

Management Response

Management agrees with this recommendation.

This is reflective of current purchasing practice, and a focus on new Standing Offer opportunities will be implemented by Q3 2006.

7.1.9.1 Engineering Services Standing Offers

When establishing Standing Offers for professional services, bids are submitted by hourly rate for the various categories of employee, such as Project Manager, Senior, Intermediate and Junior Engineer, and Administrative Support. The tendency is to total the rates and arrive at an average hourly cost. However, this does not accurately reflect the potential cost of doing business as the majority of work is done by engineering staff. The various categories of professional should be weighted to reflect usage and to more accurately reflect true costs.

When bids are received in response to a call-up against a Standing Offer, firms do not always bid resources against the classifications contained in their Standing Offer Agreement, such as Project Manager or Intermediate Engineer, for which hourly rates are established. Occasionally they just refer to the resources by name. This can cause confusion in cross referencing proposed resources and hourly rates against the stipulated maximums in existing agreements and potentially lead to paying a premium.

Recommendation 9

When evaluating proposals for Standing Offers, Supply Management should ensure the various categories of professional are weighted to reflect usage.

Management Response

Management agrees with this recommendation.   This will be implemented by Q3 2006.

Recommendation 10

Supply Management should ensure that all call-ups against Engineering Standing Offers be required to bid resources against the classifications contained in their Standing Offer Agreement or that the bids be deemed non responsive.

Management Response

Management agrees with the intent of this recommendation.

Management generally concurs with the recommendation but believes that certain situations may require flexibility.

Standing Offers by their very nature, are issued in advance of specific assignments being fully scoped, or in some cases known at all. The resources therefore, against which proponents commit firm per diem rates, tend to be typical, generic classifications; however, they do cover the majority of "down stream" needs which follow and become call-ups against the Standing Offer.

It should be recognized that occasionally an authorized firm may have the need to include a specialized resource on a proposal in order to respond to the specific needs of an assignment, and that in-house expertise exists in Supply Management Division to ensure that the City is getting the best cost.

7.1.9.2 Information Technology Services Standing Offers

During the course of our review we noted situations when Information Technology Services related requirements were "bid within the Standing Offer", and the individual nominated (originally submitted for evaluation) by the winning proponent was unavailable for work. Subsequently the original firm simply substituted another individual. This is not in keeping with an open, fair and transparent process as other firms' nominees had already been assessed and deemed the next best qualified.

When Information Technology Services calls for bids within the Standing Offer, the pool of suppliers and contacts is quite constant. This leads to assuming that all participants are aware of the criteria for evaluating submissions, and therefore the criteria are not always distributed along with the call for submissions. This may not always be the case due to turnover, and leaves the City open to challenge.

Recommendation 11

When Information Technology Services calls for bids and the individual selected (originally submitted for evaluation by the winning proponent) is unavailable for work, that the second qualified bid be selected (rather than the original firm substituting another individual).

Management Response

Management agrees with this recommendation.

A review by Information Technology Services indicates that this is a current practice; however, it is acknowledged that a deviation to the practice occurred inadvertently only once (in 2003). The Standing Offer has been in use for five years.

Recommendation 12

When Information Technology Services issues calls for proposals, that all invitees be reminded of the criteria against which they will be assessed.

Management Response

Management agrees with this recommendation. This will be implemented immediately.

7.1.9.3 Other Issues with Standing Offers

As a general rule, other public sector organizations have set limits on initial call-ups against Standing Offers as well as for amendments to those call-ups. This is stipulated in some of the City's current agreements.

In our review we noted several significant examples where Fleet Services had aggregate expenditures greater than $250,000 with firms and for which no Standing Offer was found. A minimum of $2 million dollars worth of purchases for Fleet parts requirements and a further $4 million for service requirements are made without use of Standing Offers, and opportunities may be lost to obtain discounts. Standing Offers should be established for these commonly purchased low dollar value items.

Not all departments currently provide Supply Management with copies of call-ups made against Standing Offers. This limits Supply Management in their ability to monitor utilization and work distribution. We also noted that several of the documents, on the internal, Intranet Standing Offer site within Moe, were expired.

Recommendation 13

That Supply Management ensure all Standing Offer Agreements have an original maximum cap for call-up of $100,000, with the total value of amendments not to exceed a further $50,000, or 50% of the original call-up, without the approval of the City Manager.

Management Response

Management agrees with the intent of this recommendation.

Management agrees that the total value of amendments to call-ups should not exceed 50% of the value of the original call-up. In addition, most standard call-ups have a threshold of $120,000, which we feel is reasonable. Although most existing call-ups are typically limited to the $100-$120,000 range, establishing a specific dollar threshold does not reflect the very real differences in the types of goods and services

that the City purchases. For example, a $100,000 cap may be too much for the purchase of office supplies, but would not begin to meet the needs to secure SAP resources or purchase steel.

Information Technology, for example, frequently has instances where contracts for SAP related resources require more than 100 days of commitment, because the resources are difficult to find, the per diem rates are high, and vendors require longer commitments in order to guarantee availability.

While management agrees that there should be a 50% cap on amendments to call ups, it recognizes that, at least in the case of Infrastructure Services and Public Works, there are instances where there may be a need to exceed these limits to deal with follow on work where changing firms is not in the City's interest financially. These exceptions should have the City Manager's approval.

Recommendation 14

Supply Management should review purchasing activities related to Fleet Services and develop appropriate Standing Offers and/or tenders.

Management Response

Management agrees with this recommendation.

This will be implemented by Q3 2006.

Recommendation 15

Where organizations make call-ups directly, a copy should be forwarded to Supply Management for monitoring purposes.

Management Response

Management agrees with this recommendation.

This will be implemented by Q2 2006.

Recommendation 16

That Supply Management regularly reviews the Standing Offer site to ensure that all information is up to date.

Management Response

Management agrees with this recommendation. This process is now in place.

7.2 Reporting Requirements

The overall reporting process needs improvement. The Purchasing By-Law, section 39 (1) states "Supply Management shall submit to Council an information report quarterly

containing the details relevant to the exercise of delegated authority for all contracts awarded by Directors exceeding $25,000, including amendments and renewals." Section (3) requires Supply Management to certify that the awards are in compliance with the Purchasing By-Law.

There are gaps in the contracting information produced including details on transaction type and/or value acquired through all means of acquisition. The exact value of contracting services acquired through Standing Offers and/or Payments without Reference could not be readily extracted from the Financial System. Payments without Reference are not included in the overall report. There were several significant examples where aggregate expenditures through Payment without Reference directed to individual firms were greater than $25,000 and not included in the report.

Steps have been initiated to improve the quality, completeness and timeliness of information. In July 2004, Supply Management began to include high-level information on the use of major Standing Offers in their quarterly reports to Council. However additional refinement is required to establish procedures to monitor contracting activity for compliance and performance in a timely manner.

Basic information should be routinely produced and analysed to establish:
• number and percentage of files meeting service level targets,
• aggregate number of Standing Offer Call-ups and their dollar value,
• aggregate number of Departmental Purchase Orders and their dollar value, and;
• the value of transactions processed as Payments without Reference which should have been processed as Purchase Orders.

The current process for compiling the quarterly and annual reports to Council is labour intense and subject to a significant number of edits, which may lead to a lack of clarity in the description of the goods or services purchased. In order to improve the timeliness of reporting, the process for review and editing needs to be streamlined and ensure that the goods and services purchased are described as they were recorded in the Contract Approval Request.

Recommendation 17

Supply Management should ensure that all purchasing activity is included in its report to Council, regardless of the source of the information or the means of acquisition and be presented in a clear and easily understood format.

Management Response

Management agrees with the intent of this recommendation.

Management believes that the current reporting meets the standards established within the City Purchasing By-Law, which requires that Supply Management submit to Council on a quarterly basis the details of contracts in excess of $25,000 which were awarded under delegated authority.

The recommendation here suggests an expansion beyond those works that are below $25,000 or do not flow through Supply Management. This reporting is possible but not within existing resources as this additional requirement will require the on-going analysis of all other payment types, and may not provide the kind of information Council needs for financial oversight.

A much simpler and more cost effective approach would be for Accounts Payable to produce an annual listing of all vendors to whom payments totalling $25,000 or more in aggregate were made, together with the total payments made for the year. SAP can readily produce such a report, however, the need to remove the numerous non-discretionary payments such as those to other governmental levels, benefit service providers, pension plans, school boards, etc., to name but a few, and to portray the data in a meaningful manner, will require an additional administrative level of effort

Management agrees that it is time to look at how reporting standards to Council for contracts and purchasing could be improved. Supply Management will investigate best-practice reporting for Council oversight and bring recommendations for improvement forward for the next term of Council.

Recommendation 18

Supply Management should facilitate reporting by including specific fields in the Procurement Module to identify specific transaction types such as: Call-up against Standing Offers, Request for Quotation, Request for Tender, Request for Proposal, and Request for Standing Offer, Payments without Reference, etc.

Management Response

Management agrees with this recommendation.

This upgrade to the Procurement Module in SAP would be a valuable addition to the data reporting capability, and Supply Management will initiate a working committee to include the IT Enterprise Application Management Division and the SAP Support Center to investigate the possibility of implementing the suggested upgrades. This application will undergo the same analysis and business case evaluation as all other Information Technology requests and be prioritized against all other requests.

Recommendation 19

Supply Management should ensure Payments without Reference to a Purchase Order are adequately monitored, in order to identify and include cases of non-compliance in regular reports to Council, and the City Manager, in order to minimize their occurrence.

Management Response

Management agrees with the intent of this recommendation.

Management believes that a reasonable level of monitoring is currently in place. The expansion to 100% review as suggested will have resource implications.

The Finance Branch conducts on-going compliance reviews of all payments made by credit cards, petty cash and payment without reference to a Purchase Order, which are an essential component of the City's Financial Management Control Framework. The Financial Services Branch and the involved parties deal with all cases of non-compliance.

To expand the reviews to 100% of all payments without reference in order to report on Standing Offers and non-compliance will require a significant increase in staffing requirements in Accounts Payable, as well as potentially expensive customization to the SAP application.

The implementation of this recommendation will be identified in the 2007 Departmental Business Plan and resources sought as part of the 2007 budget.

Recommendation 20

That Supply Management ensure the quarterly reports to Council reflect the actual nature of the purchase. Program Managers may make corrections to errors only, rather than "editorialize" the description of what was purchased, which must remain as described in the Contract Approval Request.

Management Response

Management agrees with this recommendation.

Corrections will be restricted to providing clarity to the description. This will be implemented immediately.

7.3   Standard Terms and Conditions

As an additional aspect of the work undertaken, we reviewed a selection of clauses in the Terms and Conditions in order to identify their appropriateness.

The identified standard clauses used by the City were reviewed with Risk Management and discussed with Legal Services as appropriate. Additionally officials of other public sector contracting organizations were consulted. The clauses were also compared to documentation utilized by other public sector organizations.

Summary of Terms and Conditions Review		
Clause	Comment	Assessment
Liability	Clauses used by the City were reviewed with Risk Management and Legal Services and discussed with officials of other public sector contracting officials, and compared to documentation utilized by other public sector organizations.	Unlimited liability clause is appropriate and adequate.
Insurance	Reviewed with Risk Management. Some contract types included insurance clauses twice, once with indemnification and once as a stand-alone.	Appropriate and adequate as tied to contract value and pre determined risk .
Confidentiality	Compared / benchmarked against other entities .	Appropriate and adequate.
Audit/Accounts	Compared / benchmarked against other entities, reviewed by CA auditors.	Complies with recommendation of risk management and therefore adequate.
Survival	Compared / benchmarked against other entities.	Complies with recommendation of risk management and therefore adequate.

Some contract types, generally those other than professional services, included insurance clauses twice, once with indemnification and once as a stand-alone. This duplication should be eliminated to avoid any confusion with suppliers.

During our review we noted cases where Terms and Conditions had been waived by Directors without the input of Risk Management, thereby exposing the City to greater risk than necessary. It is our understanding that Risk Management consults Legal Services as required in the review of possible exceptions to the Standard Terms and Conditions. We also noted that Standard Terms and Conditions are not always sent out to suppliers who are awarded contracts through Purchase Orders and/or Departmental Purchase Orders, thereby exposing the City to greater risk than necessary.

As part of ensuring "Best Value", other public sector organizations generally require suppliers to certify that the rates offered are those offered to their best/most-favoured client. This ensures that the most competitive rates available are obtained. This is currently not a practice at the City of Ottawa.

Recommendation 21

Supply Management should review their standard contract formats and clauses to remove duplication.

Management Response

Management agrees with this recommendation.

This will be implemented by Q3 2006.

Recommendation 22

Supply Management should not amend Terms and Conditions without the explicit approval of Risk Management.

Management Response

Management agrees with this recommendation.

This will be implemented immediately.

Recommendation 23

Supply Management and Financial Support Units should ensure Terms and Conditions are sent out with both Corporate and Departmental Purchase Orders, regardless of value, and their receipt and acknowledgement by suppliers kept on record.

Management Response

Management disagrees with this recommendation.

Management believes that the process currently being followed is preferable to the recommendation.

Currently, all bid solicitation documents, Tender, Standing Offer, Proposal, etc, contain up to 40 standard terms and conditions (6 to 7 pages typically), designed by Purchasing, Risk Management, and Legal Services to protect the City from a number of perspectives. Issues addressed include Conduct of Work, Insurance, Indemnification and Liability, Workplace Safety, Occupational Health, MFIPPA, Conflict of Interest, Need for Confidentiality, Audit and Reporting Requirements, among others. Bidders, in their proposal or tender submission, are obligated (at the bidding stage, where the City clearly has leverage in that regard), to accept the City terms and conditions.

Once a vendor is selected as either the lowest responsive bidder, or best value proponent, a Purchase Order is issued. The Purchase Order includes, by direct reference, an order of precedence, which lists amongst other documents, the initial City bid document (which contains the complete legal terms and conditions), and the bidder response (which has accepted those conditions), within a legally acceptable validity period.

This approach, endorsed by the City's Legal Services Branch, appears to be appropriate and preferable to the collection of signed statements, which would occur after the award was determined, and the leverage of the City to impose sometimes onerous conditions on the vendor, may be reduced. Additionally the smaller Departmental Purchase Orders include a condensed version of the main legal terms and conditions, which print automatically in SAP, and are provided to the vendor.

Recommendation 24

Supply Management should ensure that all Requests for Proposal contain a clause requiring bidders to certify that the rates offered are those offered to their best/most favoured client, and that this be subject to verification.

Management Response

Management agrees with this recommendation and will expand the recommendation to include all bid solicitation proposals.

This will be implemented by Q3 2006.

8.0 Best Practices

In accordance with a risk-based approach, the City has consolidated the contracting function under Supply Management Division within the Financial Services Branch. Except where permitted under the By-Law, all contracts greater than $10,000 are processed by Supply Management staff. An existing feature of the corporate financial system, the "release strategy" permits the Financial Support Units to create a requisition for any dollar amount, but effectively limits their ability to release a transaction to under $10,000. All other requirements must be released through Supply Management.

A Contract Approval Request has been put in place and operating with a risk-based approach to reviewing procurement requirements. As the dollar value of the procurement increases so does the requirement for senior management review and approval. This represents a significant step in accountability and management control. It provides the concise story of activities concerning the particular transaction including whether it is an amendment and whether it was processed "outside" of the authorized processes established in the Purchasing By-Law.

The current Contract Approval Request is a "stand alone" document. For ease of use and documentation retrieval it should be incorporated into the Financial System.

Policy and standard processes and procedures for contracting have been developed and communicated, as have Roles and Responsibilities.

Files held in Supply Management consistently provided adequate documentation to ensure that the policy requirements established in the By-Law had been satisfied, including: appropriate approvals, notification of competition, method of procurement, statements of work and evaluation criteria.

Recommendation 25

Supply Management should work to integrate the Contract Approval Request within the Procurement Module of the Financial System.

Management Response

Management disagrees with this recommendation.

The Contract Approval Request is an MS Word based template used to approve all contracts under delegated authority. The CAR, as it is known, flows well through the outlook e-mail function, and the timeline associated with contract approval, even at the highest levels of City management, is an impressively short one. Imbedding the CAR "Word" document in SAP would not be cost-effective.

General Management Response:

In most instances staff are in agreement with the recommendations and where there is a difference of viewpoint further comments have been provided.

Throughout the audit of procurement, Supply Management Division was involved in many discussions, which led to the recommendations contained herein, many of which run parallel to the objectives of Purchasing within the City.

The focus of the recommendations on reporting completeness, and process improvement, is recognition that there was an absence of more high profile errors in contracting which is very positive.

Since amalgamation the involvement of Purchasing in City contracts has risen from the 2001 baseline of $484.5 million, to a 2005 level, which exceeded $1 billion. The processes and procedures implemented since 2001 have added value and ensured a consistent purchasing approach with valuable controls for the vast majority of City spending.

A number of the recommendations contained herein would add considerably to the level of effort needed within Purchasing, and will be analyzed in relation to the value added to the current state. In order to implement all recommendations it is anticipated that Purchasing would need an additional four FTE's, one clerical, one buyer, and two purchasing officers, at an estimated total cost of $273k annually, along with a one time set-up cost of about $100k. Additional resources will also be required in the Accounting area if all recommendations regarding reporting were implemented.

Management will be examining where efforts could be refocused, as in the case of reporting, to minimize costs while enhancing the information. The implementation of these efforts will be identified in the 2007 Departmental Business Plan and resources sought as part of the 2007 budget.

9.0 Conclusion

Current processes and procedures provide Council a reasonable level of assurance that contracting activities are in compliance with City policy.

Overall there are opportunities to effect operational improvements in reporting and to enhance value for money through increasing the price component in contracting, utilizing more appropriate methodologies in evaluating price submissions and more effective management of Standing Offers.

The Supply Management Division must fully exercise their control responsibilities to ensure all of the recommendations are implemented.

Appendix A: Purchasing Card Follow-up Status

		2003 Audit of the Corporate Card and Purchasing Card Program Status of Implementation of Recommendations		
	Findings	**Recommendation**	**Management Response to the Audit of 2003**	**Action Taken Since the Audit as Stated by Management and Verified during Our Review**
5.1	The card program was designed to include necessary control procedures, however, they were not operating as designed. Cardholders and Directors were not consistently fulfilling their responsibilities with regard to the verification and approval of the monthly statement. Control features to automate parts of the validation process are available as part of the supplier's software but have not been properly implemented by the City. Control and program oversight by Finance Branch needs to be strengthened.	That Finance ensure the available SIC blocking controls are properly implemented. That Finance establish an effective compliance program to ensure the completeness, accuracy and adherence to corporate policies of expenditures on the credit card program. That SMT ensure that all cardholders and supervisors are reminded of their responsibilities under the policy and ensure an effective compliance mechanism is implemented.	*Finance* A revised Corporate Card policy is currently being developed as well as a compliance program to ensure adherence to the corporate card program. The program will include conducting audits on a reasonable percentage of the cardholders as resources allow. This process has commenced and will be completed by the third quarter of 2003. The adherence to policy issues is the responsibility of all Management. Our compliance testing will monitor the completeness, accuracy and policy adherence issues.	The SIC blocking controls have been invoked to restrict purchases such as restaurants, florists, etc. The Financial Services Branch has the capability of lifting these restrictions on an exception basis, at the request and approval of the employee's manager. Exceptions to this include, for example, purchases of pizza for day care and kids camp programs. The Policy & Compliance Unit has put in place an effective compliance program. Prior to July 2004, compliance review of purchasing card and payment without reference transactions were conducted on a cyclical basis by Organizational Units. A review of purchasing card transactions for May-December 2004 was completed at the end of the 2004 fiscal year. Monthly reviews are now carried out on a random sample of transactions. Anomaly reports are forwarded to the respective manager for follow-up. Cardholders are required to sign the "Employee Responsibilities for the Use of Purchasing Card" document. This document signifies the employee's agreement to comply with the City's policies and procedures pertaining to purchasing goods and services. Cardholder responsibilities are also outlined in the Purchasing Card

		2003 Audit of the Corporate Card and Purchasing Card Program Status of Implementation of Recommendations		
	Findings	**Recommendation**	**Management Response to the Audit of 2003**	**Action Taken Since the Audit as Stated by Management and Verified during Our Review**
				Procedures readily available on MOE.
5.2	Management procedures over individual cards need to be improved.	That Management ensures the card use in their areas matches their business requirements and establishes appropriate accountability.	*Finance* Finance has cancelled cards that were not activated and is currently reviewing cards that have not been utilized for protracted periods and cancelling any cards that remain unused. During 2003 Finance will take a proactive stance in identifying card usage in the Corporate Card Program and implementing changes where necessary. New capabilities in the Purchasing Card program will enhance our ability to focus the use of the cards to the needs of the individual cardholder.	Managers are encouraged to periodically review the cardholder limits established within their areas of responsibility. Limits are initially established at $2,000 (single transaction) and $5,000 (monthly limit) but can be adjusted at the request of the manager.
5.3	Testing of transactions found instances of non-compliance. Signed cardholder agreements are not on file for all active cards.	That Finance review all cardholder records to ensure a current, signed agreement is on file.	*Finance* Finance concurs with this recommendation. Cardholders will be required to sign the cardholder agreement before receiving a new card. Finance will obtain signed agreements for any missing existing cardholders by March 31st. Any signed agreements not received will have the cards disabled.	The requirement for the cardholder to sign the cardholder agreement is stated in the Purchasing Card Procedures. Existing cardholders are required to sign the cardholder agreement at the time cardholder change requests are actioned.
	Monthly statements on file contain a number of deviations from the policy. Credit card purchases did not always comply with the terms of the Standing Offerss.	That Finance better monitor and educate cardholders to ensure that suppliers with Standing Offerss are used and the appropriate discounts are obtained.	*Finance* A Standing Offer is not a contractual agreement. It is an offer from a supplier, which allows the City to purchase goods at a prescribed price. No contract exists until the City places a call-up against the Standing Offer. In addition, the supplier can withdraw their offer any time prior to a call-up being issued. However, since these Standing Offerss should represent the best pricing available, cardholders should be encouraged to use them whenever it can be accommodated within operational needs. Finance will continue to educate staff regard the use of Standing Offerss and monitor this matter on a regular basis.	Most Standing Offerss, with the exception of Information Technology suppliers, are available by type of good or service on Moe. Requirements for the use of Standing Offerss are stipulated in the City's Purchasing By-Law. The Policy & Compliance Unit routinely reports on instances where Standing Offerss have not been used, as part of its monthly review of purchasing card transactions.
	Monthly transaction and credit limits are	That Finance ensures controls are	*Finance*	The Policy & Compliance Unit monitors

		2003 Audit of the Corporate Card and Purchasing Card Program Status of Implementation of Recommendations		
	Findings	**Recommendation**	**Management Response to the Audit of 2003**	**Action Taken Since the Audit as Stated by Management and Verified during Our Review**
	exceeded in some cases.	in place to enforce the maximum transaction limit of $10,000 as authorized by the Purchasing By-law. That Finance amend the card policy to provide more detailed guidance to Managers about setting up proper transactions and monthly limits when authorizing the issuance of a credit card. That consideration by given to amending the Purchasing By-law to allow the General Manager of Corporate Services to authorize specialized circumstances provided effective compensatory controls are in place.	Finance concurs with the recommendation regarding transaction limit control and it will be fully implemented by March 2003. In order to meet operational requirements, it may be necessary for some cardholders to have a monthly limit greater than $10,000. There are existing Standing Offerss where the supplier prefers to be paid by credit card and therefore selected cardholders may need monthly limits that exceed the normal limits. Finance will commence work with Management immediately to ensure that transactions and limits are established that meet the operational requirements and the revised policy will highlight this issue.	the maximum transaction limit of $10,000 as part of its monthly review of purchasing card transactions. The Purchasing card procedures have been written and strengthened. Training sessions are available to all cardholders and managers. The Purchasing Card Procedures currently stipulate that "purchasing limits shall be based on the normal operating needs of the cardholder and must be approved by the Director or designate" For certain staff their jobs require the purchase of entertainment type purchases. Recreation staff that run day camp would be an example. To obtain an exemption staff requires the approval of their director. The Director would seek the approval Treasury who authorizes the exemption.
			Finance will review those transactions that have exceeded the $10,000 limit to determine whether the purchasing by-law needs revision for these cases. The Purchasing By-law currently permits the Directors and General Managers to make purchases greater than $10,000 under special circumstances. If the purchases in question are not contemplated under this section consideration for a change in the by-law will be brought forward within the next three months.	This is now part of the Compliance Unit monthly testing criteria and there are System controls in place. There are some staff that have transaction limits which exceed the standard $5,000 delegation.
	Purchases are being split into multiple transactions in order to use cards (including the purchase of computers with cards).	That Managers as part of their review ensure that all requirements of the Purchasing By-law are observed.	*Finance* Finance supports the recommendation relating to segregation of duties and the splitting of transactions. This matter will be highlighted in the revised policy	The Policy & Compliance Unit monitors the occurrences of potential splitting as part of its monthly purchasing card transaction review. Computer purchases

		2003 Audit of the Corporate Card and Purchasing Card Program Status of Implementation of Recommendations		
	Findings	**Recommendation**	**Management Response to the Audit of 2003**	**Action Taken Since the Audit as Stated by Management and Verified during Our Review**
			document now in progress. The purchasing card reporting capabilities will assist Finance in identifying these instances.	continue to be made using cards contrary to audit recommendations. Computer purchases are not explicitly prohibited by the current policy, but according to management, specific controls are in place to limit such transactions to authorized personnel.
	Some personal expenditures were found, however they were very limited. The policy requirement to obtain quotations for purchases over $2,000 is not being observed.	That Finance amend the card policy to require cardholders to include documentation to substantiate the Purchasing By-law requirement to obtain three quotes for purchases greater than $2,000.	*Finance* This requirement is included in the revised Corporate Card policy currently being developed as a mandatory requirement.	Purchasing card procedures (effective March 31, 2003) state that: "Where a purchase exceeds $2,000, the cardholder shall include evidence that a minimum of three verbal or written quotes were obtained unless the purchase was made from an existing Standing Offer".
	Cards are being shared in some work units in contravention of the policy.	That all Managers ensure that the practice of sharing cards is immediately discontinued and that Purchasing Cards be issued to individuals as required.	*Finance* In some cases the sharing was a result of not increasing the number of cards being used in work areas. Finance will communicate with Managers on the policy of sharing cards and, as part of the overall monitoring of the program, identify any situations where this practice continues and advise the individual to discontinue the practice. A cardholder is responsible and accountable for all activity on their card.	There has been a multiphase approach to this problem mainly communications and follow-up. First the procedures were strengthened. The policy was distributed to all. In training sessions it is emphasized that card sharing is not allowed. The FSU, purchasing card administrator and compliance staff all look to identify instances of card sharing. When a violation is detected, the FSU manager is informed of all major and minor violations for follow-up and the cardholder is notified of major violations.
5.4	Additional policy guidance is needed in some areas. The City has not yet developed and implemented a harmonized travel policy.	That a harmonized travel policy be developed and implemented as a priority. That the need for cash advances under the Corporate Card Program be reviewed and additional guidelines be	*Human Resources* A new travel policy to be used uniformly across the City is currently being developed and will be completed by the end of February. *Finance* The issue of cash advances will be reviewed as part of the Corporate Card Program policy review and update. When implementing SAP initially, the former Region	A Travel Policy, effective February 28, 2003 is in place and readily available on Moe.

		2003 Audit of the Corporate Card and Purchasing Card Program Status of Implementation of Recommendations		
	Findings	**Recommendation**	**Management Response to the Audit of 2003**	**Action Taken Since the Audit as Stated by Management and Verified during Our Review**
		developed to clearly identify the circumstances, if any, where advances can be used.	tried to eliminate the inclusion of payments to staff within the accounts payable function. This was identified as a best practice at that time. All payments or reimbursements to staff were to flow through the payroll system. The new payroll system design calls for a similar practice. Due to that restriction cash advances have been allowed within the credit card program. This matter will again be reviewed to determine the most effective manner of providing cash advances, where and when required.	
	There is a high level of spending for catering in local restaurants, additional policy guidance should be implemented to limit these expenses	That Human Resources establish clearer hospitality policy and guidelines on restaurant, alcohol and catering expenditures to ensure consistent practices across the Corporation. That Finance establishes compliance procedures to require all in-town restaurant and catering expenses to be supported by information on purpose of meeting, attendees and details of the meals purchased.	*Human Resources* Human Resources will complete a policy on Hospitality, Gifts and Entertainment in early March. *Finance* Finance will establish the necessary compliance procedures to support this policy.	A Hospitality Policy and a Gifts and Entertainment Policy, effective April 14, 2003 are in place and readily available on MOE. A compliance review has been performed for May/03 –Apr/04 transactions and a second review for Jan/05-Jun/05 is scheduled for completion in Oct/05 by the Compliance Unit.
	Additional guidelines are needed to define when gifts to employees can be made from City funds.	That Human Resources develop additional guidelines to clearly define the situations, if any, where gifts and commemorations can be made from City funds.	*Human Resources* Guidelines to clearly define the situation, if any, where gifts and commemorations can be made from City funds will be addressed in the Hospitality, Gifts and Entertainment policy to be completed in early March.	A Gifts and Entertainment Policy, effective April 14, 2003 is in place and includes policy direction on accepting gifts, hospitality or other benefits.

Ottawa

Office of the Auditor General

AUDIT OF REAL ESTATE MANAGEMENT

2005 Report

Chapter 5

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Executive Summary

Background

The Real Estate Services Division (RESD) falls within the Real Property Asset Management (RPAM) Branch of Corporate Services. The mandate of RESD encompasses:

- acquisition and disposal of all City real property interest,

- all appraisals of real property,

- coordination all real property legal documents, and

- oversight of all environmental remediation on City-owned property including the development and introduction of best practices in environmental management.

RESD has been established in large part to carry out real estate activities in response to the identified requirements of other City departments. In 2004, RESD conducted approximately 120 acquisitions and 80 disposals. In addition, approximately 150 files are currently active in the environmental remediation area.

Audit Objectives

The objectives of this audit were to provide an independent and objective assessment of:

- Whether current principles, policies and procedures for real estate activity at the City are managed in accordance with:

  o City policies and procedures;

  o Industry best practice;

  o Efficient and effective management practices; and

- Whether management practices/accountability framework are adequate to provide integrity and cost effectiveness of real estate management activities.

Organizational Strengths

RESD currently has the depth of skill and experience to fulfill its mandate and functional responsibilities. The Division consists of a dedicated team with strong and knowledgeable leadership. A positive customer service approach was in evidence during our audit. Municipal best practices as related to disposals, leasing, appraisals and environmental remediation are typically followed by RESD and the City's current property disposal policy remains one of the more comprehensive when compared to other municipal organizations.

Findings

Property Disposals

Our audit found that overall disposals were in compliance with the existing policy. Although in some instances a lack of complete documentation was noted, in our view, these instances did not impact on the overall integrity of the process used in the disposals we reviewed. Our findings indicate that management should review the policy and related procedures to more clearly provide guidance in the following areas:

- Clarifying the overall objective of property disposals;

- Clear guidelines should be established regarding the selection of the various sales methods in order to ensure that a consistent and effective method of sale is used and that appropriate negotiation protocols are adhered to; and

- A standardized process similar to the City's approach to public tendering should be required for disposals where multiple bids are anticipated.

Acquisitions, Leasing, Appraisals and Remediation

While the Division does tend to adhere to municipal best practices in these areas, the lack of formal policies and procedures places excessive reliance on the knowledge and expertise of existing staff to consistently and appropriately undertake these activities. The absence of documented procedures also creates challenges in maintaining effective staff training and succession.

Inquiries

The Division is currently dealing with a considerable number of inquiries from various sources regarding the status of individual transactions. A standard protocol and monitoring system for addressing these inquiries is needed to manage this work efficiently and consistently and to clearly demonstrate its operational impacts.

Roles and Responsibilities

RESD currently has responsibility for managing a number of City-owned properties. It would be more appropriate to assign the responsibility for managing these properties to either the Program Properties or Venture Properties Division within RPAM.

The current mandate of RESD also includes all leasing activity for the City. RESD should pursue opportunities to align these responsibilities within a single part of its operation.

Management Information

The Real Estate (RE) module of SAP was implemented as part of the City's Integrated Business Solution (IBS) initiative. The module is used in managing the inventory of City-owned properties. However, currently within RESD, a variety of stand-alone tools continue to be used to monitor all activity and a complete database management tool is

not in use. There has been a reluctance to utilize tools available within SAP to assist in this area. Discussions with Information Technology Services should be undertaken to ensure these tools are introduced and utilized.

A system of formal performance indicators and standards is not currently in place. Such measures are an important internal control mechanism that can provide management with early warning on potential issues and required management intervention.

Documentation Standards

Based on our review of a sample of transaction files, no evidence of any inappropriate activity was noted, however we concluded that approximately one-third of the files were incomplete in terms of containing all required documentation. The establishment of a checklist and sign-off procedure should be established within each file for each milestone as a trigger to ensure all steps are completed and properly documented. This would assist management's ability to monitor performance and facilitate the transfer of files between staff when necessary.

Long-Term Planning

By nature of its role, RESD is dependent upon other departments to forecast their requirements in such a way as to allow the Division to take action in a timely and effective manner. Information generally appears to be provided to RESD within a reasonable timeframe. However, no evidence was found that strategic work planning, i.e. setting annual or multi-year targets, was being conducted.

Service Delivery Model

Currently RESD includes six (6) positions identified as "Consultants". Management has indicated that the use of these consultant resources has been necessitated by workload demands and the inability to find qualified replacements for vacancies. The use of on-site consultants and contract staff has continued for long periods of time and raises significant employment issues for the City.

Management has also identified an emerging challenge in succession planning. No clear strategy has yet been developed to respond to this concern, which is an issue that will require a more coordinated corporate-wide effort in the near future. Given RESD's long-term use of external consultants, its continuing struggle to attract acceptable candidates when vacancies occur and the associated succession planning issues this is raising, it is appropriate at this point for management to pursue more formalized outsourcing in the future.

Recommendations

Recommendation 1

That the overall objective of property disposals be clarified, including clarification of the relative priorities regarding sale versus other potential uses for the property.

Management Response

Management agrees with this recommendation.

The Disposal Policy approved in October 2001 by Council, will be reviewed for clarity of wording as part of the annual review of disposal procedures to be completed in 2006.

Ultimately, Management's goal is to present objective information to aid Council in setting priorities specific to surplus property. The review of the Disposal Policy will address the need to develop a more formal approach for land exchanges. The objective would be to ensure that any surplus real estate is viewed as an asset and utilized in a manner that recognizes its financial value and rationalizes its use in relation to the City's overall requirements.

Recommendation 2

That Management establish clear guidelines on the appropriate selection of various methods of sale and associated negotiation protocols.

Management Response

Management agrees with this recommendation.

Management proposes the development of a sale and negotiations handbook to be completed by Q4 2006, that documents disposal options available and outlines the criteria to be considered when selecting a marketing method.

Recommendation 3

That Management establish a requirement for the use of a proposal call or public tender process for all disposals involving high dollar values and/or multiple bidders.

Management Response

Management agrees with this recommendation.

Current practices and procedures with regard to the use of proposal calls and/or public tenders will be reviewed and revised as part of the annual review of the current disposal procedures and incorporated into the sale and negotiations handbook, addressed under **Recommendation 2,** to be completed by Q4 2006.

Recommendation 4

That Management ensure appropriate policies and procedures are put in place for Acquisitions, Leasing, Appraisals and Remediation to ensure a consistent and effective approach that reflects best practices is maintained.

Management Response

Management agrees with the recommendation.

The development of an Acquisition Policy, including leasing, will be completed by Q2 2006.

The need for appraisals and environmental site assessments is currently captured in the Disposal Policy and will be entrenched in other policies and practices as developed.

Recommendation 5

That Management implement a standard protocol for responding to inquiries as well as an improved tracking mechanism to capture all relevant information including the source, the staff assigned and the time committed to resolving each request.

Management Response

Management agrees with the recommendation.

An upgrade to the Corporate Inquiry Tracking application is currently underway and is anticipated to be completed by Q4 2006.

Recommendation 6

That the property management responsibilities currently assigned to the Real Estate Services Division be transferred to either the Program Properties Division or the Venture Properties Division of Real Property Asset Management.

Management Response

Management agrees with the intent of this recommendation.

A review of the alternative service delivery options and the required resourcing will be completed by Q3 2006. Any resourcing issues, additional FTEs or contract dollars, will be addressed in time for the 2007 budget process.

Recommendation 7

That Real Estate Services amalgamate its leasing responsibilities within its internal structure.

Management Response

Management agrees with this recommendation.

The organizational structure in place at the time of this audit aligned leasing-out activities (revenue leases) with disposals, and lease-in activities with acquisitions. The intent of this alignment was to balance workloads within RESD. As an interim

step to an organizational review, revenue and acquisition leasing will be consolidated in Q1 2006, to allow for standardized business processes and increased focus of knowledge and expertise.

Real Estate Services Division will be reviewing the alignment of positions during the Branch Process Review Program which is targeted to be completed in Q3 2006.

Recommendation 8

That Management, in concert with the Information Technology Services Branch, implement the use of available corporate system tools to provide required database management support.

Management Response

Management agrees with this recommendation.

The RPAM Business Case, Version 1.0, indicated that Real Estate Services Division (RES) would be included in the Project System (PS) Module implementation. However, as the Real Estate Services Division had to concurrently develop and implement the Real Estate Module, it was determined that there was not enough capacity within the Division to develop the PS Module as well. At that time, the Comprehensive Asset Management Division (CAM) was substituted for RES in the PS module implementation. A review of the potential application of the PS module to address project management-tracking requirements and costs associated with the application is planned for Q2 2006.

Recommendation 9

That Management develop and implement a system of key performance indicators based on operating standards to facilitate efficient service delivery and validate potential workload issues.

Management Response

Management agrees with this recommendation.

Management agrees that meaningful performance indicators are required to estimate and budget for resource requirements and to track divisional performance.

The development of these indicators and appropriate planning standards will be completed by Q4 2006.

Recommendation 10

That Management establish a checklist and sign-off procedure to ensure that documentation of all activity is complete and accurate.

Management Response

Management agrees with the intent of this recommendation.

A review of similar issues from a previous disposal audit in 2004 indicated that the majority of the issues associated with files did not warrant a significant amendment to practices.

To ensure that files are fully and properly documented, a checklist has been developed and implemented.

Recommendation 11

That Management undertake, in concert with key client departments, an annual or multi-year planning process to identify and plan for future real estate service requirements.

Management Response

Management agrees with this recommendation.

It is currently difficult to pre-plan RESD's client-driven workload within one budget cycle. The capital budget process tends to be completed in a compressed timeframe, often in isolation. This issue occurs mainly with acquisitions for major capital infrastructure projects.

RESD staff will initiate a semi-annual workload review and analysis with clients to review project timing to allow input for resource costs in capital project budget preparation. These reviews, coordinated with the corporate budget cycle, will allow RESD to identify staffing pressures as part of the annual operating budget pressure identification**.**

Recommendation 12

That Management pursue opportunities for more formal outsourcing of services to minimize the ongoing use of consultants and address succession planning limitations.

Management Response

Management agrees with the intent of this recommendation.

To address the balance of the workload currently being provided by internal staff, RESD is currently using individual contractors, acquired through a standing offer, to meet day-to-day workload requirements.

RESD's lines of business and mandate will be reviewed as part of a Branch wide Process Review Program including an organizational assessment and staffing strategy planned for Q3 2006.

General Management Response

The Audit Report dated 11 October 2005, indicates that overall the performance and management of the Real Estate Services Division (RESD) has successfully:

- Created a skilled, experienced and dedicated team with strong and knowledgeable leadership to fulfill its mandate and responsibilities;

- Promoted positive teamwork and customer service delivery;

- Fostered positive working relationships with other areas of the City;

- Followed municipal real estate best practices;

- Created a property disposal policy and bylaw that remains a leader when compared to other municipal organizations;

- Remained on track with original direction and intent for RESD; and

- Responded capably to the disposal of facilities arising from amalgamation.

After reviewing the recommendations contained in the audit report, RESD management has the following observations:

- General agreement with observations and recommendations;

- Findings confirm RESD's strength in filling Centre of Expertise (COE) role;

- Interviews have identified technology weaknesses that need to be addressed;

- The information that was captured recognizes succession, staffing, contracting issues and challenges;

- Certain Recommendations confirm that more in-depth review and development and approval of an appropriate go-forward service delivery strategy is warranted. This will be looked at during the Branch Process Review that is targeted to be complete Q3 2006.

Conclusion

RESD currently has a high level of skills and experience to bring to the Division's mandate and its functional responsibilities. There is positive customer service approach and strong relationships have developed with its key client departments across the City.

Although RESD continues to meet current work demands, there is an undue reliance on its existing knowledge base. There is a need to develop more complete and formalized policies, procedures and performance measurement tools to ensure on-going operational consistency and effectiveness as well as to more clearly identify and validate potential impediments to organizational effectiveness in the future. Opportunities have also been identified during this audit for organizational streamlining, improved management

information and longer-term planning to assist in sustaining and enhancing the Division's long-term efficiency and effectiveness. Given succession planning issues and the ongoing need for consultant resources, pursuing more formal outsourcing of services is an appropriate strategy at this time.

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

Résumé

Contexte

La Division des services immobiliers (DSI) relève de la Direction de la gestion des biens immobiliers (DGBI) des Services généraux. Le mandat de la DSI porte sur les éléments suivants :

- acquisition et aliénation de biens immobiliers appartenant à la Ville,

- évaluation des biens immobiliers,

- coordination des documents juridiques portant sur les biens immobiliers,

- supervision des mesures d'assainissement de l'environnement visant les biens immobiliers de la Ville, y compris l'établissement et la mise en place de pratiques exemplaires de gestion de l'environnement.

La création de la DSI découlait dans une large mesure de la nécessité de répondre aux besoins constatés des autres services de la Ville. En 2004, la DSI a procédé à environ 120 acquisitions et 80 aliénations. De plus, elle s'occupe actuellement de quelque 150 dossiers dans le domaine de l'assainissement de l'environnement.

Objectifs de la vérification

La vérification avait pour buts de fournir une évaluation indépendante et objective :

- De la mesure dans laquelle les principes, politiques et procédures régissant l'immobilier sont gérés en conformité avec :

  o les politiques et procédures de la Ville;

  o les pratiques exemplaires de l'industrie;

  o des pratiques de gestion efficientes et efficaces;

- De la capacité des pratiques de gestion et du cadre de responsabilité d'assurer l'intégrité et la rentabilité des activités de gestion immobilière.

Points forts de l'organisation

Le personnel de la DSI possède les compétences et l'expérience nécessaires pour s'acquitter de son mandat et de ses responsabilités fonctionnelles. La Division peut compter sur une équipe dévouée dotée d'une direction solide, aux connaissances étendues. Notre vérification a permis de constater l'attitude positive de la Division à l'égard du service à la clientèle. La DSI applique des pratiques municipales exemplaires en ce qui concerne l'aliénation, la location, l'évaluation et l'assainissement de l'environnement. De plus, la politique de la Ville sur l'aliénation de biens immobiliers

demeure une des plus étendues, si on la compare à celles des autres administrations municipales.

Constatations

Aliénation de biens immobiliers

Notre vérification a permis de constater que dans l'ensemble, les aliénations de biens immobiliers étaient conformes à la politique en vigueur. Bien que nous ayons constaté certains cas où la documentation était incomplète, ceux-ci n'ont pas, selon nous, nui à l'intégrité globale du processus pour les dossiers que nous avons examinés. D'après ce que nous avons constaté, il conviendrait que la direction revoie la politique et les procédures connexes de façon à établir des directives plus claires dans les domaines suivants :

- Clarification de l'objectif général des aliénations de biens immobiliers;

- Établissement de lignes directrices claires concernant la sélection des diverses méthodes de vente, de façon à assurer l'application d'une méthode de vente uniforme et efficace et de protocoles de négociation appropriés;

- Opportunité d'exiger, dans le cas des aliénations de biens où plusieurs offres sont prévues, un processus normalisé semblable à celui que la Ville utilise pour les appels d'offres publics.

Acquisitions, location, évaluations et assainissement de l'environnement

Bien que la Division tende à appliquer des pratiques municipales exemplaires dans ces domaines, l'absence de politiques et de procédures officielles fait en sorte que l'on dépend trop des connaissances et de l'expérience du personnel en place pour l'exécution uniforme et appropriée de ces activités. De plus, comme il n'existe pas de procédures écrites, il est difficile d'assurer la formation du personnel et la relève d'une manière efficace.

Demandes de renseignements

La Division reçoit un grand nombre de demandes de renseignements de sources variées au sujet des différentes transactions. Il faudrait adopter, à l'égard de ces demandes, un protocole et un système de contrôle normalisés afin de pouvoir gérer ce travail d'une manière efficiente et uniforme et en montrer clairement l'incidence sur les opérations.

Rôles et responsabilités

La DSI a la responsabilité de gérer un certain nombre de biens immobiliers appartenant à la Ville. Il serait plus opportun d'attribuer cette responsabilité à la Division des biens assignés aux programmes ou à la Division des biens à risque de la DGBI.

Le mandat de la DSI s'étend également à la location de biens immobiliers. Il conviendrait que la DSI examine la possibilité de regrouper les responsabilités liées à cet aspect de son mandat à l'intérieur d'un même volet de ses activités.

Information de gestion

Mis en place dans le cadre du projet des solutions d'affaires intégrées de la Ville, le module Immobilier du SAP sert à gérer l'inventaire de biens immobiliers. Toutefois, la DSI continue d'employer différents outils indépendants pour contrôler l'ensemble des activités, mais elle n'utilise pas d'instrument complet de gestion de base de données. La Division se montre aussi réticente à se servir des outils disponibles dans le cadre du SAP à cette fin. Il conviendrait d'amorcer des discussions avec les Services de technologie de l'information afin d'assurer l'implantation et l'utilisation de ces outils.

Il n'existe pas de système d'indicateurs et de normes de rendement formels. Or, de telles mesures constituent un mécanisme de contrôle interne important qui peut signaler rapidement à la direction certains problèmes potentiels nécessitant une intervention de sa part.

Normes de documentation

L'échantillon de dossiers de transaction que nous avons examiné n'a pas révélé d'activités inappropriées, mais nous avons constaté que le tiers environ des dossiers étaient incomplets, c'est-à-dire qu'ils ne contenaient pas la totalité des documents requis. Il conviendrait d'établir une liste de contrôle et une procédure d'approbation pour chacune des étapes de chaque dossier afin d'avoir l'assurance que toutes les étapes sont accomplies et qu'elles donnent lieu à l'établissement de documents appropriés. La direction pourrait ainsi mieux contrôler le rendement. Cette mesure faciliterait aussi le transfert de dossiers entre employés au besoin.

Planification à long terme

De par la nature même de son rôle, la DSI est tributaire de la façon dont les autres services prévoient leur besoins pour pouvoir intervenir avec rapidité et efficacité. Il semble que de manière générale, l'information soit transmise à la DSI dans un délai raisonnable. Nous n'avons toutefois trouvé aucune preuve montrant que le travail faisait l'objet d'une planification stratégique (établissement d'objectifs annuels ou pluriannuels).

Modèle de prestation de services

La DSI compte six postes « d'expert-conseil ». La direction a indiqué que le recours à ces ressources était rendu nécessaire en raison du volume de travail et de l'incapacité de trouver des personnes qualifiées pour combler les postes vacants. Le recours à des experts-conseils de l'extérieur et à des contractuels, qui s'étend sur de longues périodes, soulève des questions importantes pour la Ville sur le plan du recrutement.

La direction a également constaté que la planification de la relève posait un nouveau défi. Aucune stratégie précise n'a encore été élaborée pour résoudre cette préoccupation, qui

nécessitera sous peu un effort plus concerté de l'ensemble de la Ville. Compte tenu du fait que la DSI a recours pendant de longues périodes à des experts-conseils de l'extérieur, qu'elle continue d'avoir de la difficulté à attirer des candidats acceptables lorsque des postes se libèrent et que cette situation soulève des questions pour la planification de la relève, il y a lieu que la direction adopte à l'avenir une démarche plus formelle en ce qui concerne le recours à des ressources externes.

Recommandations

Recommandation 1

Que l'objectif global des aliénations de biens immobiliers soit clarifié, ce qui comprend la clarification de la priorité relative de la vente de ces biens par rapport à leurs autres utilisations potentielles.

Réponse de la direction

La direction accepte cette recommandation.

La Politique sur l'aliénation de biens que le Conseil a adoptée en octobre 2001 fera l'objet d'une révision qui aura pour but d'en clarifier le libellé, dans le cadre de l'examen annuel de 2006 des procédures d'aliénation.

La direction a pour objectif ultime de présenter des renseignements objectifs afin d'aider le Conseil à établir des priorités propres aux biens excédentaires. L'examen de la Politique sur l'aliénation de biens tiendra compte de la nécessité d'adopter une démarche plus formelle en ce qui concerne les échanges de terrains. Il s'agirait d'obtenir l'assurance que tout bien immobilier excédentaire soit perçu comme un actif et utilisé d'une manière qui en reconnaisse la valeur financière et en rationalise l'utilisation par rapport aux besoins globaux de la Ville.

Recommandation 2

Que la direction établisse des lignes directrices claires sur la sélection de diverses méthodes de vente et sur les protocoles de négociation connexes.

Réponse de la direction

La direction accepte cette recommandation.

La direction propose de produire d'ici au quatrième trimestre de 2006 un guide de vente et de négociation qui établira les différentes possibilités d'aliénation de biens et énoncera les critères à retenir pour la sélection d'une méthode de commercialisation.

Recommandation 3

Que la direction impose l'obligation de procéder à une demande de propositions ou à un appel d'offres public pour toute aliénation de bien ayant une valeur élevée ou suscitant des offres multiples.

Réponse de la direction

La direction accepte cette recommandation.

Les pratiques et procédures actuelles concernant le recours aux demandes de propositions et aux appels d'offres publics vont être passées en revue et révisées dans le cadre de l'examen annuel des procédures d'aliénation de biens. Les pratiques et procédures révisées seront intégrées au guide de vente et de négociation mentionné au paragraphe **Recommandation 2,** qui doit être produit d'ici au quatrième trimestre de 2006.

Recommandation 4

Que la direction veille à la mise en place de politiques et procédures appropriées concernant les acquisitions, la location, les évaluations et l'assainissement de l'environnement, de façon à assurer une démarche uniforme et efficace qui s'appuie sur des pratiques exemplaires.

Réponse de la direction

La direction accepte cette recommandation.

L'élaboration d'une politique sur les acquisitions, qui englobera la location, sera terminée pour le deuxième trimestre de 2006.

Les dispositions concernant les évaluations et l'assainissement de l'environnement, qui sont actuellement contenues dans la Politique sur l'aliénation de biens, seront progressivement intégrées à d'autres politiques et pratiques.

Recommandation 5

Que la direction établisse un protocole normalisé pour la réponse aux demandes de renseignements et qu'elle se dote d'un mécanisme de suivi amélioré pour la saisie de l'information pertinente (source, personnel affecté à chacune des demandes et temps nécessaire pour les résoudre).

Réponse de la direction

La direction accepte cette recommandation.

On procède actuellement à la mise à jour de l'application de suivi des demandes de renseignements que reçoit la Ville. L'opération doit être terminée d'ici au quatrième trimestre de 2006.

Recommandation 6

Que les responsabilités de gestion immobilière actuellement attribuées à la Division des services immobiliers soient transférées à la Division des biens assignés aux programmes ou à la Division des biens à risque de la Direction générale des biens immobiliers.

Réponse de la direction

La direction accepte l'esprit de cette recommandation.

L'examen des différents modèles de prestation de services possibles et des ressources requises sera terminé d'ici au troisième trimestre de 2006. La question des ressources (nouveaux ÉTP ou crédits supplémentaires pour la passation de contrats) sera traitée en vue du processus d'établissement du budget de 2007.

Recommandation 7

Que la Division des services immobiliers regroupe ses responsabilités en matière de location dans sa structure interne.

Réponse de la direction

La direction accepte cette recommandation.

Selon la structure organisationnelle qui existait au moment de cette vérification, les activités de location à des entités externes (baux engendrant des recettes) étaient regroupées avec les opérations d'aliénation de biens, tandis que les activités de location par un tiers (pour les besoins de la Ville) étaient regroupées avec les acquisitions. L'objectif de ce regroupement était d'assurer une répartition équilibrée de la charge de travail à la DSI. À titre de mesure provisoire préalable à un examen de l'organisation, toutes les activités de location (à des entités externes et par des tiers) vont être regroupées au cours du premier trimestre de 2006, afin de permettre la normalisation des processus et une concentration accrue des connaissances et des compétences.

La Division des services immobiliers examinera le regroupement des postes durant le Programme d'examen des processus en vigueur dans les directions qui devrait être terminé au courant du troisième trimestre de 2006.

Recommandation 8

Que la direction assure, de concert avec la Direction des services de technologie de l'information, l'utilisation des outils systèmes dont la Ville dispose pour fournir le soutien requis en gestion de bases de données.

Réponse de la direction

La direction accepte cette recommandation.

Selon la version 1.0 de l'analyse de rentabilisation de la DGBI, la Division des services immobiliers devait être incluse dans la mise en œuvre du module des systèmes de projets (SP). Toutefois, comme la DSI a dû procéder simultanément à l'élaboration et à la mise en place du module des services immobiliers, il a été établi que la Division ne disposait pas des capacités suffisantes pour élaborer également le module des SP. C'est donc la Division de la gestion générale des biens qui a été chargée d'assurer la mise en place du module des SP pour les Services immobiliers Il est prévu de procéder au cours du second trimestre de 2006 à un examen de la possibilité d'appliquer le module des SP au suivi de la gestion des projets et des coûts liés à cette application.

Recommandation 9

Que la direction élabore et mette en œuvre un système d'indicateurs de rendement clés fondé sur des normes de fonctionnement, afin de faciliter la prestation efficiente des services et de valider les problèmes pouvant être liés à la charge de travail.

Réponse de la direction

La direction accepte cette recommandation.

La direction convient qu'il faut des indicateurs de rendement clés pour évaluer et budgétiser les besoins en ressources et suivre le rendement de la Division.

L'élaboration de ces indicateurs et des normes de rendement pertinentes aura lieu d'ici au quatrième trimestre de 2006.

Recommandation 10

Que la direction établisse une liste de contrôle et une procédure d'approbation afin d'avoir l'assurance que la documentation relative à chacune des activités est complète et précise.

Réponse de la direction

La direction accepte l'esprit de cette recommandation.

L'examen de questions analogues soulevées lors d'une vérification de l'aliénation de biens effectuée en 2004 a révélé que la majorité des questions liées aux dossiers ne justifiait pas une modification importante des pratiques existantes.

Une liste de contrôle a été établie et mise en œuvre afin d'obtenir l'assurance que les dossiers font l'objet d'une documentation complète et adéquate.

Recommandation 11

Que la direction établisse, de concert avec les principaux services clients, un processus de planification annuelle ou pluriannuelle afin de pouvoir déterminer et planifier les besoins futurs concernant les services immobiliers.

Réponse de la direction

La direction accepte cette recommandation.

À l'heure actuelle, il est difficile de planifier le volume de travail engendré par les clients à la DSI à l'intérieur d'un même cycle budgétaire. L'établissement du budget des immobilisations a tendance à s'effectuer dans un délai serré, souvent en vase clos. Ce problème touche surtout les acquisitions liées aux grands projets d'infrastructure.

Le personnel de la DSI va procéder, de concert avec les clients, à une analyse et à un examen semi-annuels du volume de travail afin de vérifier l'échéancier des projets de façon qu'il soit possible de tenir compte du coût des ressources au moment d'établir le budget des projets d'immobilisation. Ces examens, qui coïncideront avec l'établissement du budget de la Ville, permettront à la DSI de déterminer les pressions liées aux ressources humaines dans le cadre du processus annuel visant à inventorier les pressions sur le budget de fonctionnement.

Recommandation 12

Que la direction recherche des possibilités d'externalisation plus formelle des services afin de réduire au minimum le recours continu à des experts-conseils et de contrer les limites inhérentes à la planification de la relève.

Réponse de la direction

La direction accepte l'esprit de cette recommandation.

Pour résoudre la question de la répartition du volume de travail assuré par le personnel interne, la DSI a actuellement recours aux services d'entrepreneurs retenus à la suite d'une offre à commandes.

Les activités et le mandat de la DSI vont être revus dans le cadre d'un programme d'examen des processus en vigueur dans l'ensemble de la Direction prévu pour le troisième trimestre de 2006, qui donnera également lieu à une évaluation de l'organisation et à l'établissement d'une stratégie de dotation.

Réponse générale de la direction

Le rapport de vérification daté du 11 octobre 2005, indique que dans l'ensemble, la Division des services immobiliers a su :

- Constituer une équipe compétente, expérimentée et dévouée, dotée d'une direction solide, aux connaissances étendues, pour s'acquitter de son mandat et de ses responsabilités;

- Promouvoir l'esprit d'équipe et une prestation de services positive;

- Favoriser des relations de travail positives avec les autres services de la Ville;

- Appliquer des pratiques exemplaires en matière de services immobiliers municipaux;

- Établir une politique et un règlement sur l'aliénation de biens qui font de la Ville un chef de file par rapport aux autres administrations municipales;

- Respecter son orientation et sa raison d'être initiaux;

- Réagir d'une manière compétente à l'aliénation d'installations ayant découlé de la fusion.

Ayant examiné les recommandations contenues dans le rapport de vérification préliminaire, la direction de la DSI formule les observations suivantes :

Dans l'ensemble, la direction accepte les observations et recommandations découlant de la vérification :

- Les conclusions confirment la force de la DSI en tant que centre d'expertise.

- Les entrevues ont révélé des lacunes sur le plan technologique qu'il importe de combler.

- Les renseignements recueillis soulignent les défis que posent la relève, la dotation en personnel et le recours à des contractuels.

- Certaines recommandations confirment la nécessité d'examiner, d'élaborer et d'approuver une stratégie appropriée en ce qui concerne la prestation de services. Cette opération aura lieu au cours de la révision des processus en vigueur à la direction, qui doit être achevée au cours du troisième trimestre de 2006.

Conclusion

La DSI possède de grandes compétences et beaucoup d'expérience pour s'acquitter de son mandat et de ses responsabilités fonctionnelles. Ses relations avec ses clients sont positives et elle a établi de très bonnes relations avec les principaux services clients à la Ville.

Bien que la DSI continue de satisfaire aux exigences du travail, elle est indûment tributaire de sa base de connaissances existante. Il lui faut se doter de politiques, de procédures et d'outils de mesure du rendement plus étendus et plus formels afin d'assurer

l'uniformité et l'efficacité des opérations et de pouvoir déterminer et valider d'une façon plus nette les entraves à l'efficacité organisationnelle à l'avenir. La vérification a également révélé des possibilités de rationaliser l'organisation, d'améliorer l'information de gestion et de planifier à plus long terme afin de maintenir et d'accroître l'efficience et l'efficacité de la Division. Étant donné les problèmes de planification de la relève et la nécessité de faire constamment appel à des experts-conseils, l'externalisation plus formelle des services constitue une stratégie appropriée actuellement.

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1. Background

The Real Estate Services Division (RESD) falls within the Real Property Asset Management Branch of Corporate Services. The mandate of RESD encompasses:

- acquisition and disposal of all City real property interest,

- all appraisals of real property,

- coordination all real property legal documents, and

- oversight of all environmental remediation on City-owned property including the development and introduction of best practices in environmental management.

There are currently 22 FTEs within RESD, supported by a number of consultant positions. The organizational structure of the Division is presented below.
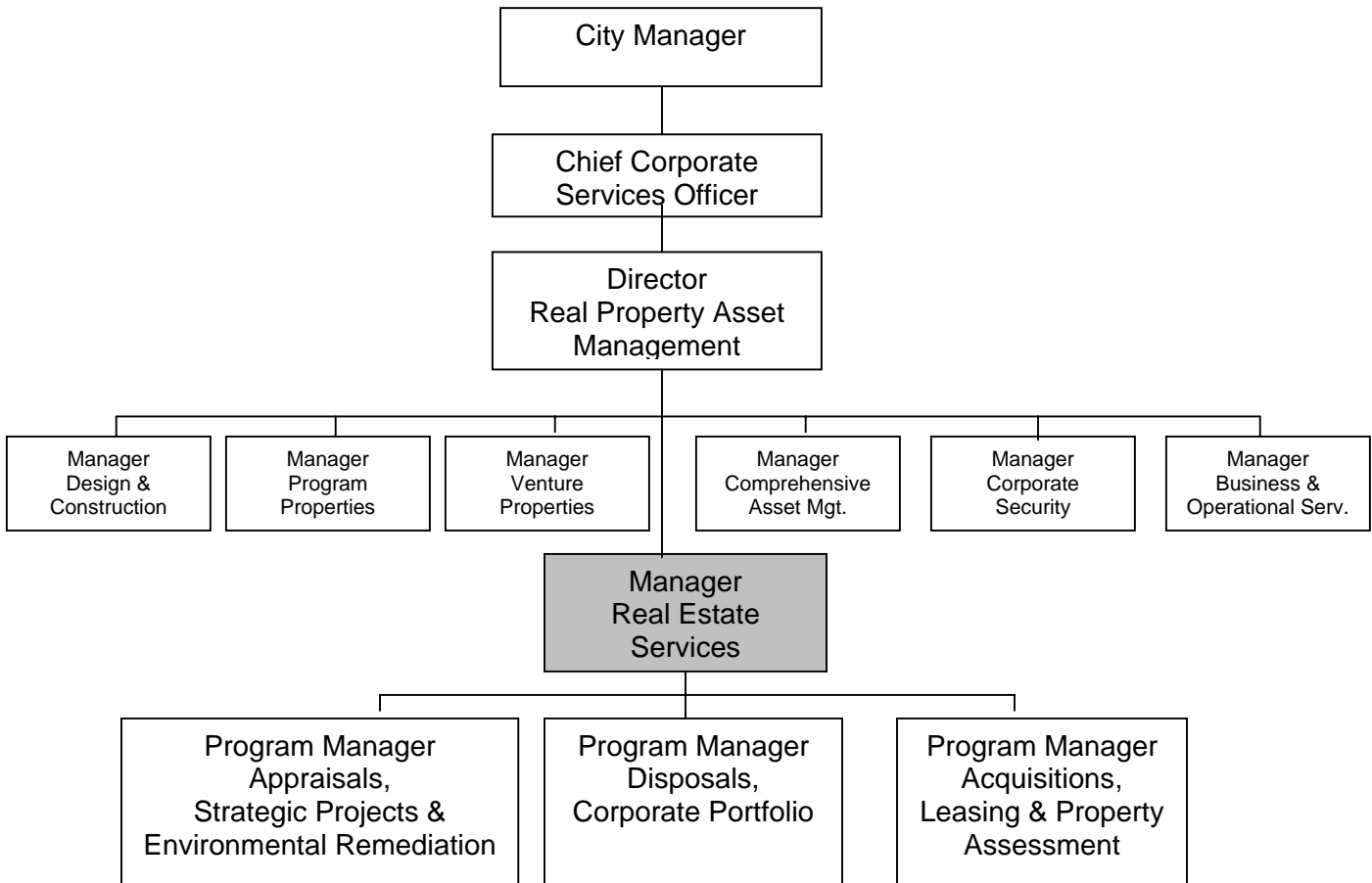
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                          City Manager

                       Chief Corporate
                       Services Officer

                          Director
                     Real Property Asset
                        Management

Manager      Manager      Manager      Manager          Manager      Manager
Design &     Program      Venture      Comprehensive    Corporate    Business &
Construction Properties   Properties   Asset Mgt.       Security     Operational Serv.

                          Manager
                        Real Estate
                          Services

Program Manager      Program Manager      Program Manager
Appraisals,          Disposals,           Acquisitions,
Strategic Projects & Corporate Portfolio  Leasing & Property
Environmental Remediation                 Assessment
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In October 2001, Council approved the Disposal of Real Property – Harmonization of Policy, Procedures and Disposal By-Law. Some of the key features of this policy include the following:

- Council shall, by resolution, declare whether a property is surplus to the City's needs;

- Before property is sold to the general public, all public bodies (i.e. the federal or provincial government or any agency thereof, a local board or school boards) will be given the opportunity to acquire the land at its current market value;

- If the property is suitable for housing purposes, then non-profit, co-operative housing groups will be asked whether they are interested in acquiring the property at its current market value;

- Notice of disposal of real property shall be given as required by the Municipal Act and the City's land disposal by-law; and,

- All transactions will be based on current market values as determined by an appraisal of the real property.

The City's revised Corporate Accommodation Master Plan (CAMP) was approved by Council on May 14, 2003. This Plan resulted in the several City-owned properties being identified for immediate disposal including several major facilities such as:

- 1595 Telesat Court;

- 495 Richmond Road;

- 580 Terry Fox Drive; and

- 150 Elgin/31 Gloucester Street

RESD has been established in large part to carryout property acquisitions and disposals in response to the identified requirements of other City departments such as Public Works and Services and Planning and Growth Management. As such, the Division's activities are largely tactical in nature requiring effective coordination and communication with other areas of the City. In 2004, RESD conducted approximately 120 acquisitions and 80 disposals. In addition, approximately 150 files are currently active in the environmental remediation area.

2.   Audit Objectives and Approach

2.1.   Objectives, Criteria and Scope

The objectives of this audit were to provide an independent and objective assessment of whether current principles, policies and procedures for real estate activity at the City are managed in accordance with:

- City policies and procedures;

- Industry best practice;

- Results of the 2004 review of property disposals;

- Efficient and effective management practices; and

- Whether management practices/accountability framework are adequate to provide integrity and cost effectiveness of real estate management activities.

Specific criteria used in provided this assessment included:

- Policies and procedures are in place for the following:

  - acquisition and disposal of City-owned properties;

  - real estate appraisals;

  - leasing/property inventory and assessment;

  - overall portfolio management;

  - environmental remediation; and

  - strategic projects.

- Policies and procedures are consistent with the strategies of the City (including the 20/20 Plan).

- Policies and procedures are monitored, evaluated and communicated periodically.

- Real estate activities are in accordance with City policy, Provincial/Federal regulations and industry best practice.

- Management control framework (systems, procedures, controls and resources) and management practices are appropriate to ensure due regard to efficiency, effectiveness, financial integrity and compliance.

- Roles and responsibilities are clearly defined, communicated and understood.

- Inter-functional relationships are clearly defined, communicated and understood.

- Information used for decision-making and reporting is timely, relevant and reliable.

- Adequate operational, financial and information systems and processes are in place to ensure that funds are being spent for the purposes intended and are recorded, tracked and reported

- The scope of this audit included RESD activities and transactions during 2003-2005.

2.2. Approach

We have relied upon interviews with City of Ottawa staff and information, data, and other documentary evidence provided to us. The conclusions reached in our report have been based upon information available at the time of the review. Specific steps undertaken during the audit included:

- Review of documents such as the City's Corporate Accommodation Master Plan (CAMP), real estate policies/procedures, terms of reference and administrative reports;

- Interviews with staff from Real Property, the Asset Management Branch (RPAM), Corporate Finance and Legal Departments;

- Review and analysis of operating information (policies, plans and procedures related to real estate management); and

- Compliance testing on a random sample of real estate transactions.

3. Organizational Strengths

RESD currently has the depth of skill and experience to fulfill the real estate services mandate and functional responsibilities of the City. The Division consists of a dedicated team with strong and knowledgeable leadership. A positive teamwork and customer service delivery approach was in evidence during our audit and for the most part positive working relationships have been developed and maintained with other areas of the City.

Municipal best practices as related to leasing, appraisals and environmental remediation are typically followed by RESD and the City's current property disposal policy remains one of the more comprehensive when compared to other municipal organizations. In essence, the original direction and intent for RESD remains on track and the Division has responded capably to the recent challenges associated with the disposal of various City facilities arising from municipal amalgamation.

4. Findings and Recommendations

4.1. Audit Objective 1

Current principles, policies and procedures for real estate activity at the City are managed in accordance with:

- **City policies and procedures;**

- **Industry best practice; and**

- **Efficient and effective management practices.**

4.1.1 Property Disposals

In October 2001, Council approved the Disposal of Real Property – Harmonization of Policy, Procedures and Disposal By-Law. Based on a review of other similar municipalities, the City's policy is one of the more comprehensive.

Our audit of property disposal files found that overall the disposals reviewed were in compliance with the existing policy. In some instances a lack of complete documentation

was noted and is discussed more fully in Section 4.2.3. However, in our view, these instances did not impact on the overall integrity of the process used in the disposals we reviewed.

Our audit did note that the method of sale used varied across the files reviewed. All methods used are permitted under the current policy, however, this did create inconsistencies in the way in which bids were received and negotiations with prospective buyers were handled in some instances. These inconsistencies create risks in ensuring a standardized approach to disposals and can impact on the perceived equity and transparency of the disposal process which in turn could result in challenges to the outcome. Management should review the policy and related procedures to more clearly provide guidance in the following areas:

i) It is unclear from the wording of the current policy whether the overall objective of property disposals is to achieve fair market value or to maximize returns to the City when market conditions permit. Both objectives are stated in the policy. In addition, the policy requires that properties identified for sale are to be circulated to all City departments first to determine if there are potential uses for the site, including the possibility of using the site for social housing purposes. Federal and provincial governments are also to be circulated prior to going to the market for disposal. The policy does not speak to the relative priorities of each of these potential outcomes and how the potential for significant returns to the City from selling the property on the open market compares to other possible uses for the property. The overall objectives for property disposals should be clarified.

ii) Clear guidelines should be established regarding the selection of the various sales methods. This would ensure that a consistent and effective method of sale is used and that appropriate negotiation protocols are adhered to. A standardized process similar to the City's approach to public tendering should be required for disposals where multiple bids are anticipated. Under such a process, notification of the sale of a City property would require that all interested parties submit their bids by the same deadline. All bids would then be reviewed by staff to identify the most suitable one based on the market assessment of the property, the price offered and the sale conditions requested in the bid. Negotiations would then be launched with this bidder to finalize the agreement. In the event that an agreement cannot be met and negotiations are abandoned, staff would open negotiations with the party submitting the next best bid based on the initial evaluation.

iii) The lack of a more formal tender-like approach to these sales in the past has created particular challenges during the timing gap between acceptance of a bid and final Council approval. Once staff accepts a bid, the Committee and Council reporting process begins in order to obtain final approval for the sale. It is not uncommon for the City to continue to receive additional bids during this interim period. Since the current policy does not address this scenario, staff have on occasion requested advice from Legal Services to clarify how to handle

these interim bids. The City's disposal policy should clearly establish the suspension of the bidding process upon closing date of the initial request for bids. The policy would then ensure that once an agreement has been reached by staff, no subsequent bids could be accepted in the interim period when Council approval is being confirmed. Establishing this process under a Council-approved policy will be important to help avoid future disputes with bidders.

Recommendation 1

That the overall objective of property disposals be clarified, including clarification of the relative priorities regarding sale versus other potential uses for the property.

Management Response

Management agrees with this recommendation.

The Disposal Policy approved in October 2001 by Council, will be reviewed for clarity of wording as part of the annual review of disposal procedures to be completed in 2006.

Ultimately, Management's goal is to present objective information to aid Council in setting priorities specific to surplus property. The review of the Disposal Policy will address the need to develop a more formal approach for land exchanges. The objective would be to ensure that any surplus real estate is viewed as an asset and utilized in a manner that recognizes its financial value and rationalizes its use in relation to the City's overall requirements.

Recommendation 2

That management establish clear guidelines on the appropriate selection of various methods of sale and associated negotiation protocols.

Management Response

Management agrees with this recommendation.

Management proposes the development of a sale and negotiations handbook to be completed by Q4 2006, that documents disposal options available and outlines the criteria to be considered when selecting a marketing method.

Recommendation 3

That Management establish a requirement for the use of a proposal call or public tender process for all disposals involving high dollar values and/or multiple bidders.

Management Response

Management agrees with this recommendation.

Current practices and procedures with regard to the use of proposal calls and/or public tenders will be reviewed and revised as part of the annual review of the current disposal procedures and incorporated into the sale and negotiations handbook, addressed under **4.1.1 Recommendation 2,** to be completed by Q4 2006.

4.1.2   Acquisitions, Leasing, Appraisals and Remediation

At the time of the audit, property disposal was the only RESD activity governed by formal policies and procedures. A policy governing property acquisitions is currently in draft form and is scheduled for implementation by the end of 2006. The leasing policy from the former Region of Ottawa-Carleton is used a guideline in this area. Appraisals, strategic projects and environmental remediation currently have no formalized internal policies and procedures in place.

RESD is largely a tactical operation responsible for responding to requests for property-related transactions on behalf of other City departments. While the Division does tend to adhere to industry best practices in these areas, the lack of formal policies and procedures places excessive reliance on the knowledge and expertise of existing staff to consistently and appropriately undertake these activities. The current operating environment also makes it difficult for managers to monitor activities to ensure consistency between staff, measure performance effectively and ensure staff training is adequate. No evidence of inappropriate activity was found, however, with staff turnover expected to continue be a challenge for RESD management, the lack of standard documented procedures will create greater risks in the future in that the current level of knowledge may not be sustainable.

A particular aspect of acquisitions that should be addressed by the policy is the practice of conducting property trades or land exchanges. In order for the City to obtain a desired property (e.g. for environmental protection), land exchanges have on occasion been arranged whereby a City-owned property is offered in trade. In these cases, Council approval is obtained, however, no policy is currently in place to ensure these exchanges are managed in a consistent fashion. The creation of a corporate acquisition policy should include direction on property transfers.

Recommendation 4

That Management ensure appropriate policies and procedures are put in place for Acquisitions, Leasing, Appraisals and Remediation to ensure a consistent and effective approach that reflects best practices is maintained.

Management Response

Management agrees with the recommendation.

The development of an Acquisition Policy, including leasing, will be completed by Q2 2006.

The need for appraisals and environmental site assessments is currently captured in the Disposal Policy and will be entrenched in other policies and practices as developed.

4.1.3   Inquiries

The Division is currently dealing with a considerable number of inquiries from outside of the department regarding the status of various transactions. Management and staff interviewed during the audit indicated that responding to these inquiries consumes a significant amount of resources that could otherwise be utilized on completing an already high volume of transactions. Unfortunately, the manner in which these inquires are currently logged does not make it possible to accurately gauge the operational impacts. A running list of inquires is kept which does not track the source of the inquiry, the staff assigned, the open/close date or the time committed to each request. A standard protocol and monitoring system for addressing these inquires is therefore not yet in place and as a result makes the task of managing this work efficiently and demonstrating its operational impacts difficult.

Recommendation 5

That Management implement a standard protocol for responding to inquiries as well as an improved tracking mechanism to capture all relevant information including the source, the staff assigned and the time committed to resolving each request.

Management Response

Management agrees with the recommendation.

An upgrade to the Corporate Inquiry Tracking application is currently underway and is anticipated to be completed by Q4 2006.

4.2.   Audit Objective 2

Management practices/accountability framework are adequate to provide integrity and cost effectiveness of real estate management activities.

4.2.1   Roles and Responsibilities

Property Management.   RESD currently has responsibility for managing a number of City-owned properties. These are properties which the City has purchased at various times in the past in anticipation of needing the land for future Official Plan requirements. Until this land is required, the City has continued to offer these properties for lease to the public and acts as landlord to the occupants.

Assigning these property management duties to the City's real estate function is somewhat inconsistent with the broader mandate of RESD and requires it to maintain an additional set of skills that is not directly related to its core business. Elsewhere within the Real Property Asset Management Branch there are two Divisions, Program Properties and Venture Properties, whose mandate is to manage all other City-owned facilities. It would be more appropriate to assign to one of these Branches the responsibly for managing properties now under RESD jurisdiction.

Recommendation 6

That the property management responsibilities currently assigned to the Real Estate Services Division be transferred to either the Program Properties Division or the Venture Properties Division of Real Property Asset Management.

Management Response

Management agrees with the intent of this recommendation.

A review of the alternative service delivery options and the required resourcing will be completed by Q3 2006. Any resourcing issues, additional FTEs or contract dollars, will be addressed in time for the 2007 budget process.

Leasing. The current mandate of RESD includes all leasing activity for the City, including that which is related to the properties described in the preceding discussion. Maintaining leasing expertise within RESD is appropriate, however, the responsibility is currently scattered across various section of the Division. RESD should pursue opportunities to align these responsibilities in a single part of its operation.

Recommendation 7

That Real Estate Services amalgamate its leasing responsibilities within its internal structure.

Management Response

Management agrees with this recommendation.

The organizational structure in place at the time of this audit aligned leasing-out activities (revenue leases) with disposals, and lease-in activities with acquisitions. The intent of this alignment was to balance workloads within RESD. As an interim step to an organizational review, revenue and acquisition leasing will be consolidated in Q1 2006, to allow for standardized business processes and increased focus of knowledge and expertise.

With the potential realignment of the Corporate Portfolio property management responsibilities addressed under **4.2.1 Recommendation 6**, the consolidation of lease activities will be accommodated within the existing staffing levels.

Real Estate Services Division will be reviewing the alignment of positions during the Branch Process Review Program which is targeted to be completed in Q3 2006.

4.2.2 Management Information

The Corporate Information System. As part of the City's Integrated Business Solution (IBS) initiative completed in 2004, the Real Estate (RE) module of SAP was configured and implemented to support RESD operations. The RE module is currently used in managing the existing inventory of City–owned properties. As part of the design phase, a fit/gap analysis was conducted by the IBS team which identified a complex matrix of cross-connections between Real Estate, Supply, Finance, Human Resources – Payroll and third party solutions. Leasing data is maintained on the system and capital and operating budgets are tracked by SAP and Finance, allowing Real Estate budgets to be monitored by the Manager and Finance on a regular basis.

The initial strategy for IBS called for the use of the Project System (PS) module of SAP to support RESD's broader database management needs. Management and staff within RESD indicated, however, that the PS module is far more complex than is required for its needs and would be costly to implement. The module therefore has not been used and, as a result, the Division is currently operating without a database management tool. The scope of the audit did not afford the opportunity to conduct a complete post-implementation review of the system, however, it appears that the intended benefits of implementing the corporate system cannot be achieved if it remains underutilized. Accordingly, RESD should pursue with Information Technology Services the implementation of available SAP tools to provide adequate database management support. The Office of the Auditor General has planned a more detailed audit of the City's enterprise system in 2006

Recommendation 8

That Management, in concert with the Information Technology Services Branch, implement the use of available corporate system tools to provide required database management support.

Management Response

Management agrees with this recommendation.

The RPAM Business Case, Version 1.0, indicated that Real Estate Services Division (RES) would be included in the (PS) Module implementation. However, as the Real Estate Services Division had to concurrently develop and implement the Real Estate Module, it was determined that there was not enough capacity within the Division to develop the PS Module as well. At that time, the Comprehensive Asset Management Division (CAM) was substituted for RES in the PS module implementation. A review of the potential application of the PS module to address project management-tracking requirements and costs associated with the application is planned for Q2 2006.

Performance Indicators. Currently within RESD, a variety of stand-alone tools are used to monitor activities, ranging from email updates and excel spreadsheets to the 'Tasks' option from Microsoft Outlook. One spreadsheet was provided which indicated in excess of 700 separate projects, however, it was not possible from this data to accurately assess workload requirements or operational efficiency. A system of formal performance indicators and standards is not currently in place and there was a lack of evidence that consistent reporting between staff and management is occurring in order to facilitate monitoring of activities and timelines.

The absence of key performance indicators and standards is related to the need for formal operating procedures described earlier in the report. Such measures are an important internal control mechanism that can provide management with an early warning on potential issues and required management intervention. Throughout the audit, staff and management expressed concerns over their ability to continue to manage existing workloads in the future. Regular reporting against a set of performance indicators is required in order to validate workload concerns and assess operating sustainability accurately.

Recommendation 9

That Management develop and implement a system of key performance indicators based on operating standards to facilitate efficient service delivery and validate potential workload issues.

Management Response

Management agrees with this recommendation.

Management agrees that meaningful performance indicators are required to estimate and budget for resource requirements and to track divisional performance.

The development of these indicators and appropriate planning standards will be completed by Q4 2006.

4.2.3 *Documentation Standards*

Based on our review of a sample of transaction files, no evidence of any inappropriate activity was noted however we concluded that approximately one-third of the files were incomplete in terms of containing all required documentation. Typical examples included copies of appraisals not found on file, approval documents as required by the City processes not included, no evidence that circulation of the notice of surplus property had been undertaken and no evidence of required involvement of the Legal Services Branch.

None of these incidents can be viewed as a serious breach of policy. However, because the contents of each file is in chronological order containing copies of emails, correspondence, appropriate reports, and other documentation as relevant to the transaction file, it is necessary to review all of the file contents to ascertain the status of

each transaction and to ensure all required steps have been successfully completed. As such, to ensure accuracy and completeness of transactions, even on a periodic, sample basis is extremely time consuming and is not being performed regularly.

The establishment of a checklist and sign-off procedure within each file for each milestone should be implemented as a trigger to ensure all steps are completed and properly documented. The use of such a checklist with documented sign-offs at key points would also facilitate management's quality assurance process.

Recommendation 10

That Management establish a checklist and sign-off procedure to ensure that documentation of all activity is complete and accurate.

Management Response

Management agrees with the intent of this recommendation.

A review of similar issues from a previous disposal audit in 2004 indicated that the majority of the issues associated with files did not warrant a significant amendment to practices.

To ensure that files are fully and properly documented, a checklist has been developed and implemented.

4.2.4   Long-Term Planning

As stated previous, the role of RESD is to respond to requests from other City departments for real estate related services. City departments seem well aware of RESD's mandate and do not typically interfere with the acquisition, leasing and disposal of properties.

By nature of its role, RESD is to a large extent dependent upon these other departments to forecast their requirements in such a way as to allow the Division to take action in a timely and effective manner. Information generally appears to be provided to RESD within a reasonable timeframe. However, timelines for larger projects have on occasion created pressure within the Division to meet critical deadlines. We could find no evidence that strategic work planning, i.e. setting annual or multi-year targets, was being conducted. Such a process, conducted in concert with key client departments such as Planning and Growth Management, may minimize the occurrences of major initiatives having to be acted upon under very tight time frames.

Recommendation 11

That Management undertake, in concert with key client departments, an annual or multi-year planning process to identify and plan for future real estate service requirements.

Management Response

Management agrees with this recommendation.

It is currently difficult to pre-plan RESD's client-driven workload within one budget cycle. The capital budget process tends to be completed in a compressed timeframe, often in isolation. This issue occurs mainly with acquisitions for major capital infrastructure projects.

RESD staff will initiate a semi-annual workload review and analysis with clients to review project timing to allow input for resource costs in capital project budget preparation. These reviews, coordinated with the corporate budget cycle, will allow RESD to identify staffing pressures as part of the annual operating budget pressure identification.

4.2.5   Service Delivery Model

The RESD structure currently includes six (6) positions identified as "Consultants". These positions have received payments from various accounts within the RESD budget. In addition, one (1) Clerk position was also identified which is currently being expensed on a consultant basis. Consultants or contract staff have been used in this manner within RESD since 2001 and in some cases these resources have remained with the Division on a day-to-day basis for extended periods of time. Management has indicated that the use of these on-site consultant/contract resources has been necessitated by workload demands and the inability to find qualified candidates when vacancies occur. To do so over long periods of time, however, raises significant employment issues for the City.

Management has also identified a related succession planning issue. This is emerging as a significant challenge in light of several anticipated retirements and the Division's difficulties in attracting acceptable candidates in the past. No clear strategy has yet been developed to respond to this and concerns have been raised regarding the longer-term sustainability of the function. Succession planning is an issue that will require a more coordinated Corporate-wide effort in the near future.

In addition to contract staff, RESD currently conducts the majority of its property appraisals via standing offers with external organizations. In 2003, the Universal Program Review (UPR) submission by RESD estimated that approximately 50% of all real estate activity at the City was conducted using external resources and/or on-site contract staff. The UPR submission discussed the possibility of increasing outsourcing to 100%. At the time, although the potential for costs savings was seen as questionable, it was recommended that a review of opportunities in this regard be conducted. Given RESD's long-term use of contract staff, its continuing struggle to attract acceptable

candidates when vacancies occur and the associated succession planning issues this is raising, it is appropriate at this point for management to pursue opportunities for more formalized outsourcing in the future.

Recommendation 12

That Management pursue opportunities for more formal outsourcing of services to minimize the ongoing use of consultants and address succession planning limitations.

Management Response

Management agrees with the intent of this recommendation.

To address the balance of the workload currently being provided by internal staff, RESD is currently using individual contractors, acquired through a standing offer, to meet day-to-day workload requirements.

RESD's lines of business and mandate will be reviewed as part of a Branch-wide Process Review Program including an organizational assessment and staffing strategy planned for Q3 2006.

General Management Response

The Audit Report (DRAFT), dated 11 October 2005, indicates that overall the performance and management of the Real Estate Services Division (RESD) has successfully:

- Created a skilled, experienced and dedicated team with strong and knowledgeable leadership to fulfill its mandate and responsibilities;
- Promoted positive teamwork and customer service delivery;
- Fostered positive working relationships with other areas of the City;
- Followed municipal real estate best practices;
- Created a property disposal policy and bylaw that remains a leader when compared to other municipal organizations;
- Remained on track with original direction and intent for RESD; and
- Responded capably to the disposal of facilities arising from amalgamation.

After reviewing the Recommendations contained in the draft audit report, RESD management has the following observations:

General agreement with observations and Recommendations;

Findings confirm RESD's strength in filling Centre of Expertise (COE) role;

Interviews have identified technology weaknesses that need to be addressed;

The information that was captured recognizes succession, staffing, contracting issues and challenges;

Certain Recommendations confirm that more in-depth review and development and approval of an appropriate go-forward service delivery strategy is warranted. This will be looked at during the Branch Process Review that is targeted to be complete Q3 2006.

5. Conclusion

RESD currently has a high level of skills and experience to bring to the Division's mandate and its functional responsibilities. There is positive customer service approach and strong relationships have developed with its key client departments across the City.

Although RESD continues to meet current work demands, there is an undue reliance on its existing knowledge base. There is a need to develop more complete and formalized policies, procedures and performance measurement tools to ensure on-going operational consistency and effectiveness as well as to more clearly identify and validate potential impediments to organizational effectiveness in the future. Opportunities have also been identified during this audit for organizational streamlining, improved management information and longer-term planning to assist in sustaining and enhancing the Division's long-term efficiency and effectiveness. Given succession planning issues and the ongoing need for consultant resources, pursuing more formal outsourcing of services is an appropriate strategy at this time.

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

Ottawa

Office of the Auditor General

AUDIT OF THE EMERGENCY MANAGEMENT PROGRAM

2005 REPORT

Chapter 6

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Executive Summary

Background

The City of Ottawa has been actively conducting emergency management planning since amalgamation in 2001. At that time, the Emergency and Protective Services Department (EPS) of the City undertook a strategic planning exercise (Operation Delta) to integrate emergency services across the former municipalities. This included an examination of the gaps in the City's emergency management capabilities.

In 2002, a new Emergency Response Program capital project worth $7.1 million was approved by Council. The funding was aimed at optimizing the City's emergency response capabilities by addressing multi-departmental emergency response initiatives that could not easily be funded within a single unit's operating budget. A multi-departmental Steering Committee and Working Group was established to develop a five-year action plan to identify and prioritize key projects to significantly improve the City's capability to mitigate, prepare for, respond to and recover from emergencies.

The Working Group used measurable management and operational objectives to identify and prioritize 31 capital projects that would contribute to the reduction of the gap between the current desired level of response and the actual capabilities.

In 2002, the Ontario Provincial Legislature amended the *Emergency Management Act* (formerly the *Emergency Plans Act*) with the requirement for all municipalities in Ontario to develop and implement an emergency management program. Using a multi-departmental approach, the City of Ottawa developed a comprehensive Emergency Management Program (EMP or the Program) that was approved by Council in December 2004. The program is designed to enhance the City's ability to prevent, plan for, and respond to large-scale disasters and emergencies and to ensure the continued delivery of core services to City residents. A two-tiered governance structure has been developed to manage the Emergency Management Program.

1. **Emergency Management Program Steering Committee (the Steering Committee).** This committee is chaired by the Deputy City Manager of Community and Protective Services and is comprised of the members of the City's Executive Management Team. It is responsible for providing overall strategic guidance and direction for the Program.

2. **Emergency Management Program Working Group (the Working Group).** This Working Group is chaired by the Manager of the Emergency Measures Unit (EMU) and is comprised of key managers from across the City and also includes representatives from external organizations (e.g., Red Cross, local hospitals, etc.). The Working Group is responsible for executing the Emergency Management Program across the City of Ottawa. Although referred to as the EMU in this report, the EMU was renamed the "Office of Emergency Management" as of September 1, 2005.

In 2004 the list of the City's EMP capital projects was revised. Specifically, five new projects were introduced, three projects removed, and several projects merged to produce a revised list of 29 capital projects.

Subsequent to the proclamation of the *Emergency Management Act,* Emergency Management Ontario, a unit of the Ministry of Community Safety and Correctional Services, developed the Community Emergency Management Program framework which outlines standards for municipal Emergency Management Programs. The standards are divided into three levels: essential, enhanced and comprehensive. The *Emergency Management Act* requires that all municipalities in Ontario comply with the standards developed by Emergency Management Ontario. The elements of the essential standard were required to be in place by December 2004. The enhanced and comprehensive elements must be completed by December 2006 and 2007 respectively.

The City is approximately half way through its first Five Year Emergency Response Program Action Plan. This audit was intended to provide Council, the City Manager and the Executive Management Team with information to assess the Program and to take remedial action if required.

The objectives of the audit were to provide Council with an independent and objective assessment of:

1. The City's compliance to the requirements of the province of Ontario's *Emergency Management Act* and related regulations;
2. The adequacy of the management controls framework (e.g., governance, planning, reporting, etc.) used to manage the City's Emergency Management Program; and,
3. The alignment of each of the City's 29 Emergency Management Program projects to the stated goals and objectives of the Emergency Management Program.

The scope of the audit did not include:

- An assessment of the adequacy of the Emergency Management Plans of individual departments and branches;
- An assessment of the economy and efficiency of the Emergency Measures Unit; or,
- A detailed review of each of the 29 EMP capital projects.

The audit included an extensive review and analysis of Program and project related documentation, including: Emergency Operations Control Group Exercise Reports; The Five Year Emergency Response Program Action Plan and the updated 2004 plan; the confidential Emergency Management Plan; EMP capital project status reports; the 2003 Vulnerability Analysis Report; Council briefings; and, assorted Program related planning documents.

In addition, the audit conducted an array of interviews with representatives of staff and management from numerous City departments and branches.

Key Findings and Recommendations

Strengths

Since amalgamation and well before events such as the 9/11 attacks in the United States and the EMO requirements for an Emergency Management Program, the City has been proactively planning for enhancements to its emergency response capabilities. Through this audit, it was observed that emergency management planning at the City has matured from the development of a static, point-in-time emergency management plan to an active multi-departmental emergency management program that includes consultations with external stakeholders, regular training, and demonstrated commitment from the City Manager and Executive Management Team. The Audit Team observed the following key strengths of the Program.

- There is a high level of awareness and commitment to the Program by the City Manager and Executive Management Team. Specifically, at the time of the audit, the Emergency Operations Control Group (EOCG) had met six times, each for half a day, since November 2004 to conduct emergency management simulation exercises. This dedication of a half day per exercise represents a significant commitment of time for the Executive of the City. By making this commitment, the Executive is leading by example and demonstrating the high priority and importance that it places on Program.

- A detailed Emergency Plan has been developed and was incorporated into a City of Ottawa By-law in December 2004. The City of Ottawa Emergency Plan outlines the overall municipal emergency management system, the general emergency functions common to all types of emergencies and disasters as well as specific emergency functions. By Provincial Regulation, municipal Emergency Plans were due to be submitted to the Chief, Emergency Management Ontario by December 31, 2004. The City completed its plan prior to this deadline.

- The Working Group (WG) maintains active representation from across City departments and meets weekly to manage the program. The WG members show a high level of commitment and dedication to the WG and the Program as a whole. The WG meetings are held on a regular basis with formal agendas and minutes distributed for each meeting.

- The Program is one of Community and Protective Services' 12 Strategic Priority Projects, and the 2006-2009 City Corporate Plan commits to developing and implementing an Emergency Management Program that improves the City's ability to cope with a major crisis or disaster. The Program is also a corporate priority project.

Findings

The following outlines the key findings, risks and recommendations for this audit.

Objective 1 – Compliance

The Audit Team observed that the City is compliant with the requirements of the *Emergency Management Act* and associated regulations. Specifically, at December 31, 2004 the City was compliant with the relevant sections of the *Emergency Management Act* (included in Appendix B) and with the Essential standard of the Community Emergency Management Program Framework.

The Audit Team identified one area for improvement with regard to improving the City's process for ensuring compliance to provincial legislation and regulations.

Findings - Compliance Assurance

The City has been recognized by the Province of Ontario as compliant to relevant legislation and regulations; however, a formalized process does not exist to ensure compliance is regularly monitored and consequently sustained over the long term. Additionally, our review of current Program activities indicates that additional processes may be required to be compliant with the Enhanced and Comprehensive standards, as defined by Emergency Management Ontario. There is a risk that by maintaining its current portfolio of Emergency Management Program capital projects the City will possibly be non-compliant to the Enhanced and Comprehensive standards defined by Emergency Management Ontario.

Risk

There is a risk that Council and the Steering Committee will not receive timely compliance information to assist them in their decision-making processes.

Recommendation 1

That the management of the EMU develop a mapping of EMP capital projects and Program activities to the standards defined by Emergency Management Ontario and that the subsequent mapping be:
    a. **annually reported to Council; and,**
    b. **updated and reported to the Steering Committee on a twice yearly basis.**

Management Response

Management agrees with these recommendations.

Although the Audit Team determined that "the City is compliant with the requirements of the Emergency Management Act and associated regulations" as reported to Council at its meeting of December 15, 2004, the Audit Team recommended development of a process to

map Emergency Management Program (EMP) capital projects and activities to the enhanced (year 2) and comprehensive (year 3) standards.

Because the City's five (5) year, $7.1 million EMP actually pre-dates the Emergency Management Act, tracking tailored to its requirements was not built into the original design.

Although the Province does not require it until 2007, the Office of Emergency Management is developing an annual planning cycle process as follows:
- Annual project review including a legislative program mapping process for approval by the Steering Committee;
- Semi-annual reprioritization exercise to ensure legislative compliance will be achieved with an update provided to the Steering Committee for approval ; and
- Bi-monthly formal program status updates to the Steering Committee to ensure financial accountability, mitigate risks associated with projects and ensure that information is shared appropriately.

This process will be tabled at the Steering Committee meeting in Q1 2006.

Objective 2 – Management Control Framework

We observed that the Program has an adequate management control framework. Specifically, formal and informal controls and processes were observed for all of the audit criteria supporting the control areas identified above.

While it was observed that an adequate management control framework exists, three observations were made to reduce the risks facing the Program and to strengthen existing processes. Specifically, the Audit Team identified improvement opportunities in the following areas: governance structure and processes; benefit sustainment; and, the sufficiency of resources assigned to the Program.

Findings - Governance Structure and Processes

Community and Protective Services and EMU management has increasingly developed and implemented processes and controls to effectively manage the Program. Nevertheless, three key additional processes and controls are required to mitigate the risks associated with the current Program governance model and consequently enhance the probability that the Program will achieve its long-term goals and objectives.

Risks

There is a risk that discrepancies will exist between the Emergency Measures Unit capital project summary reporting and individual capital project status reporting.

There is a risk that project teams may not have the necessary resources with the required qualifications to successfully meet project objectives.

Recommendation 2

It is recommended that the EMU develop the following key controls for approval by the Steering Committee.

   a. A detailed Terms of Reference for the Steering Committee including a description of the Steering Committee's program oversight roles and responsibilities and an approvals matrix for the Working Group, Steering Committee, and EMU.
   b. A formal program planning framework, including strategic and annual program planning processes for the Program.
   c. A performance measurement framework for regular reporting to the Steering Committee and Council including performance measures in the areas of legislative and regulatory compliance and Program goals and objectives.

Management Response

Management agrees with these recommendations.

"The Audit Team observed that the Program has an adequate management control framework. Specifically, formal and informal controls and processes were observed for all of the audit criteria supporting the control areas identified above. While it was observed that an adequate management control framework exists, three observations were made to reduce the risks facing the Program and to strengthen existing processes."

As noted under Recommendation 1, the current Terms of Reference for the Emergency Management Program were developed in 2002, prior to passage of the Emergency Management Act, and focused primarily on the project structure. Now that the City is approaching the end of its first 5-year planning cycle, it is appropriate to review the current Terms of Reference and reorient them to support the ongoing governance structure and processes required to support the ongoing Emergency Management Program.

The updated Terms of Reference will identify roles, responsibilities and approval processes. It will include an annual mapping/planning process and semi-annual self-assessment to ensure legislative compliance. It will outline program objectives and develop performance measures to ensure that the program is meeting those objectives and it will outline a strategic planning cycle for the Emergency Management Program.

A Terms of Reference will be tabled for approval by the Steering Committee in Q1 of 2006.

The existing management control framework is being strengthened departmentally and within the Branch, the reporting areas, nature of the reports and frequency have been

documented and will be actively reviewed by individual managers and collectively by the Branch Management Team.

Findings - Benefit Sustainment

The City has approved $7.1 million in Program related capital projects; however, associated operating funding has not yet been identified to sustain the long-term benefits of these projects.

Risks

There is a risk that Emergency Management Program capital project 511-19, Municipal Evacuation Plan, will experience further project delays and consequently that the City will continue to be without a comprehensive plan for the effective and orderly evacuation of all or segments of the City.

There is a risk that the Steering Committee will not have a full understanding of the human resources and operating costs associated with the 29 Emergency Management Program capital projects and consequently that the City will not allocate sufficient future years resources to sustain the benefits of these investments over the long term.

Recommendation 3

That the Steering Committee place a priority upon the timely completion of capital project 511-19, Municipal Evacuation Plan, and regularly monitor the project's progress and adequacy of resources assigned to the Project.

Management Response

Management agrees with this recommendation.

Management recognized the Evacuation Plan as a priority and dedicated resources to support this initiative in October 2005. The project focuses on planning all elements of an evacuation, which requires multi-departmental coordination. The first phase was completed in December 2005, and described the coordination mechanisms and major procedures for all plan elements and detailed internal City of Ottawa responsibilities within the plan. The next phase, anticipated to be complete by June 2006, will address all major job aids, coordination mechanisms and responsibilities involving external partners.

Recommendation 4

That the EMU undertake a process to identify and document the anticipated operating and human resources costs for all EMP capital projects (pending, scoping, active, and completed) and that these costs be discussed and agreed to by the Steering Committee.

Management Response

Management agrees with this recommendation.

In August 2005, a revised project approval process was formally established and approved by the EMP Steering Committee. Included in this process are the identification of human resources and their time allocation, and the potential operational impact of the project. Throughout a project's development, the Steering Committee members will be kept apprised of the project's progress and its integration operationally. Staff recently conducted a historical review of the human resources allocated to the projects as well as projected human resources required to complete the projects in 2006 and 2007. The results of this analysis were used for the annual project review for 2006 and will subsequently be used in 2007.

Findings - Sufficient Resources

Through the establishment of the Emergency Measures Unit, the funding of the Emergency Management Program capital project portfolio and the ongoing operation of the Working Group, the City has dedicated comprehensive multi-year budgetary and human resources for effective emergency management planning. While an extensive array of resources have been dedicated to emergency planning by the City, issues exist regarding the adequacy of resources assigned to the Working Group and the adequacy of the Emergency Operations Centre.

Risks

As a multi-departmental program, the Program is reliant upon other departments and branches to provide staff resources to enable it to successfully deliver upon its mandate. The Program is currently at risk of not having sufficient full-time resources to successfully deliver upon the Program goals and objectives as outlined in the Five Year Emergency Response Program Action Plan.

The current location and design of the Emergency Operations Centre adds avoidable constraints and challenges to the City's capability to effectively and efficiently manage emergencies.

Recommendation 5

That the EMU develop and document a process for the selection and approval of new Working Group members and ensure that the process: documents the anticipated workload requirements of Working Group members; clearly outlines roles and responsibilities; and includes formal senior management approval of the department from which the resource belongs.

Management Response

Management agrees with the intent of this recommendation.

Further to recommendation 2, the new Terms of Reference will include a process to document requirements of Working Group membership, core competencies and a process for gaining formal approval at the Steering Committee level on Working Group membership. This formal approval will assist in ensuring workload balances are made with respect to Working Group members.

A detailed human resources impact analysis was presented to the Steering Committee November 22, 2005. Subsequent to this, an implementation plan for 2006 & 2007 will be presented to the Steering Committee in Q1 of 2006. The implementation plan will identify the implementation of various projects and the financial and human resources required to successfully complete each project with in the identified timeline. Each future project will also follow the project start-up process approved by the Steering Committee in August 2005. The 2006 & 2007 implementation plans, the project start-up process and bi-monthly status reporting to the Steering Committee will ensure effective benefit sustainment.

Recommendation 6

That the Steering Committee place a priority upon the timely completion of EMP capital project 511-07, Emergency Operations Centre Design.

Management Response

The current location and design of the Emergency Operation Centre (EOC) is problematic. The layout is not appropriate for the number and types of activities required by a single tier municipality of Ottawa's size, is located downtown and therefore at higher risk from a vulnerability perspective, has no permanent audio visual equipment and computer workstations and lacks an effective form of controlled access.

Accordingly, a project has been identified for the design of a new Emergency Operations Centre. A Best Practices Review has been completed and an EOC Design Concept document was developed to aid in decision-making processes and the design phase. To date, the project team has also developed detailed operating procedures for the current EOC, which addresses notification procedures for mobilizing staff and procedural processes for the effective management of the EOC. The City of Ottawa is currently seeking partnership opportunities with the Federal Government – Public Safety and Emergency Preparedness Canada to co-locate Federal and Municipal Emergency Operations Centers. Temporary modifications to the existing EOC are also being evaluated to enhance efficiencies of space and personnel.

Objective 3 – Projects

The Audit Team observed that the current Emergency Management Program capital project portfolio of 29 capital projects is aligned to the stated goals and objectives of the Program and that the capital project portfolio contains all the EMP related capital projects currently underway

at the City.   Additionally, it was observed that monitoring processes exist at the branch and departmental level but not at the Steering Committee level to track capital projects schedules, costs and scope.

The Audit Team identified the following opportunity to strengthen the Program's project management processes and to increase the likelihood that the 29 Emergency Management Program capital projects will be completed prior to the deadline of December 2007.

Finding

The Program does not have a formalized process to allow for the regular review and reprioritization of the EMP capital projects portfolio.

Risk

The City is at risk of not meeting its Emergency Management Program capital projects completion schedule. Without the implementation of additional project monitoring processes at the Steering Committee level, the likelihood of this risk occurring will increase over the next two years as the City approaches the end of its first Five Year Emergency Response Program Action Plan and attempts to gain closure on the remaining Emergency Management Program capital projects.

<u>Recommendation 7</u>

That the management of the EMU document and implement a process to ensure the Steering Committee review and where required reprioritize/re-profile the EMP capital projects portfolio on a twice yearly basis.

> **<u>Management Response</u>**
>
> Management agrees with this recommendation.
>
> The Audit Team "observed that the current EMP capital projects portfolio of 29 capital projects is aligned to the stated goals and objectives of the Program and …that monitoring processes exist at the branch and departmental level but not at the Steering Committee level to track capital projects schedule, costs and scope."
>
> A semi-annual process will ensure that projects are appropriately prioritized on an ongoing basis by the Steering Committee as well as to ensure provincial program compliance.
>
> The Terms of Reference planned for Q1 of 2006 will include this requirement.

Management Response - Impact of 2006 Budget Reduction

Based on the Council direction emanating from the 2006 budget deliberations the request to expand the capital project 901037 (Emergency Management Plan) was not included in the approved 2006 budget. In response to this budget direction the existing $1.34 million in the works-in-progress was reallocated to maximize progress on critical projects while minimizing impact.

A review of all projects deliverables planned for 2006 was conducted and adjustments to the budget and associated staff resourcing have been recommended based on the following considerations:

- Ensuring legislative requirements are achieved in 2007.
- Considering the impact of reducing or omitting budgets for projects currently in progress.
- Initiating projects that would provide corporate benefit to a known area of improvement.
- Delaying the implementation of projects that will benefit from the completion of projects currently in progress or other dependencies

The EMP Steering Committee will be confirming those budget and resource adjustments in Q1 of 2006.   Proposed reductions will have the following impact on the audit recommendations:

- Audit Recommendation 3, respecting timely completion of the Municipal Evacuation Plan. The component of the evacuation plan that identifies protocols and decisions aids to effectively re-establish population to evacuated areas, will be delayed until 2007.
- Audit Recommendation 6, respecting the timely completion of the Emergency Operations Centre Design. The 2006 project will be limited to risk assessment of potential EOC locations with the detailed design delayed until 2007.

Conclusion

We trust that these findings and recommendations will enhance the management and control of the Emergency Management Program. Additionally, we wish to express our appreciation for the cooperation and assistance afforded the audit team by Management.

Résumé

Contexte

La Ville d'Ottawa mène activement la planification de la gestion des situations d'urgence depuis sa fusion en 2001. À l'époque, les Services de protection et d'urgence (SPU) de la Ville ont lancé une démarche de planification stratégique (Opération Delta) pour intégrer les services d'urgence de l'ensemble des anciennes municipalités. Cette démarche comprenait une étude des lacunes de la Ville en matière de gestion des situations d'urgence de la Ville.

En 2002, un nouveau projet d'immobilisations pour le Programme des interventions d'urgence, d'une valeur de 7,1 millions de dollars a été approuvé par le Conseil. Le financement était destiné à l'optimisation du potentiel de la Ville en matière de gestion des situations d'urgence par l'étude des initiatives des interventions d'urgence des services qui ne pouvaient pas être financés facilement par le budget d'une seule unité opérationnelle. On a mis en place un comité directeur et un groupe de travail multi-services pour créer un plan d'action de cinq ans dans le but de répertorier les projets importants et d'en établir la priorité pour améliorer de façon significative les capacités de la Ville à intervenir, à réduire les risques, à se préparer et à se rétablir en cas d'urgence.

Le groupe de travail a choisi des objectifs de gestion et d'exploitation mesurables pour établir la priorité des 31 projets d'immobilisations qui contribueraient à la réduction de l'écart entre le niveau d'intervention souhaité et les capacités réelles.

En 2002, l'assemblée législative provinciale de l'Ontario a modifié la *Loi sur la gestion des situations d'urgence* (anciennement la *Loi sur les mesures d'urgence*) en exigeant que toutes les municipalités de l'Ontario créent et mettent en œuvre un programme de gestion des situations d'urgence. La Ville d'Ottawa a créé, à l'aide d'une approche multi-services, un Programme de gestion des situations d'urgence (PGSU ou le Programme) complet, qui a été approuvé par le Conseil en décembre 2004. Celui-ci sert à augmenter les capacités de la Ville en ce qui a trait à la prévention, à la planification et à l'intervention lors de catastrophes et d'urgences de grande envergure, et pour assurer la prestation des services essentiels aux résidents. Un mécanisme de gestion à deux volets a été créé pour gérer le Programme de gestion des situations d'urgence.

1. **Le Comité directeur du Programme de gestion des situations d'urgence (le Comité directeur).** Le directeur municipal adjoint des Services communautaires et de protection préside ce comité qui comprend les membres de l'équipe de la haute direction de la Ville. Il est chargé de fournir une orientation et des directives stratégiques sur le programme.

2. **Le groupe de travail du Programme de gestion des situations d'urgence (le Groupe de travail).** Le gestionnaire de l'Unité des mesures d'urgence (UMU) préside ce groupe de travail. Ce dernier comprend des gestionnaires clés dans l'ensemble de la Ville, y compris des représentants d'organisations externes (par exemple, la Croix-Rouge, les

hôpitaux de la région, etc.). Le Groupe de travail se doit d'exécuter le Programme de gestion des situations d'urgence dans l'ensemble de la Ville d'Ottawa. Bien qu'on l'appelle UMU dans le présent rapport, on l'a renommé le « Bureau de gestion des situations d'urgence » le 1er septembre 2005.

En 2004, la liste des projets d'immobilisations du PGSU de la Ville a été revu. On a notamment présenté cinq nouveaux projets, et on en a supprimé trois et fusionné plusieurs pour créer une liste révisée de 29 projets d'immobilisations.

Après la proclamation de la *Loi sur la gestion des situations d'urgence,* Gestion des situations d'urgence Ontario, une unité du ministère de la Sécurité communautaire et des Services correctionnels, a créé un programme de gestion des situations d'urgence de la communauté qui donnait un aperçu des normes pour les programmes de gestion des situations d'urgence. Il existe trois niveaux de normes : essentielles, améliorées et détaillées. La *Loi sur la gestion des situations d'urgence* exige que toutes les municipalités de l'Ontario se conforment aux normes créées par Gestion des situations d'urgence Ontario. Les éléments des normes essentielles devaient être mis en œuvre en décembre 2004. Les éléments améliorés et détaillés doivent être terminés d'ici décembre 2006 et 2007 respectivement.

La Ville est approximativement à mi-chemin de son premier plan d'action de cinq ans pour son programme des interventions d'urgence. Cette vérification visait à fournir au Conseil, au Directeur des services municipaux et à l'équipe de la haute direction les renseignements pour évaluer le programme et intervenir si nécessaire.

Les objectifs de la vérification était de fournir au Conseil les évaluations indépendantes et objectives de :

1. La conformité de la Ville aux exigences de la *Loi sur la gestion des situations d'urgence* et des règlements connexes de la province d'Ontario;
2. La suffisance de la structure du contrôle de la gestion (par exemple, la gouvernance, la planification, l'évaluation, etc.) qui sert à gérer le Programme de gestion des situations d'urgence de la Ville;
3. L'harmonisation de chacun des 29 projets du Programme de gestion des situations d'urgence de la Ville avec les buts énoncés du Programme de gestion des situations d'urgence.

La portée de la vérification ne comprenait pas :

- Une évaluation de la conformité des plans de gestion des situations d'urgence de chaque service et direction;
- Une évaluation de l'économie et de l'efficacité de l'Unité des mesures d'urgence;
- Une révision détaillée de chacun des 29 projets d'immobilisations du PGSU.

La vérification comprenait une examen profond et une analyse de la documentation sur le programme et le projet, notamment les rapports d'exercice du Groupe de contrôle des opérations d'urgence; le plan d'action de cinq ans du Programme des interventions d'urgence et le plan

2004 mis à jour; le plan confidentiel de gestion des situations d'urgence; l'état d'avancement du projet d'immobilisations du PGSU; le rapport de 2003 de l'analyse de vulnérabilité; les réunions préparatoires du Conseil; et les documents de planification connexes du programme.

De plus, la vérification mèna à une série d'entrevues avec des représentants d'employés et des gestionnaires de plusieurs services et directions de la Ville.

Principales constatations et recommandations

Forces

Depuis la fusion, et bien avant certains événements tels que les attentats du 11 septembre 2001 aux États-Unis et les exigences de la GSUO pour un Programme de gestion des situations d'urgence, la Ville planifie proactivement des améliorations à ses capacités d'intervention en situation d'urgence. On a constaté, grâce à cette vérification, que la planification de la gestion des situations d'urgence de la Ville a évolué, étant passée de la création d'un plan de gestion des situations d'urgence fixe et ponctuel à un programme de gestion des situations d'urgence multi-services qui comprend des consultations avec des partenaires à l'externe, de la formation et un engagement du directeur des services municipaux et de l'équipe de la haute direction. L'équipe de vérification a constaté les forces suivantes de son programme.

- Le directeur des services municipaux et l'équipe de la haute direction sont très sensibilisés au programme et y sont très engagées. De façon précise, au moment de la vérification, le Groupe de contrôle des opérations d'urgence (GCOU) s'était réuni à six reprises, chaque fois pendant une demi-journée, depuis novembre 2004 pour effectuer des exercices de simulation de gestion de situations d'urgence. Cet effort d'une demi-journée par exercice démontre un engagement significatif de la part de l'administration de la Ville. Par cet engagement, l'administration donne l'exemple et démontre le niveau élevé de priorité et d'importance du programme.

- Un plan d'urgence détaillé a été créé et ajouté au règlement municipal de la Ville d'Ottawa en décembre 2004. Le plan d'urgence de la Ville d'Ottawa donne un aperçu général du système municipal de gestion des situations d'urgence, les fonctions d'urgence générales des différentes situations d'urgence et de sinistres ainsi que les fonctions d'urgence spécifiques. Selon les règlements provinciaux, les plans d'urgence municipaux devaient être envoyés au chef de Gestion des situations d'urgence Ontario avant le 31 décembre 2004. La Ville a terminé son plan avant cette date.

- Le groupe de travail (GT) entretient couramment des représentations parmi les différents services de la Ville et se réunit toutes les semaines pour gérer le programme. Les membres du GT démontrent un haut niveau d'engagement et de dévouement au GT et au programme en entier. Les réunions du GT se déroulent régulièrement selon un ordre du jour, et un procès-verbal est distribué à chaque réunion.

- Le programme est l'un des 12 projets stratégiques prioritaires des Services communautaires et de protection, et le Plan directeur municipal 2006-2009 s'engage à créer et à mettre en œuvre un programme de gestion des situations d'urgence qui améliore la capacité de la Ville de faire face aux crises et aux catastrophes majeures. Le programme est aussi un projet d'immobilisations de l'organisme.

Constatations

Voici un sommaire des constatations, des recommandations et des risques principaux pour cette vérification.

Objectif n° 1 – Conformité

L'équipe de vérification a constaté que la Ville est conforme aux exigences de la *Loi sur la gestion des situations d'urgence* et des règlements connexes. De façon précise, au 31 décembre 2004, la Ville se conformait aux articles pertinents de la *Loi sur la gestion des situations d'urgence* et à la norme Essentielle du Cadre des programmes de gestion des situations d'urgence de la communauté.

L'équipe de la vérification a répertorié un point à améliorer relatif au processus de la Ville pour assurer la conformité aux lois et aux règlements provinciaux.

Résultat – Assurance de la conformité

La province d'Ontario reconnaît que la Ville est conforme aux lois et aux règlements pertinents. Par contre, il n'existe pas de processus officiel pour veiller à ce que la conformité soit régulièrement vérifiée et, par conséquent, maintenue à long terme. De plus, notre révision du programme d'activités actuel indique qu'il faudra peut-être des processus supplémentaires pour respecter les normes améliorées et détaillées, tel que précisé par Gestion des situations d'urgence Ontario. La Ville court le risque de devenir non conforme aux normes améliorées et détaillées définies par Gestion des situations d'urgence Ontario en conservant son portefeuille actuel de projets d'immobilisations du Programme de gestion des situations d'urgence.

Risque

Il se peut que le Conseil et le Comité directeur ne reçoivent pas les renseignements sur la conformité à temps pour les aider lors des processus de prise de décisions.

Recommandation 1

Que la direction de l'UMU fasse correspondre les projets d'immobilisations du PGSU et les activités du Programme avec les normes définies par Gestion des situations d'urgence Ontario, et que la mise en correspondance subséquente soit :

a. **rapportée tous les ans au Conseil municipal;**
b. **mise à jour et rapportée tous les six mois au Comité directeur.**

Réponse de la direction

La direction accepte ces recommandations.

Même si l'équipe de vérification a déterminé que la Ville est conforme aux exigences de la *Loi sur la gestion des situations d'urgence* et des normes connexes tel qu'il a été annoncé au Conseil lors de la réunion du 15 décembre 2004, l'équipe de vérification recommande la création d'un processus pour appliquer les projets et les activités d'immobilisations du Programme de gestion des situations d'urgence aux normes améliorées (deuxième année) et détaillées (troisième année).

Étant donné que le PGSU de cinq (5) ans de la Ville, d'un coût de 7,1 millions de dollars, a été mis en place avant la promulgation de la *Loi sur la gestion des situations d' urgence*, les mesures de suivi originales du Programme ne satisfaisaient pas aux exigences de la *Loi*.

Bien que la province ne la requiert pas avant 2007, le Bureau de gestion des mesures d'urgence élabore actuellement un processus cyclique de planification annuelle comme suit :

- Réaliser un examen annuel du projet, y compris un processus de mise en correspondance législative du Programme à des fins d'approbation par le Comité directeur;

- Effectuer un exercice semestriel de reformulation des priorités afin d'assurer la conformité législative et de faire le point au Comité directeur à des fins d'approbation;

- Faire officiellement le point tous les deux mois sur les progrès du Programme à l'intention du Comité directeur afin d'assurer la responsabilisation financière, d'atténuer les risques associés aux projets et de faire en sorte que l'information soit communiquée de façon appropriée.

Ce processus sera présenté à la réunion du premier trimestre de 2006 du Comité directeur.

Objectif no 2– Cadre de contrôle de gestion

Nous avons constaté que le Programme dispose d'un cadre de contrôle de gestion adéquat. Plus particulièrement, des contrôles et des procédés officiels et officieux ont été constatés pour tous les critères de vérification à l'appui des secteurs de contrôle mentionnés ci-dessus.

Toutefois, bien qu'un cadre de contrôle de gestion adéquat existe, trois observations ont été faites pour atténuer les risques associés au Programme et pour renforcer les procédés existants. De façon précise, l'équipe de vérification a identifié les occasions d'amélioration dans les zones suivantes : la structure et les processus de gestion publique; le soutien des avantages; et la quantité suffisante de ressources affectées au Programme.

Résultats – Structure et processus de gestion publique

La gestion des Services communautaires et de protection et de l'UMU a créé et mis en œuvre davantage de processus et de contrôles pour gérer de façon efficace le Programme. Néanmoins, trois processus et contrôles supplémentaires sont nécessaires pour limiter les risques associés au modèle actuel du programme de gouvernance et, par conséquent, améliorer les chances que le Programme atteigne ses buts à long terme.

Risques

Il est possible qu'il y ait un écart entre le rapport sommaire des projets d'immobilisations de l'Unité des mesures d'urgence et les rapports d'étape de chaque projet d'immobilisations.

Il est possible que les équipes des projets n'aient pas les fonds nécessaires et les qualifications requises pour atteindre les objectifs du projet.

Recommandation 2

Il est recommandé que l'UNU établisse les contrôles clés suivants à des fins d'approbation par le Comité directeur :
>   a. **Un mandat détaillé pour le Comité directeur, comprenant une description du Programme, des rôles de supervision et des responsabilités du Comité directeur ainsi qu'une matrice d'approbation pour le Groupe de travail, le Comité directeur et l'UMU.**
>   b. **Un cadre officiel de planification pour le Programme, comprenant des processus stratégiques et annuels de planification.**
>   c. **Un cadre de mesure du rendement pour la présentation régulière de rapports au Comité directeur et au Conseil municipal, comprenant des mesures du rendement à l'égard de la conformité législative et réglementaire ainsi qu'aux objectifs du Programme.**

Réponse de la direction

La direction accepte ces recommandations.

L'équipe de vérification a constaté que le Programme dispose d'un cadre de contrôle de gestion adéquat. Plus particulièrement, des contrôles et des procédés officiels et officieux ont été constatés pour tous les critères de vérification à l'appui des secteurs de contrôle mentionnés ci-dessus. Toutefois, bien qu'un cadre de contrôle de gestion adéquat existe, trois observations ont été faites pour atténuer les risques associés au Programme et pour renforcer les procédés existants.

Comme il a été mentionné dans la recommandation 1, le mandat actuel du Programme des mesures d'urgence, qui se concentre principalement sur la structure des projets, a été élaboré en 2002, soit avant la promulgation de la *Loi sur la gestion des situations d'urgence*. Comme le cycle de planification de cinq ans de la Ville approche de son terme, il serait approprié d'examiner le mandat actuel et de le réorienter en fonction de la structure et des procédés de gouvernance continus nécessaires à l'appui du Programme des mesures d'urgence.

Le mandat déterminera les rôles, les responsabilités et les approbations. Il comprendra un processus de mise en correspondance et de planification annuel ainsi qu'un processus d'autoévaluation semestriel afin d'assurer la conformité à la législation. Le mandat fera état des objectifs du Programme, et il donnera lieu à l'établissement de mesures de rendement, qui feront en sorte que le Programme atteigne ses objectifs, ainsi qu'à un cycle de planification stratégique pour le Programme des mesures d'urgence.

Le Comité directeur devra approuver le mandat lors du premier trimestre de 2006.

Le cadre de contrôle de gestion actuel fait l'objet d'un renforcement au niveau du service et de la direction. Les secteurs de rapport, ainsi que la nature et la fréquence des rapports ont été documentés et seront activement examinés par chaque gestionnaire et par l'équipe de gestion de la Direction.

Résultats – Soutien des avantages

La Ville a approuvé 7,1 millions de dollars pour les projets d'immobilisations reliés au Programme. Par contre, on n'a pas encore trouvé les fonds d'exploitation connexes pour soutenir les avantages à long terme de ces projets.

Risques

Il se peut que le projet d'immobilisations 511-19 du Programme de gestion des situations d'urgence, le Plan d'évacuation municipal, soit repoussé et, par conséquent, la Ville demeurera sans plan détaillé pour l'évacuation efficace de la Ville en totalité ou en partie.

Le Comité directeur pourrait ne pas comprendre parfaitement les ressources humaines et les coûts d'exploitation associés aux 29 projets d'immobilisations du Programme de gestion des situations d'urgence et, par conséquent, la Ville ne lui allouera pas les ressources suffisantes pour les années à venir pour soutenir les avantages de ces insvestissements à long terme.

Recommandation 3

Que le Comité directeur accorde la priorité à l'achèvement, dans les limites de temps prescrites, du projet d'immobilisation 511-19, Plan d'évacuation municipal, et qu'il

contrôle régulièrement les progrès du projet et la pertinence des ressources affectées au projet.

Réponse de la direction

La direction accepte cette recommandation.

La direction de la Ville comprend l'importance du Plan d'évacuation et a affecté, en octobre 2005, des ressources pour appuyer cette initiative. Le Plan est centré sur la planification de tous les éléments d'une évacuation, qui requiert une coordination de plusieurs services. La première étape, qui a été achevée en décembre 2005, consistait à décrire les mécanismes de coordination et les principales procédures pour tous les éléments du Plan, et à exposer en détail les responsabilités internes de la Ville d'Ottawa. La prochaine étape, qui devrait être achevée en juin 2006, traitera de tous les principaux outils de travail, mécanismes de coordination et responsabilités faisant participer des partenaires externes.

Recommandation 4

Que l'UMU entreprenne un processus visant à déterminer et à documenter les coûts prévus liés aux opérations et aux ressources humaines pour tous les projets d'immobilisation du PMU (en instance, de délimitation, actifs et achevés) et que ces coûts soient discutés et approuvés par le Comité directeur.

Réponse de la direction

La direction accepte cette recommandation.

En août 2005, le Comité directeur du PMU a établi et approuvé officiellement un processus révisé d'approbation des projets. Ce processus comprend la détermination des ressources humaines et l'aménagement de leur temps ainsi que l'incidence opérationnelle possible du projet. Tout au long du développement d'un projet, les membres du Comité directeur seront mis au courant des progrès du projet et de son intégration opérationnelle. Le personnel a récemment réalisé un examen historique des ressources humaines affectées aux projets de même que de celles projetées pour l'achèvement des projets en 2006 et en 2007. Les résultats de cette analyse ont été utilisés pour l'examen annuel des projets de 2006 et seront de nouveau utilisés, par la suite, pour ceux de 2007.

Résultats – Ressources suffisantes

Par la création de l'Unité des mesures d'urgence, le financement du portefeuille des projets d'immobilisations du Programme de gestion des situations d'urgence et les activités continues du groupe de travail, la Ville a réservé des ressources humaines et budgétaires pluriannuelles suffisantes pour la planification efficace de la gestion des situations d'urgence. Tandis qu'un bon nombre de ressources ont été consacrées à la planification d'urgence par la Ville, le Groupe de

travail éprouve des difficultés avec la suffisance des ressources affectées et le Centre des opérations d'urgence.

Risques

En tant que programme multi-services, le Programme dépend des autres services et directions pour fournir les ressources en personnel lui permettant de bien répondre à son mandat. Le Programme risque actuellement de ne pas avoir les ressources suffisantes à temps plein pour bien atteindre les objectifs du Programme, tel qu'indiqué dans le plan d'action du Programme des interventions d'urgence d'une durée de cinq ans.

Le lieu et le concept actuels du Centre des opérations d'urgence ajoutent des obstacles à la capacité de la Ville de gérer les urgences efficacement.

Recommandation 5

Que le PMU élabore et documente un processus visant la sélection et l'approbation des nouveaux membres du Groupe de travail, et qu'il fasse en sorte que le processus consigne les besoins prévus liés à la charge de travail des membres du Groupe de travail, décrive clairement les rôles et les responsabilités, et ait obtenu l'approbation officielle de la haute direction du service d'où proviennent les ressources.

Réponse de la direction

La direction accepte les intentions de cette recommandation.

Pour faire suite à la recommandation 2, le nouveau mandat comprendra un processus qui documentera les exigences liées à l'effectif du Groupe de travail et les compétences de base ainsi qu'un processus visant à obtenir l'approbation officielle au niveau du Comité directeur. Cette approbation officielle fera en sorte que les charges de travail soient équilibrées au sein du Groupe de travail.

Le 22 novembre 2005, une analyse détaillée de l'incidence sur les ressources humaines a été remise au Comité directeur. Par la suite, un plan de mise en œuvre pour 2006 et 2007 sera présenté au Comité directeur lors du premier trimestre en février 2006. Le plan déterminera la mise en œuvre de divers projets ainsi que les ressources financières et humaines requises pour achever avec succès chacun des projets dans les limites de temps prescrites. Chaque projet futur devra également suivre un processus de démarrage approuvé par le Comité directeur en août 2005. Le plan de mise en œuvre 2006-2007, le processus de démarrage des projets et les rapports d'étape bimensuels à l'intention du Comité directeur assureront la prestation d'un soutien efficace aux avantages.

Recommandation 6

Que le Comité directeur accorde la priorité à l'achèvement, dans les limites de temps prescrites, du projet d'immobilisation 511-07, Conception du Centre des opérations d'urgence.

Réponse de la direction

La conception et l'emplacement actuels du Centre des opérations d'urgence (COU) constituent un problème. L'aménagement n'est pas approprié au nombre et aux types d'activités requis par une municipalité à palier unique de la taille d'Ottawa. En outre, le Centre est situé au centre-ville et est donc plus vulnérable, il ne dispose d'aucun matériel audiovisuel permanent ou ordinateur, et d'aucune forme efficace de contrôle des accès.

Par conséquent, la conception d'un nouveau Centre des opérations d'urgence est à l'étude. Un examen des meilleures pratiques a été réalisé, et un document conceptuel a été élaboré pour le COU afin de faciliter le processus de prise de décisions et l'étape de la conception. À ce jour, l'équipe du projet a également élaboré des procédures opérationnelles détaillées pour le COU actuel, qui traitent des avis visant la mobilisation du personnel et de la gestion efficace du COU. La Ville d'Ottawa recherche actuellement des possibilités de partenariat avec le ministère de la Sécurité publique et de la Protection civile du gouvernement fédéral en vue de partager des centres d'opérations d'urgence. La Ville évalue également des modifications temporaires au COU existant afin d'améliorer l'efficacité des bureaux et du personnel.

Objectif no 3 – Projets

L'équipe de vérification a constaté que le portefeuille des projets d'immobilisations du Programme de gestion des situations d'urgence des 29 projets d'immobilisations est aligné sur les objectifs du Programme et que le portefeuille du projet d'immobilisations comprend tous les projets d'immobilisations liés au PIU en cours à la Ville. De plus, il a été établi qu'il existe des processus de suivi à la direction dans les services, mais pas au Comité directeur pour effectuer le suivi de l'horaire, des coûts et de l'étendue du projet d'immobilisations.

L'équipe de vérification a déterminé les possibilités suivantes pour renforcer les processus de gestion de projet pour le Programme et améliorer les probabilités que les 29 projets d'immobilisations du Programme de gestion des situations d'urgence soient terminés avant la date d'échéance de décembre 2007.

Résultat

Il n'existe aucun processus officiel pour permettre la révision normale du Programme et l'établissement de nouvelles priorités du portefeuille des projets d'immobilisation PGSU.

Risque

Il se peut que la Ville n'ait pas terminé son projet d'immobilisations du Programme de gestion des situations d'urgence tel que prévu. Sans la mise en œuvre de processus de gestion de projet supplémentaires au Comité directeur, les risques que cela arrive augmenteront au cours des deux prochaines années, car la Ville arrive à la fin de son plan d'action de cinq ans pour le Programme des interventions d'urgence et tente de conclure les projets d'immobilisations du Programme de gestion des situations d'urgence qu'il reste.

Recommandation 7

Que la direction de l'UMU documente et mette en œuvre un processus qui fera en sorte que le Comité directeur examine et, lorsque nécessaire, établisse de nouveau, tous les deux ans, les priorités et le profil du portefeuille de projets du PMU.

Réponse de la direction

La direction accepte cette recommandation.

L'équipe de vérification « a constaté que le portefeuille de 29 projets d'immobilisation du PMU est conforme aux objectifs établis pour le Programme et ... que des procédés de contrôle visant le suivi du calendrier, des coûts et de la portée des projets d'immobilisation existent au niveau de la direction et du service, mais non à celui du Comité directeur ».

Un processus semestriel fera en sorte que les priorités des projets soient établies de façon appropriée et continue par le Comité directeur et que le Programme soit conforme aux exigences provinciales.

Le mandat prévu pour le premier trimestre de 2006 tiendra compte de cette exigence.

Réponse de la direction – Effet de la réduction du budget en 2006

Selon les directives du Conseil provenant des délibérations budgétaires de 2006, la demande d'expansion du projet d'immobilisations 901037 (plan de gestion des situations d'urgence) ne faisait pas partie du budget 2006 approuvé. Par conséquent, la somme de 1,34 million de dollars consacrée aux travaux en cours a été réattribuée pour maximiser les progrès de projets critiques tout en limitant les conséquences.

Nous avons procédé à une révision des réalisations attendues des projets planifiés pour 2006 et nous avons suggéré des modifications au budget et au renouvellement du personnel associé selon les considérations suivantes :
- Veiller à ce que les prescriptions législatives soient terminées en 2007.
- Prendre en considération les répercussions de la réduction ou de l'omission des budgets pour les projets actuellement en cours.

- Amorcer des projets qui fourniraient des avantages globaux aux secteurs améliorés connus.
- Retarder la mise en œuvre de projets qui seront avantagés par l'achèvement des projets actuellement en cours ou d'autres projets qui en dépendent.

Le Comité directeur du PGSU confirmera ces budgets et ces modifications des ressources lors du premier trimestre en 2006. Les réductions proposées auront les répercussions suivantes sur les recommandations de vérification :

- Recommandation de vérification 3. Le respect de l'achèvement prévu du plan d'évacuation municipal. La composante du plan d'évacuation qui détermine les protocoles et les mécanismes d'aide à la décision pour réhabiliter efficacement la population par les endroits évacués sera repoussée jusqu'en 2007.
- Recommandation de vérification 6. Respecter l'achèvement de la conception du centre des opérations d'urgence. Le projet 2006 sera limité à l'évaluation des risques des endroits d'établissement possible des COU et la conception détaillée repoussée jusqu'en 2007.

Conclusion

Nous sommes convaincus que ces constatations et ces recommandations amélioreront la gestion et le contrôle du Programme de gestion des situations d'urgence. De plus, nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1.   Background

1.1   Provincial Emergency Management Requirements

In 2002, the Provincial Legislature amended the *Emergency Management Act* (formerly the *Emergency Plans Act*) with the requirement for all municipalities in Ontario to develop and implement an emergency management program that includes:

- an emergency plan;
- training programs and exercises for employees of the municipality and other persons with respect to provision of necessary services and the procedures to be followed in emergency response and recovery activities;
- public education on risks to public safety and on public preparedness for emergencies; and,
- any other standards for the development of emergency management programs established by regulation by the Solicitor General.

The *Act* also requires emergency management programs to conform to the standards set out by Emergency Management Ontario in accordance with international best practices and the four core components of emergency management: mitigation/prevention, preparedness, response and recovery. Emergency Management Ontario, a unit of the Ministry of Community Safety and Correctional Services, is responsible for the development and implementation of emergency management programs throughout Ontario.

Emergency Management Ontario has prepared a Community Emergency Management Program framework which outlines mandatory standards for municipal Emergency Management Programs. These standards are divided into three levels: essential, enhanced and comprehensive. Legislation required that all components of the essential standard be in place by December 2004. The enhanced and comprehensive elements must be completed by December 2006 and 2007 respectively.

1.2   Emergency Measures Unit

The City of Ottawa's Emergency Measures Unit (EMU) of the Community and Protective Services Department ensures the safety of residents in case of a major emergency. The EMU is responsible for executing the Emergency Management Program across the City of Ottawa. These responsibilities include:

- Emergency preparedness, 9-1-1 administration and the corporate radio communication system;
- Planning for the efficient use of the City's services, agencies and personnel during an emergency;
- Housing the City's Emergency Operation Centre and activating the Emergency Operations Centre Control Group when needed;

- Coordinating the internal business continuity planning initiative for the City;
- Maintaining and revising the City's Emergency Plan;
- Coordination of 29 Emergency management program related capital projects; and,
- Coordination of the Emergency Management Program Working Group.

The EMU consists of five full-time staff and has annual total operating budget of approximately $1,645,400. The following is the current organization chart for the EMU.

Figure 1 – EMU Organization Chart
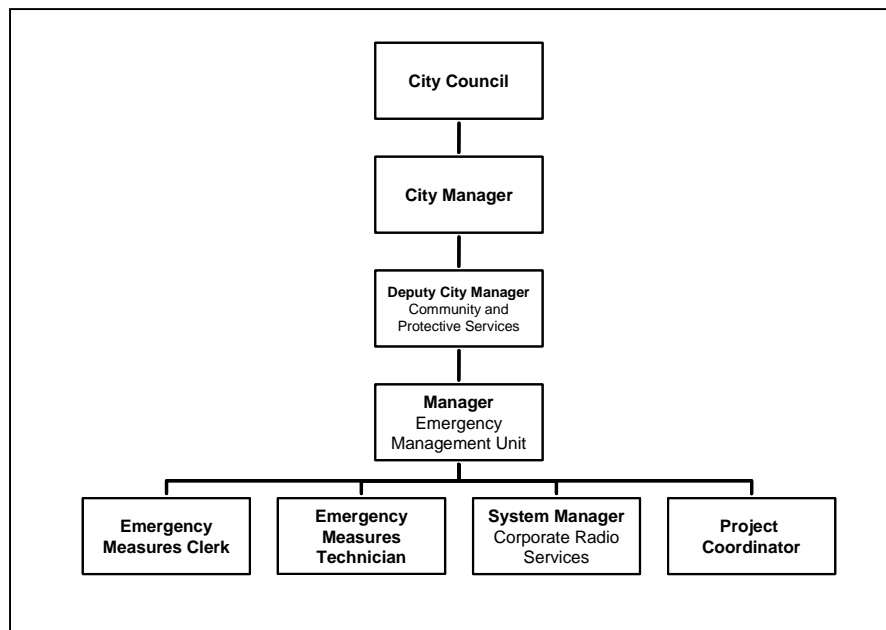
Although referred to as the EMU in this report, please note that as of September 1, 2005 the EMU has been renamed the "Office of Emergency Management".

1.3   Emergency Management Program

Led by the Manager of the EMU and using a multi-departmental approach, the City of Ottawa has developed a comprehensive Emergency Management Program. The program is designed to enhance the City's ability to prevent, plan for, and respond to large-scale disasters and emergencies and to ensure the continued delivery of core services to City residents. A two-tiered governance structure has been developed to manage the Emergency Management Program, as follows:

1. **Emergency Management Program Steering Committee.** This Committee is chaired by the Deputy City Manager of Community and Protective Services and is comprised of the City Manager and Executive Management Team. It is responsible for providing overall direction to the Program.

2. **Emergency Management Program Working Group.** This Working Group is chaired by the Manager of the EMU, is comprised of key managers from across the city and also includes representatives from external organizations (e.g., local hospitals, Emergency management Ontario, etc.).

Currently, the following resources are committed to emergency management planning at the City.

- **Capital Budget Resources:** In 2002, a new Five Year Emergency Response Program was approved by Council. The program consisted of 31 capital projects worth a total of $7.1 million. This total does not include the salary costs associated with the personnel who manage the individual projects.

- **Human Resources:** At a minimum, the City dedicates 14 Full Time Equivalents (FTE's) to emergency management planning.

  – Five FTEs that work full time in the EMU. The salary costs associated with these FTE's are included in the EMU's annual operating budget.

  – Nine additional FTEs from the Working Group that were initially intended to work full time on Program related activities. The salary costs associated with these FTEs are included in the annual operating budgets of the departments in which the FTEs reside. This process was agreed to by all stakeholders at the inception of the Program.

- **EMU Resources:** The EMU manages the Program as a whole and has an annual operating budget of approximately $1,645,000. This budget includes:

  – approximately $1,370,000 for the 9-1-1 administration and the corporate radio communication system used by the Police, Public Works, the Ottawa International Airport, Fire, and Paramedic services.); and,

  – approximately $275,000 for the salaries of the five EMU staff and various other operating costs.

1.4 Emergency Management Five Year Action Plan

The City of Ottawa has been actively conducting emergency management planning since amalgamation in 2001. At that time, the Emergency and Protective Services Department (EPS) of the City undertook a strategic planning exercise (Operation Delta) to integrate emergency services across the former municipalities. This included an examination of the gaps in the City's emergency management capabilities.

In 2002, a new Five Year Emergency Response Program capital project worth $7.1 million was approved by Council. (See Appendix A for the complete program spending plan). The funding

was aimed at optimizing the City's emergency response capabilities by addressing multi-departmental emergency response initiatives that could not easily be funded within a single unit's operating budget. A multi-departmental Steering Committee and Working Group were established to develop a five-year action plan to identify and prioritize key projects to significantly improve the City's capability to mitigate, prepare for, respond to and recover from emergencies.

As part of the process to develop the five-year action plan, the Working Group conducted a simplified vulnerability analysis to identify the critical threats to which the City is vulnerable. The vulnerability analysis considered the probability, consequences and the City's response capabilities for a list of potential hazards and threats. Due to timeframe and budget constraints, the Working Group selected 18 of the most challenging threats to the City from a list of 77 identified hazards. The threats were classified, according to the perceived vulnerability of the City, into three categories: high, medium and low. The Working Group then developed five scenarios that encompassed most of the possible consequences of the hazards in the high vulnerability category. These scenarios were used to develop the multi-departmental measurable management and operational objectives included in the five-year action plan.

The Working Group used the measurable management and operational objectives to identify and prioritize 31 projects that would contribute to the reduction of the gap between the current desired level of response and the actual capabilities. In 2004, five new projects were introduced, three projects removed, and several projects merged to produce a list of 29 projects, presented in the table below.

Table 1 – Approved EMP Capital Project Portfolio as of August 22, 2005	
Project #	Project Name
511-01	Chemical, Biological, Radiological, and Nuclear equipment acquisition
511-02	Comprehensive vulnerability analysis
511-03	Comprehensive emergency management plan
511-04	Public education / awareness program
511-05	Common terminology
511-06	Emergency personnel identification system
511-07	Emergency Operations Centre design
511-08	Personal protection standards
511-09	Portable Emergency Site
511-10	Vulnerable buildings/structures identification
511-11	Alert Notification System
511-12	Public notification system
511-13	Post Traumatic Stress Prevention and Response program
511-14	Multi-agency Chemical, Biological, Radiological, and Nuclear response plan
511-15	Multi agency training and exercise program
511-16	Municipal/partners joint response protocol
511-17	Municipal/hospital joint response protocol

Table 1 – Approved EMP Capital Project Portfolio as of August 22, 2005	
Project #	**Project Name**
511-18	Emergency Information System
511-19	Municipal evacuation plan
511-20	Mobile Emergency Site Management command post
511-21	Corporate Mitigation Program
511-22	Mobile emergency triage & treatment unit
511-23	Municipal business continuity plan
511-24	Emergency environmental response plan
511-25	Research and development program
511-26	Wilderness search and rescue
511-27	Urban search and rescue
511-28	Temporary accommodations for responders
511-29	"Next of Kin" procedures

The Emergency Management Program requires that a comprehensive vulnerability assessment be conducted every 3 years. The next assessment for the City is scheduled for 2006, at which time it is anticipated that the project prioritization and spending plan will be updated based on a revised vulnerability assessment.

2. Audit Objectives, Scope and Approach

2.1 Audit Objectives

To provide an independent and objective assessment of:

1. The City's compliance to the requirements of the Province of Ontario's *Emergency Management Act* and related regulations;
2. The adequacy of the management controls framework (e.g., governance, planning, reporting, etc.) used to manage the City's Emergency Management Program; and,
3. The alignment of each of the City's 29 EMP projects to the stated goals and objectives of the Emergency Management Program.

2.2   Audit Scope

The scope of the audit did not include:

- An assessment of the adequacy of the Emergency Management Plans of individual Departments and Branches;
- An assessment of the economy and efficiency of the Emergency Measures Unit; or,
- A detailed review of each of the 29 EMP capital projects.

2.3   Audit Approach

The audit included an extensive review and analysis of Program and project related documentation, including: Emergency Operations Control Group Exercise Reports; The Five Year Emergency Response Program Action Plan and the updated 2004 plan; the confidential Emergency Management Plan; EMP capital project status reports; the 2003 Vulnerability Analysis Report; Council briefings; and, assorted Program related planning documents.

In addition, the audit conducted an array of interviews with representatives of staff and management from numerous City departments and branches.

3. Strengths

Since amalgamation and well before events such as the 9/11 attacks in the United States and the provincial requirements for an Emergency Management Program, the City has been proactively planning for enhancements to its emergency response capabilities. Through this audit, it was observed that emergency management planning at the City has matured from the development of a static, point-in-time emergency management plan to an active multi-departmental emergency management program that includes consultations with external stakeholders, regular training, and demonstrated commitment from the City Manager and the Executive Management Team.

We observed the following key strengths of the Program.

3.1 Emergency Operations Control Group Exercises

There is a high level of awareness and commitment to the Program by the City Manager and the Executive Management Team. Specifically, the Emergency Operations Control Group has met six times, each for half a day, since November 2004 to conduct emergency management simulation exercises. This dedication of a half day per exercise represents a significant commitment of time for the Executive of the City. By making this commitment, the Executive is leading by example and demonstrating the high priority and importance that it places on Program.

It is significant to note that the Audit Team reviewed the reports generated after each exercise and made the following observations:

- Attendance for required departmental and branch representatives was close to 100% for the exercises conducted over the past 10 months.

- A detailed analysis is conducted after each exercise to determine best practices and areas for improvement. While a formal log of recommendations and follow-up actions does not exist, it would appear from consecutive exercise reports that remedial action has been taken between exercises to address the identified areas for improvement.

3.2 Emergency Plan and By-law

A detailed Emergency Plan has been developed and was incorporated into a City of Ottawa by-law in December 2004. The City of Ottawa Emergency Plan outlines the overall municipal emergency management system, the general emergency functions common to all types of emergencies and disasters as well as specific emergency functions. By Provincial Regulation, municipal Emergency Plans were due to be submitted to the Chief, Emergency Management Ontario by December 31, 2004. The City completed its plan prior to this deadline.

In June 2005, the EMU received a Letter of Achievement from Emergency Management Ontario in recognition of the City being a leader in emergency preparedness and for surpassing the 2004 legislative requirements identified by Emergency Management Ontario. During 2004 the City adopted a comprehensive City Emergency Plan, began a training program for senior City staff and emergency services personnel, and initiated *Are You Ready?*, an awareness and education campaign aimed at preparing residents and businesses for emergency situations. The City was also recognized for proactively implementing its own Emergency Management Program prior to the requirement of the *Emergency Management Act*.

3.3   EMP Working Group

The Working Group maintains active representation from across all City departments and meets weekly to manage the Program. The Working Group members show a high level of commitment and dedication to the Working Group and the Program as a whole. The Working Group meetings are held on a regular basis with formal agendas and minutes distributed for each meeting. The Working Group includes representatives from the following departments and branches: Emergency Management Unit; Public Health; Public Works and Services; Corporate Services; Paramedic Services; Fire Services Branch; Planning and Growth Management; and, Corporate Communications. External representatives from the Ottawa Police Service, Hospital Disaster Planning Committee of Ottawa, and Emergency Management Ontario also regularly attend the Working Group meetings.

Additionally, many members of the Working Group have specifically sought and gained training in different emergency management disciplines. Specifically, many members of the Working Group have completed Emergency Management Ontario's Basic Emergency Management training course.

3.4   EMP is a Corporate Priority Project

The EMP is one of Community and Protective Services' 12 Strategic Priority Projects, and the 2006-2009 City Corporate Plan commits to developing and implementing an Emergency Management Program that improves the City's ability to cope with a major crisis or disaster. The EMP is a corporate priority project and is actively supported by the City Manager and the Executive Management Team.

4.   Findings and Recommendations

4.1   Introduction

The Audit Team observed that the City has conducted and continues to conduct detailed planning activities for the Program. Specifically, we observed that the key foundation elements for effective emergency management are in place in the City, including:

- The completion of a vulnerability assessment to identify the hazards and consequences the City is exposed to and assess its response capabilities;
- The completion of a comprehensive Emergency Management Plan to outline the overall municipal emergency management systems, general common emergency functions as well as specific emergency functions;
- The adoption, by Council, of a By-law to formalize the Program and the Emergency Management Plan;
- The approval and ongoing execution of 29 capital projects designed to mitigate identified hazards and consequences; and,
- Committed EMU and Working Group resources to implement the Program and complete the 29 capital projects.

The findings and recommendations identified in this section represent areas for improvement for the management of the Program. A sub-section has been provided for each of the audit objectives. Each sub-section is structured as follows.

- **Audit Criteria:** This sub-section outlines the criteria that was used to assess the Program for the given audit objectives.

- **Audit Objective - Overall Conclusion:** This sub-section states the Audit Team's conclusion against the given audit objective. Audit conclusions are brief, high level statements that answer the question posed by the audit objective.

- **Findings:** For each audit objective, the audit team identified up to three areas for improvement. The first part of this sub-section is a brief sentence or two that describes problem or challenge observed by the Audit Team. The reminder of this sub-section includes supporting facts and information to provide the reader with contextual information regarding the issue.

- **Risk/Impact:** This sub-section provides the risk and/or impacts of the issue identified. This section helps the reader to understand the relative importance of the issue identified and recommendation(s) brought forward by the Audit Team.

- **Recommendation(s):** This sub-section provides high level recommendation(s) to remedy the issue identified. Recommendations are high level by design as it is the role of the Audit Team to identify and quantify/qualify issues and areas for improvement and it is management's role to develop appropriate remedies and interventions.

- **Management Response(s):** This sub-section includes management's responses to the issues identified.

4.2 Audit Objective 1: Compliance to the *Emergency Management Act* and Related Regulations

4.2.1 Audit Criteria

The criteria used to assess the City's compliance to the requirements of the *Emergency Management Act* and associated regulations, were as follows:

- The plan has all required elements as defined in s.2.1(1) & (2) and s.9 of the Act;
- The City has conducted a hazard and risk assessment and infrastructure identification process, pursuant to s.3;
- Training programs and exercises have been conducted, pursuant to s.5.
- The plan is reviewed and, if necessary, revised annually; and,
- The original plan was submitted to Council and the Chief, Emergency Management Ontario and that the most current plan has been submitted.

4.2.2 Audit Objective 1: Overall Conclusion

The Audit Team observed that the City is compliant with the requirements of the *Emergency Management Act* and associated regulations as outlined above (i.e. the audit criteria). Specifically, at December 31, 2004 the City was compliant with the relevant sections of the *Emergency Management Act* (included in Appendix B) and with the Essential standard of the Community Emergency Management Program Framework.

We identified one area for improvement with regard to improving the City's process for ensuring compliance to provincial legislation and regulations.

4.2.3 Compliance Assurance

Findings

The City has been recognized by the Province of Ontario as compliant to relevant legislation and regulations; however, a formalized process does not exist to ensure compliance is regularly monitored and consequently sustained over the long term. Additionally, our review of current Program activities indicates that additional processes may be required to be compliant with the Enhanced and Comprehensive standards, as defined by Emergency Management Ontario.

As previously outlined in this report, the requirements for municipal emergency management planning is governed by both legislation and regulation in the Province of Ontario. The following table describes the governing legislation and regulation.

Table 3 – EMP Governing Legislation and Regulations		
Name	**Authority**	**Description**
Emergency Management Act, 2002	Provincial Statute	• Prescribes emergency management planning requirements for municipalities, crown corporations and the provincial government.
Community Emergency Management Program Framework	Emergency Measures Ontario (a unit of the Ministry of Community Safety and Correctional Services)	• Is given authority by s.14.(3) of the *Emergency Management Act.* • Prescribes an increasingly sophisticated level of emergency management requirements for municipalities. Three levels (standards) of emergency management planning are defined: Essential, Enhanced; and, Comprehensive. • Municipalities are required to meet the requirements of these levels (standards) as follows: Essential by December 2004; Enhanced by December 2006; and, Comprehensive by December 2007.*

*At the time of the development of this report, indications existed that these deadlines may be adjusted by the Province to provide municipalities more time to meet the Enhanced standards. Notwithstanding these indications, changes have not yet been officially made to the Community Emergency Management Program Framework.

Through Council's adoption of the Emergency Management Program on December 15, 2004, the City achieved compliance with the *Emergency Management Act, 2002* and the Essential standards outlined in the Community Emergency Management Program Framework

We observed, however, that the Program does not currently maintain a documented and communicated process to ensure that the City will meet its compliance requirements for the Enhanced and Comprehensive standards of the Community Emergency Management Program Framework. Specifically, the City has not undertaken a process to map the EMP capital projects and activities to Enhanced and Comprehensive standards.

While the City is making progress towards numerous elements of Emergency Management Ontario's Enhanced and Comprehensive standards, our review of the EMP Capital projects and Program activities indicates that compliance gaps may exist in the following areas.

Table 4 – Potential Emergency Management Ontario Future Years Compliance Gaps	
Emergency Management Ontario Enhanced Standard	**Potential Gap**
Development and implementation of an annual self-assessment process to determine the quality and effectiveness of the Emergency Management Program.	Currently, an annual self-assessment process for the Program as a whole does not exist. EMP capital project 511-25 may partially but not fully address this requirement by researching best practices to ensure future projects in emergency management are developed and implemented according to best practices. Currently, documented plans do not exist to introduce an annual self-assessment process. This project is currently pending and has not yet been initiated.
Emergency Management Ontario Comprehensive Standard	**Potential Gap**
Development and implementation of an external assessment process to determine the quality and effectiveness of the Emergency Management Program.	Currently, a regular external assessment process for the Program does not exist.

The requirement for a mapping of Program activities and EMP capital projects to Emergency Management Ontario standards is further required due to the current financial pressures facing the City. As per the 2006 Budget Directions Report of June 27, 2005, the City is facing an unfunded operating budget shortfall of between $35M and $51M for 2006. For Council to make effective decisions regarding Program funding requirements, it is anticipated that, at a minimum, Council would require information regarding the cost of ensuring the City's compliance to legislative and regulatory requirements. Consequently, a mapping of EMP projects and activities to Emergency Management Ontario requirements would:

- Ensure the optimal use of capital resources by linking the current EMP capital project portfolio to current legislative and regulatory requirements; and,

- Provide Council and senior management with an enhanced level of assurance that all regulatory requirements will be met by the prescribed due dates.

Risk/Impact

There are two primary risks associated with this issue.

- There is a risk that by maintaining its current portfolio of EMP capital projects the City will possibly be non-compliant to the Enhanced and Comprehensive standards defined by Emergency Management Ontario.

- There is a risk that Council and the Steering Committee will not receive timely compliance information to assist them in their decision-making processes.

Recommendation 1

That the management of the EMU develop a mapping of EMP capital projects and Program activities to the standards defined by Emergency Management Ontario and that the subsequent mapping be:
  a. annually reported to Council; and,
  b. updated and reported to the Steering Committee on a twice yearly basis.

Management Response

Management agrees with these recommendations.

Although the Audit Team determined that "the City is compliant with the requirements of the Emergency Management Act and associated regulations" as reported to Council at its meeting of December 15, 2004, the Audit Team recommended development of a process to map Emergency Management Program (EMP) capital projects and activities to the enhanced (year 2) and comprehensive (year 3) standards.

Because the City's Five (5) Year, $7.1 Million EMP actually pre-dates the Emergency Management Act, tracking tailored to its requirements was not built into the original design.

Although the Province does not require it until 2007, the Office of Emergency Management is developing an annual planning cycle process as follows:
- Annual project review including a legislative program mapping process for approval by the Steering Committee
- Semi-annual reprioritization exercise to ensure legislative compliance will be achieved with an update provided to the Steering Committee for approval
- Bi-monthly formal program status updates to the Steering Committee to ensure financial accountability, mitigate risks associated with projects and ensure that information is shared appropriately.

This process will be tabled at the Steering Committee meeting in Q1 2006.

4.3   Audit Objective 2: Adequacy of Management Control Framework for EMP

4.3.1   Audit Criteria

The Audit Team used the Canadian Institute of Chartered Accountants' Criteria for Control (CoCo) management control framework as the basis for the assessment of the adequacy of the Program's management control framework.   CoCo is a collection of management best practices/controls that, if implemented, provide management with a level of assurance that an organization's stated goals and objectives will be met. The following is a list of the control areas that were assessed as part of this audit objective (see Appendix C for detailed audit criteria).

- Risk management;
- Policies and procedures;
- Planning;
- Measurable performance targets and indicators;
- Governance: Authority, Responsibility and Accountability;
- Knowledge, Skills and Tools;
- Sufficient and Relevant Information; and,
- The decisions and actions of different parts of the organization should be coordinated.

4.3.2   Audit Objective 2: Overall Conclusion

The Audit Team observed that the Program has an adequate management control framework. Specifically, formal and informal controls and processes were observed for all of the audit criteria supporting the control areas identified above.

While it was observed that an adequate management control framework exists, three observations were made to reduce the risks facing the Program and to strengthen existing processes.   Specifically, we identified improvement opportunities in the following areas: governance structure and processes; benefit sustainment; and, the sufficiency of resources assigned to the Program.

4.3.3   Governance Structures and Processes

Community and Protective Services and EMU management has increasingly developed and implemented processes and controls to effectively manage the Program. Nevertheless, three key additional processes and controls are required to mitigate the risks associated with the current Program governance model and consequently enhance the probability that the Program will achieve its long-term goals and objectives.

The EMP is a city-wide program that is actively managed by a unit within Community and Protective Services, the EMU.   Overall stakeholder coordination and strategic guidance is provided by the Steering Committee and day-to-day program coordination is managed through the Working Group. Accountability for program results rests with the Deputy City Manager of

Community and Protective Services and by delegation with the Manager of the EMU. Responsibility for the management and delivery of individual EMP capital projects rests with the individual Working Group members from different City departments and branches.

The use of this type of a governance structure is typical for the delivery of enterprise-wide programs in large organizations with hierarchical organizational structures; however, programs that are managed by this type of governance model are also inherently at higher risk of experiencing challenges related to the division of authority, accountability and responsibility across multiple business units and involving various managers.

Currently, the EMU is accountable for the successful completion of the EMP capital project portfolio but does not maintain authority over the management or reporting of the individual capital projects. The following impacts were observed as a consequence of the division of Program authority, accountability and responsibility.

- **Project Start-up:** One of the critical factors in the success of any project is the early involvement of project personnel with the appropriate skills and knowledge. The Program process for developing project teams is based upon soliciting volunteers from the Working Group and requesting subject matter experts from outside the Working Group (e.g., Corporate Communications, Information Technology Services, etc). In the past, the lack of authority to direct participation in specific project teams has contributed to project difficulties. For example, EMP Project 511-08, Personal Protection Standards, is developing a CD for first responders and city stakeholders to promote personal protective equipment awareness. This CD was close to completion before it was observed that it did not meet City corporate communication standards. Due to a Working Group member from Corporate Communications not being involved in the early stages of this project, and in part to the City reorganization during this time, the CD required rework to be compliant with City communication standards and new departmental and branch names and contacts.

- **Project Reporting:** All EMP capital projects are required to follow the Community and Protective Services project reporting standards that require the submission of twice monthly status reports to Community and Protective Services management; however, the majority of Working Group members and consequently EMP capital project leads are not staff of Community and Protective Services and consequently are not bound by the its reporting requirements. While evidence suggests that Working Group members principally adhere to the Community and Protective Services reporting standards, the accuracy of some of the status reporting is questionable. Specifically, a comparison of the information contained in the individual capital project status reports for May 27, 2005 against the capital project summary spreadsheet presented to the Steering Committee on August 9, 2005 revealed EMP capital project 511-10, Vulnerable Buildings/Structures Identification, reported greater accumulated expenditures in the May 27, 2005 capital project status report than those reported in the capital project summary spreadsheet compiled two months later. Approximately $40,000 less in capital project expenditures

was reported in the August 9, 2005 capital project summary spreadsheet than was reported in the May 27, 2005 capital project status report. While evidence was not discovered to suggest any financial mismanagement has occurred, this example does highlight the difficulty of ensuring the integrity of status reporting information in a decentralized program environment.

Recognizing the challenges associated with this governance model, Community and Protective Services management and the EMU have taken steps to mitigate the above risks. Specifically:

- The manager of the EMU has recently designed and implemented enhanced controls over the reporting of financial results for EMP capital projects. Working with a representative from the Financial Services Unit, the EMU is configuring the coding of EMP capital projects in SAP (the City's financial system) to allow for expenditure tracking and reporting on an individual project basis and by cost allocation unit. Prior to this change, Program reporting was limited only to the EMP capital budget as a whole.

- The Deputy City Manager of Community and Protective Services includes the Manager of the EMU in the regularly scheduled Community and Protective Services Senior Management Team meetings and informally communicates with stakeholders of other City departments and branches at the regularly scheduled Emergency Operations Control Group training exercises. Since most of the critical emergency services groups within the City report directly to the Deputy City Manager of Community and Protective Services, many of the Program related governance issues can be resolved through the existing Community and Protective Services management structures and processes.

Given that the Community and Protective Services management has taken mitigation measures to reduce governance risks and that other City enterprise-wide programs are managed in a similar manner, the level of risk associated with the current governance model does not justify a change to the current Program governance model; however, the addition of a few key processes is still warranted. Specifically,

- Regular and formal program oversight by the Steering Committee. Currently, this happens informally at the monthly Emergency Operations Control Group training exercises; however, these exercises are planned to come to an end this year and hence will not continue to provide an informal forum for the communication and resolution of Program issues. Additionally, we did not find an updated, documented set of Terms of Reference for the Steering Committee.

- A formal program planning framework, including strategic and annual program planning processes. Currently, the Working Group conducts informal annual planning activities and is planning to revise the Five Year Emergency Response Program Action Plan in 2006. Funding for the development of the next Five Year Emergency Response Program

Action Plan, however, has not been secured and a formal planning cycle has not been developed, documented and agreed upon with the Steering Committee.

- Development of a performance measurement framework. Currently, limited performance measures exist for the EMU and the Program. Specifically, performance measures are not collected and reported to allow Council and the Steering Committee to assess progress towards legislative and regulatory compliance and progress toward meeting the Program goals and objectives.

While indirectly linked to the governance impacts defined in this sub-section of the report, the three controls described above are important components of an effective governance framework and will allow the Steering Committee to formally provide strategic direction to the Program and to receive regular information from which to assess Program success and the need for corrective action. Consequently, project related governance risks will be mitigated.

Risk/Impact

- There is a risk that discrepancies will exist between the EMU capital project summary reporting and individual capital project status reporting.

- There is a risk that project teams may not have the necessary resources with the required qualifications to successfully meet project objectives.

<u>Recommendation 2</u>

It is recommended that the EMU develop the following key controls for approval by the Steering Committee:
 a. A detailed Terms of Reference for the Steering Committee including a description of the Steering Committee's program oversight roles and responsibilities and an approvals matrix for the Working Group, Steering Committee, and EMU.
 b. A formal program planning framework, including strategic and annual program planning processes for the Program.
 c. A performance measurement framework for regular reporting to the Steering Committee and Council including performance measures in the areas of legislative and regulatory compliance and Program goals and objectives.

<u>Management Response</u>

Management agrees with these recommendations.

"The Audit Team observed that the Program has an adequate management control framework. Specifically, formal and informal controls and processes were observed for all of the audit criteria supporting the control areas identified above. While it was observed

that an adequate management control framework exists, three observations were made to reduce the risks facing the Program and to strengthen existing processes."

As noted under Recommendation 1, the current Terms of Reference for the Emergency Management Program were developed in 2002, prior to passage of the Emergency Management Act, and focused primarily on the project structure. Now that the City is approaching the end of its first 5-year planning cycle, it is appropriate to review the current Terms of Reference and reorient them to support the ongoing governance structure and processes required to support the ongoing Emergency Management Program.

The updated Terms of Reference will identify roles, responsibilities and approval processes. It will include an annual mapping/planning process and semi-annual self-assessment to ensure legislative compliance. It will outline program objectives and develop performance measures to ensure that the program is meeting those objectives and it will outline a strategic planning cycle for the Emergency Management Program.

A Terms of Reference will be tabled for approval by the Steering Committee in Q1 of 2006.

The existing management control framework is being strengthened departmentally and within the branch, the reporting areas, nature of the reports and frequency have been documented and will be actively reviewed by individual managers and collectively by the Branch Management Team.

4.3.4 Benefit Sustainment

The City has approved $7.1 million in Program related capital projects; however, associated operating funding has not yet been identified to sustain the long-term benefits of these projects.

At the Steering Committee meeting of August 9th, 2005, discussions began regarding a process to ensure that the benefits of the EMP capital project investments were sustained once the capital projects were completed. Further work will be required to fully address this issue in the future. Specifically, during the first two years of the Program it was assumed that any operating and maintenance costs associated with the EMP capital projects would be absorbed by the department or branch assuming custody of the asset or responsibility for the new capacity. Additionally, project planning documents did not require the identification of ongoing operating and maintenance costs. Consequently, the full ongoing cost impacts of the EMP capital project portfolio were not clearly identified and reported to the departments and branches that are designated to assume these costs. Given the budget pressures facing the City, the lack of identification of future years operating budget requirements is a weakness of the Program.

We reviewed the EMP capital project portfolio in an attempt to quantify the potential impacts of the EMP capital projects upon future years operating budgets. Two scenarios were developed

for analysis: a minimal case scenario and a greater impact case scenario. All but two of the capital projects (511-02 Comprehensive Vulnerability Assessment and 511-03 Comprehensive Emergency Management Plan) were determined to have potential future years operating budget impacts.

- **Minimal Impact:** Assuming that an average of 2% of the total capital project cost would be required to support the new asset or capacity annually, approximately $130,000 in operating budget pressures would be added to the City's overall operating budget.[1]

- **Greater Impact:** Assuming that an average of 5% of the total capital project cost would be required to support the new asset or capacity annually, approximately $320,000 in operating budget pressures would be added to the City's overall operating budget.

In addition to potentially increasing operating costs, the EMP capital projects will also place pressures on the City's human resources. Specifically, many of the EMP capital projects will introduce new processes and responsibilities to individual departments and branches. While it is more difficult to definitively quantify these impacts, it is generally agreed that the EMP capital projects will generate additional workload pressures on City staff and management.

The following is a sample of EMP capital projects and the potential operating budget and human resources impacts associated with these projects. It should be noted that the following is not an all-inclusive list. Other EMP projects may also have budget and human resource issues associated with them.

- **511-04: Public Education/Awareness Program:** The *Are You Ready?* program is an important part of the City's capability to train its staff and raise emergency planning awareness amongst residents. The value of this project was approximately $500,000. The EMP capital project included funds to develop the training program and materials and to train an initial group of four master trainers. Not included or identified in the EMP capital project were the resource requirements for the sustainment of this ongoing program. Currently, only one part-time EMU resource and five voluntary staff trainers are available to provide training to both City staff and public groups. Due to other job related duties and responsibilities, the voluntary staff trainers are not consistently available to conduct training. To-date, over 60 people from over 20 different community groups and agencies have been trained. A further 70 groups have expressed interest in receiving the training. Due to a lack of available master trainers, it is unclear when the remainder of these community groups will receive the training.

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[1] Industry best practices are that organizations should invest 2% of the value of their real property capital assets into recapitalization of those assets. In the absence of a similar best practice for the introduction of new programs and processes, this number was used as a proxy to determine the potential operating budget impacts of the EMP projects.

- **511-09: Portable Emergency Shelters:** Through this capital project the City has purchased four large shelters for use during emergencies. The budget for this project (excluding any operating costs subsequently identified) is approximately $330,000. These shelters are equipped with HVAC systems, lighting, etc. The shelters will be dispersed amongst City services as follows: two will go to the Paramedic Service and one each to the Police Service and the Fire Service. Operating funding for the storage and annual maintenance of the shelters was not identified in the original project plans. The Working Group is currently undertaking a process to determine the operating and maintenance requirements and to develop performance standards of the new shelters.

- **511-10: Vulnerable Buildings/Structures Identification**: This is a three phased capital project designed to begin identifying vulnerabilities to facilities, buildings and structures in the City of Ottawa. The budget for this project is approximately $700,000. The first phase of the project will begin to identify the resource and other needs (accessibility/structural) of emergency facilities in the City of Ottawa. The second phase of the project will seek to assess all City owned buildings. The third phase of this project will begin to identify vulnerabilities in City owned structures. Once completed (currently scheduled for 2007), a process will be required to regularly update the vulnerability assessment of City owned buildings and structures. Currently, future year's salary or operating budget resources have not been identified to sustain this new process after December 2007.

- **511-14: Chemical Biological Radiological and Nuclear Response Plan:** Working in partnership with the National Capital Chemical, Biological, Radiological, and Nuclear Responders Advisory Committee, this project is designed to develop a multi-agency plan and response capacity that integrates with the City of Ottawa Emergency Plan for managing the crisis and mitigating the consequences of chemical, biological, radiological and nuclear incidents. The budget for this project is approximately $600,000 over three years. The project milestones include developing inter-agency policy and procedure protocols for CBRN response, identifying procedures that will need to be created to meet objectives, documenting and reviewing best practices, and planning common exercises and training activities. Ongoing operating funding has not been identified for the continued operation of this new capability.

- **511-27: Urban Search & Rescue Capabilities:** The purpose of this project is to develop a locally deployable, multi-disciplined Urban Search and Rescue team. Sixty-five to seventy team members comprised of Firefighters, Police Officers, Paramedics, and other expertise, as required will be coordinated for this purpose. Ongoing operating funding has not been identified for the continued operation of this new capability.

- **511-19: Municipal Evacuation Plan:** The goal of this capital project is to develop a comprehensive Evacuation Plan for the City of Ottawa. The budget for this project is approximately $75,000. This plan will reflect the response mechanism of all pertinent municipal and external resources in response to the need to move the affected population

safely from hazardous areas to areas were their safety and wellbeing will not be at risk. The project plan for this project was developed in April 2003. The project was placed on hold by the Working Group in April of 2004 and will be reinitiated in the fall of 2005. The project was placed on hold due to dependencies on the Emergency Management Plan and the availability of project team resources. Currently, future year's salary or operating budget resources have not been identified to regularly review and maintain the evacuation plan.

- **511-20: Mobile Emergency Site Management Command Post:** The City is currently in the process of identifying and acquiring a mobile emergency site management command post which will facilitate unified command communication for effective emergency scene management. The budget for this capital project is approximately $350,000. Operating funding has not been identified for the storage and ongoing maintenance of the mobile ESM command post.

At the August 9th, 2005 Steering Committee, the issue of benefit sustainment was discussed. The following project start up process was recommended for all EMP capital projects.

1. Project leads will complete a project plan template.
2. Project plans will need to clearly identify and specify information within the new sections of the template: technology requirements, operational impacts and resource requirements.
3. Project plans will be reviewed and approved by the Working Group membership.
4. Project plans will then be presented to Steering Committee for final approval.
5. Upon approval from Steering Committee, Program resource allocations will need to be designated according to a specific position and time frame (e.g. will it be a secondment or from a specific department for a designated time frame or an ongoing full-time resource requirement?)

The above process will in part mitigate the risks associated with the program's previous lack of planning for future years operating and human resources impacts associated with the EMP capital projects. This will be achieved through the identification of operational impacts and resource requirements in step 2 of the process described above. Nevertheless, a summary of human resources and operating impacts for all EMP capital projects would enhance reporting to the Steering Committee and Council.

Risk/Impact

- There is a risk that EMP capital project 511-19, Municipal Evacuation Plan, will experience further project delays and consequently that the City will continue to be without a comprehensive plan for the effective and orderly evacuation of all or segments of the City.

- There is a risk that the Steering Committee will not have a full understanding of the human resources and operating costs associated with the 29 EMP capital projects and consequently that the City will not allocate sufficient future years resources to sustain the benefits of these investments over the long term.

Recommendation 3

That the Steering Committee place a priority upon the timely completion of capital project 511-19, Municipal Evacuation Plan, and regularly monitor the project's progress and adequacy of resources assigned to the project.

Management Response

Management agrees with this recommendation.

Management recognized the Evacuation Plan as a priority and dedicated resources to support this initiative in October 2005. The project focuses on planning all elements of an evacuation, which requires multi-departmental coordination. The first phase was completed in December 2005, and described the coordination mechanisms and major procedures for all plan elements and detailed internal City of Ottawa responsibilities within the plan. The next phase, anticipated to be complete by June 2006, will address all major job aids, coordination mechanisms and responsibilities involving external partners.

Recommendation 4

That the EMU undertake a process to identify and document the anticipated operating and human resources costs for all EMP capital projects (pending, scoping, active, and completed) and that these costs be discussed and agreed to by the Steering Committee.

Management Response

Management agrees with this recommendation.

In August 2005, a revised project approval process was formally established and approved by the EMP Steering Committee. Included in this process are the identification of human resources and their time allocation, and the potential operational impact of the project. Throughout a project's development, the Steering Committee members will be kept apprised of the project's progress and its integration operationally. Staff recently conducted a historical review of the human resources allocated to the projects as well as projected human resources required to complete the projects in 2006 and 2007. The results of this analysis were used for the annual project review for 2006 and will subsequently be used in 2007.

4.3.5 Sufficient Resources

Through the establishment of the EMU, the funding of the EMP capital project portfolio and the ongoing operation of the Working Group, the City has dedicated comprehensive multi-year budgetary and human resources for effective emergency management planning. While an extensive array of resources have been dedicated to emergency planning by the City, issues exist regarding the adequacy of resources assigned to the Working Group and the adequacy of the Emergency Operations Centre (EOC).

The following is a brief overview of the resources dedicated to emergency management planning and response at the City.

Resource	Description
Human Resources	• Currently, the City dedicates 14 Full Time Equivalents (FTE's) to emergency management planning. This includes: – Five FTE's that work full time in the EMU; and, – Nine additional FTE's from the Working Group that were initially intended to work full time on Program related activities.
EMU Operating Budget	• The EMU maintains an annual operating budget of approximately $1,645,000. This budget includes approximately: – $1,370,000 for the 9-1-1 administration and the corporate radio communication system used by the Police, Public Works, the Ottawa International Airport, Fire, and Paramedic services; and, – $275,000 for the salaries of the five EMU staff and various other operating costs.
Capital Budgets	• Through the Five Year Emergency Response Program approved by Council in 2002, the City allocated $7,100,000 over five years for EMP capital projects.
Facilities	• Office space has been provided in City Hall for the EMU and the EOC. This space is comprised of: – One enclosed office; – Open office space for two staff; – One medium sized boardroom (the EOC); and, – One small boardroom (10 to 12 workstations for staff to support Emergency Operations Control Group members in the event of an emergency).

Through the course of this audit it was observed that ambiguity exists regarding the appropriate role of the Working Group members. Specifically, at the creation of the Working Group in 2002

it was generally agreed by the Steering Committee members that each department and select branches would contribute one full time FTE to the Working Group. It was additionally agreed that each Working Group member would split their time roughly 50/50 between conducting Program activities for the Working Group (primarily managing EMP capital projects) and promoting and conducting departmental/branch related Program activities. Since the creation of the Working Group, this understanding has evolved. Working Group members now participate on a voluntary basis and often have additional responsibilities in their own departments or branches. Consequently, many Working Group members now divide their time between Program activities and their other non- Program activities.

We also observed that a formal and documented process does not exist for the selection and approval of Working Group members. Specifically, it was observed that a process does not exist to:

- Assess the appropriateness and qualifications of proposed Working Group members;
- Clearly document and communicate the requirements of Working Group membership; or,
- Gain the formal approval of senior departmental management from which proposed Working Group originated.

The lack of dedicated full time Working Group resources reduces the overall resources assigned to preparing the City for effectively managing future emergencies and has had an impact on the ability of the Program to deliver the capital projects within the original schedules. Specifically, for fiscal years 2002, 2003 and 2004 the Program budgeted to spend approximately $2.2M in capital projects. A review of actual expenditures reveals that only $1.6M of this amount was spent during this same period. It is important to note that the above schedule slippages are not solely due to a lack of full-time Working group resources. During 2002 and 2003, the Program was in the early stages of initiation and was undertaking the process of staffing the EMU and the Working Group. There has also been frequent turnover in the EMU Manager position, resulting in three different managers between January 2003 and June 2004. Nevertheless, it is reasonable to assume that a portion of these slippages can be attributed to the lack of dedicated full time Working Group resources.

Most audit interviewees acknowledged that the current location and design of the EOC is problematic. Specifically, it was observed that:

- The EOC is located on the main floor of 110 Laurier (City Hall). The existing layout was initially designed to serve as the EOC for the former upper tier regional government of Ottawa Carleton and was not designed for the requirements of a single tier municipality of Ottawa's current size or for a municipality with the range and complexity of services currently provided by the City;

- The EOC is located at City Hall and is close to numerous locations considered to be high risk from a vulnerability perspective;

- The EOC does not have permanent audio/visual equipment and computer workstation facilities to assist Emergency Operations Control Group members and staff to access their computer systems and monitor events. Audio/visual equipment and computer workstations are temporarily installed on an as-and-when required basis; and,

- There is not an effective form of controlled access to and from the EOC.

Currently, the EMP portfolio of capital projects includes a project (511-07 Emergency Operations Centre Design) for the design of a new EOC. A decision document related to this project was submitted to the Steering Committee on August 9, 2005. The decision requested was as follows: "In effort to move forward, a decision is required to determine if City Hall is an appropriate location for the primary EOC. If it is determined that City hall is not the primary location, further analysis will be conducted to guide next steps." The document also identified $3,456,591 (not including costs for window reinforcement and radio relocation) in anticipated renovation costs should the Steering Committee decide to renovate and expand the existing EOC in City Hall.

While the City is actively managing the risks associated with the current EOC, this issue has been included in the audit report because of the schedule challenges that have been experienced by EMP capital project 511-07 Emergency Operations Centre Design. Specifically, the design of a new EOC was originally planned to be completed by the end of 2003. As of August 2005, this project was still active and a decision regarding the appropriate location of the EOC had not been formally taken. Additionally, while a budget has been allocated for the design of a new EOC (through EMP capital project 511-07 Emergency Operations Centre Design), a budget has not been allocated for the renovation of the existing EOC or the creation of a new EOC. Consequently, due to the criticality of maintaining a fully capable EOC to effective emergency management and communications during an emergency event, closer monitoring of this project is warranted by the Steering Committee.

Regarding long-term resource allocations, it should be noted that the City has identified approximately $1,500,000 in annual EMP capital funding in the Long Range Financial Plan; however, without the conduct of an updated vulnerability assessment, the development of another the Five Year Emergency Response Program Action Plan, and the mapping of Emergency Management Ontario requirements to EMP capital projects and program activities it is not possible to make an accurate forecast of future years EMP capital requirements.

Risk/Impact

- As a multi-departmental program, the Program is reliant upon other departments and branches to provide staff resources to enable it to successfully deliver upon its mandate. The Program is currently at risk of not having sufficient full-time resources to successfully deliver upon the Program goals and objectives as outlined in the Five Year Emergency Response Program Action Plan.

- The current location and design of the EOC adds avoidable constraints and challenges to the City's capability to effectively and efficiently manage emergencies.

Recommendation 5

That the EMU develop and document a process for the selection and approval of new Working Group members and ensure that the process: documents the anticipated workload requirements of Working Group members; clearly outlines roles and responsibilities; and includes formal senior management approval of the department from which the resource belongs.

Management Response

Management agrees with the intent of this recommendation.

Further to recommendation 2, the new Terms of Reference will include a process to document requirements of Working Group membership, core competencies and a process for gaining formal approval at the Steering Committee level on Working Group membership. This formal approval will assist in ensuring workload balances are made with respect to Working Group members.

A detailed human resources impact analysis was presented to the Steering Committee November 22, 2005. Subsequent to this, an implementation plan for 2006 & 2007 will be presented to the Steering Committee in Q1 of 2006. The implementation plan will identify the implementation of various projects and the financial and human resources required to successfully complete each project with in the identified timeline. Each future project will also follow the project start-up process approved by the Steering Committee in August 2005 (identified on page 44 of audit report). The 2006 & 2007 implementation plan, the project start-up process and bi-monthly status reporting to the Steering Committee will ensure effective benefit sustainment.

Recommendation 6

That the Steering Committee place a priority upon the timely completion of EMP capital project 511-07, Emergency Operations Centre Design.

Management Response

The current location and design of the Emergency Operation Centre (EOC) is problematic. The layout is not appropriate for the number and types of activities required by a single tier municipality of Ottawa's size, is located downtown and therefore at higher risk from a vulnerability perspective, has no permanent audio visual equipment and computer workstations and lacks an effective form of controlled access.

Accordingly, a project has been identified for the design of a new Emergency Operations Centre. A Best Practices Review has been completed and an EOC Design Concept document was developed to aid in decision-making processes and the design phase. To

date, the project team has also developed detailed operating procedures for the current EOC, which addresses notification procedures for mobilizing staff and procedural processes for the effective management of the EOC. The City of Ottawa is currently seeking partnership opportunities with the Federal Government – Public Safety and Emergency Preparedness Canada to co-locate Federal and Municipal- Emergency Operations Centers. Temporary modifications to the existing EOC are also being evaluated to enhance efficiencies of space and personnel

4.4   Audit Objective 3: Alignment of the 29 EMP Projects with EMP Goals

4.4.1   Audit Criteria

The criteria used to assess the relevance and alignment of each of the 29 EMP capital projects to the goals and objectives of the Program were as follows.

Relevance

- That all of the EMP capital projects are aligned with stated goals and objectives of the Program.

Completeness

- That all EMP related capital projects currently underway at the City are included in Program.

Project Risks

- That there is a monitoring process to track capital project schedule, costs and scope.

4.4.2   Audit Objective 3: Overall Conclusion

The Audit Team observed that the current EMP capital project portfolio of 29 capital projects is aligned to the stated goals and objectives of the Program and that the capital project portfolio contains all the EMP related capital projects currently underway at the City. Additionally, it was observed that monitoring processes exist at the branch and departmental level but not at the Steering Committee level to track capital project schedule, costs and scope.

We identified the following opportunity to strengthen the Program's project management processes and to increase the likelihood that the 29 capital projects will be completed prior to the deadline of December 2007.

4.4.3   Regular Project Portfolio Monitoring

The Program does not have a formalized process to allow for the regular review and reprioritization of the EMP capital project portfolio. This process will become increasingly important over the next two years as the City approaches the end of its first Five Year Emergency Response Program Action Plan and attempts to gain closure on the remaining 24 EMP capital projects that are not yet completed (5 of the 29 projects have been completed).

Schedule related risks are common to most capital programs and are typically mitigated in large organizations by robust project management processes and practices. We observed that the following formal project related processes exist:

- **Community and Protective Services Project Reporting:** Every two weeks, the EMU submits individual project status reports to Community and Protective Services Deputy City Manager's office. These reports are created by the individual project leads and are reviewed by the Manager, Strategic Initiatives & Business Planning. On a monthly basis, these reports are rolled up into a summary report and are presented to the Community and Protective Services Senior Management Team.

- **Working Group Project Status Reporting:** On a rotational basis, Working Group members are asked to provide the Working Group with project status updates at their weekly Working Group meetings.

While the above processes are important for managing the EMP capital projects on a tactical level, we did not observe a formal process for the Steering Committee's regular review and reprioritization of the EMP capital project portfolio. Specifically, most large organizations that manage capital programs implement a structured annual or twice annual process to allow executive decision makers with the opportunity to review and challenge project progress and to reprioritize funding based on emerging needs. Since 2002, the capital project portfolio has been reviewed only twice for completeness and relevance, by the Working Group and Steering Committee. These reviews were conducted as follows:

- **Fall/Winter 2004/05:** As part of the process to adopt the new Emergency Management Program by-law, the cluster of 31 EMP capital projects was reviewed by the Working Group and Steering Committee for completeness and relevance. This review resulted in five new projects being introduced, three projects being removed, and several projects merged to produce a revised list of 29 capital projects. An explanation of these changes and decisions was included in the documentation presented to Council on December 15, 2004.

- **Summer 2005:** As part of the EMU's ongoing planning processes, the manager of the EMU conducted a review of the revised list of 29 capital projects for accuracy of the

project schedule and budget information. As a consequence of this review, the following changes were proposed to the Steering Committee.

- Eight projects receive a decrease in their budgets.
- Eleven projects receive an increase in their budgets.
- The budgets of ten projects remain unchanged.

This type of process will be especially important to the Program over the next two years given that a large portion of the projects (24 projects representing approximately $4.2M in expenditures) are yet to be successfully completed. Reviewing the 24 capital projects in more detail, as of the beginning of August, 2005:

- Five capital projects representing $330,000 in capital expenditures had not been initiated. These included: 511-24 Municipal Emergency Environmental Response Capability; 511-25 Research and Development Program; 511-26 Wilderness Search and Rescue; 511-28 Temporary Accommodations / Shelters for Responders and Their Families; and, 511-29 "Next Of Kin" Procedures. With the exception of 511-25, these projects will not impact upon the City's compliance to provincial legislation and regulations.

- Eleven capital projects representing approximately $2.1M are planned to be completed in 2006 or 2007. In addition to the five projects listed above, the following projects are included in this category: 511-23 Municipal Business Continuity Plan; 511-27 Urban Search and Rescue; 511-02 Comprehensive Vulnerability Analysis; 511-19 Municipal Evacuation Plan; 511-13 - Post Traumatic Stress Prevention and Response Program; and, 511-14 - Multi-agency CBRNE Response Plan. Projects 511-23 and 511-19 will contribute to the City's compliance to Emergency Management Ontario's Comprehensive standard.

Risk/Impact

The City is at risk of not meeting its EMP capital project completion schedule. Without the implementation of additional project monitoring processes at the Steering Committee level, the likelihood of this risk occurring will increase over the next two years as the City approaches the end of its first Five Year Emergency Response Program Action Plan and attempts to gain closure on the remaining 24 EMP capital projects.

Recommendation 7

That the management of the EMU document and implement a process to ensure the Steering Committee review and where required reprioritize/re-profile the EMP project portfolio on a twice yearly basis.

Management Response

Management agrees with this recommendation.

The Audit Team "observed that the current EMP capital project portfolio of 29 capital projects is aligned to the stated goals and objectives of the Program and …that monitoring processes exist at the branch and departmental level but not at the Steering Committee level to track capital project schedule, costs and scope."

A semi-annual process will ensure that projects are appropriately prioritized on an ongoing basis by the Steering Committee as well as to ensure provincial program compliance.

The Terms of Reference planned for Q1 of 2006 will include this requirement.

Management Response - Impact of 2006 Budget Reduction

Based on the Council direction emanating from the 2006 budget deliberations the request to expand the capital project 901037 (Emergency Management Plan) was not included in the approved 2006 budget. In response to this budget direction the existing 1.34 million in the works in progress was reallocated to maximize progress on critical projects while minimizing impact.

A review of all projects deliverables planned for 2006 was conducted and adjustments to the budget and associated staff resourcing have been recommended based on the following considerations:

- Ensuring legislative requirements are achieved in 2007.
- Considering the impact of reducing or omitting budgets for projects currently in progress.
- Initiating projects that would provide corporate benefit to a known area of improvement.
- Delaying the implementation of projects that will benefit from the completion of projects currently in progress or other dependencies

The EMP Steering Committee will be confirming those budget and resource adjustments in Q1 of 2006. Proposed reductions will have the following impact on the audit recommendations:

- Audit Recommendation 3, respecting timely completion of the Municipal Evacuation Plan. The component of the evacuation plan that identifies protocols and decisions aids to effectively re-establish population to evacuated areas, will be delayed until 2007.
- Audit Recommendation 6, respecting the timely completion of the Emergency Operations Centre Design. The 2006 project will be limited to risk assessment of potential EOC locations with the detailed design delayed until 2007.

5. Conclusion

The City of Ottawa has been actively conducting emergency management planning since amalgamation in June 2001. Led by the Deputy City Manager of Community and Protective Services and the Manager of the EMU and using a multi-departmental approach, the City of Ottawa has developed a comprehensive Emergency Management Program and has been recognized for its efforts by Emergency Management Ontario. At a high level, the audit team made the following observations.

1. The City is compliant with the requirements of the *Emergency Management Act* and associated regulations. The Audit Team identified one area for improvement with regard to strengthening the City's process for ensuring ongoing compliance to provincial legislation and regulations.

2. The Program has an adequate management control framework. Specifically, formal and informal controls and processes were observed for all of the audit criteria. While it was observed that an adequate management control framework exists, three observations were made to reduce the risks facing the Program and to strengthen existing processes. Specifically, the Audit Team identified improvement opportunities in the following areas: governance structure and processes; benefit sustainment; and, the sufficiency of resources assigned to the Program.

3. The current EMP capital project portfolio of 29 capital projects is aligned to the stated goals and objectives of the Program and that the capital project portfolio contains all the EMP related capital projects currently underway at the City. Additionally, it was observed that monitoring processes exist at the branch and departmental level to track capital project schedule, costs and scope but not at the Steering Committee. The Audit Team identified an opportunity to strengthen the Program's project management processes and to increase the likelihood that the 29 capital projects will be completed prior to the deadline of December 2007.

Appendix A –Project Spending Plan

Number	Project	Project Status May 27, 2005	Final Deliverable Due Date	Original Budget Dec. 17, 2002	Revised Budget Aug 19, 2005	Net Project Budget Change	External Funding Required	2002 Actual	2003 Budget	2003 Actual	2004 Budget	2004 Actual	2005 Budget
511-01	CBRN equipment	On Target	30-Nov-04	$300,000	$400,000	$100,000	$900,000	$112,498	$322,898	$210,400	$77,102	$75,368	
511-02	Comprehensive vulnerability analysis	On Target	15-Dec-06	$200,000	$90,000	-$110,000			$45,000	$45,288	$15,000	$15,000	
511-03	Comprehensive municipal emergency management plan	On target	15-Dec-04	$300,000	$80,000	-$220,000			$40,000	$39,398	$30,000	$28,000	$10,000
511-04	Public education / awareness program	On Target	3-Feb-05	$520,000	$585,000	$65,000			$85,000	$63,345	$350,000	$345,754	$150,000
511-05	Common terminology	On Target	10-Jun-05	$10,000	$5,000	-$5,000			$5,000	$2,500			
511-06	Emergency personnel identification system	On Target	15-Dec-05	$25,000	$150,000	$125,000	$3,000		$10,000	$2,972	$135,000	$134,991	$5,000
511-07	Design an Emergency Operations Centre	On Target	3-Jun-05	$50,000	$180,000	$130,000			$40,000	$30,000	$50,000	$39,881	$40,000
511-08	Personal protection standards for emergency personnel	On Target	30-Jun-05	$50,000	$135,000	$85,000	$36,000		$15,000	$14,708	$90,000	$87,705	$30,000
511-09	*Portable emergency site facilities*	On Target	27-Jun-05	N/A	$330,000	$330,000					$330,000		
511-10	Vulnerable buildings / structures	On Target	30-Jun-05	$700,000	$700,000	$0					$140,000	$132,506	$260,000
511-11	*Alert system equipment*	On Target	31-Oct-05	N/A	$40,000	$40,000					$15,000	$10,496	$5,000
511-12	Public notification system for emergencies	On Target	15-Dec-05	$100,000	$100,000	$0							
511-13	Post Traumatic Stress Prevention and Response Program	On Target	30-Jun-06	$200,000	$200,000	$0			$10,000	$4,000	$10,000	$9,373	$60,000
511-14	Multi-agency CBRNE Response Plan	On Target	13-Apr-06	$600,000	$575,000	-$25,000	$100,000						$225,000
511-15	Multi agency emergency management training and exercise program	On Target	17-Sep-05	$500,000	$420,000	-$80,000					$20,000	$18,521	$100,000
511-16	Municipal/partners joint response protocol & performance objectives	On Target	15-Jul-05	$80,000	$80,000	$0							$40,000
511-17	Municipal/hospital joint response protocol & performance objectives	On Target	30-Sep-05	$50,000	$50,000	$0							
511-18	Development of an Emergency Information System	On Target	7-Nov-05	$250,000	$285,000	$35,000							$100,000
511-19	Municipal evacuation plan	On Target	8-Dec-06	$100,000	$75,000	-$25,000			$5,000	$3,000	$5,000	$5,000	
511-20	Mobile emergency site management command platform	On Target	8-Sep-05	$385,000	$350,000	-$35,000							$350,000
511-21	*Mitigation program*	On Target	1-Nov-05	N/A	$200,000	$200,000							$50,000
511-22	Mobile emergency treatment rehab unit	On Target	30-Jul-05	$320,000	$300,000	-$20,000							$300,000
511-23	Municipal business continuity plan	On Target	15-Dec-07	$200,000	$285,000	$85,000							$140,000
511-24	Municipal emergency environmental response capability	Not Started	15-Feb-07	$400,000	$200,000	-$200,000							
511-25	Research and development program	Not Started	15-Feb-07	$100,000	$40,000	-$60,000							$10,000
511-26	Wilderness search and rescue	Not Started	15-Feb-07	$50,000	$40,000	-$10,000							
511-27	Urban search and rescue	On Target	15-Feb-07	$850,000	$600,000	-$250,000	$850,000						$200,000
511-28	Temporary accommodations / shelters for responders and their families	Not Started	15-Feb-07	$50,000	$40,000	-$10,000	$50,000						
511-29	"Next of Kin" procedures	Not Started	15-Feb-07	$10,000	$10,000	$0							
	Inter Agency Communication Protocol	Removed	2003	$10,000	$0	-$10,000							
DPW20	Emergency Potable Water Supply Plan	Removed	2005	$250,000	N/A	-$250,000							
WRC29	Multi Agency Water Response	Removed	2007	$400,000	N/A	-$400,000							
MDR08	Mutually Depending Response Identification	Removed	2003	$40,000	N/A	-$40,000							
	5 year Plan				$45,558	$45,558		$45,320	$45,558	$238			
	Administrative				$15,245	$15,245		$1,929	$7,006	$5,077	$4,737	$4,736	$3,502
	Professional Services				$248,803	$248,803		$10	$78,803	$78,813	$70,000	$70,000	$100,000
	Shelter Coordination				$10,394	$10,394					$10,394	$10,394	
	Contingencies				$235,000	$235,000			$120,000		$25,000		$25,000
Total				$7,100,000	$7,100,000	$0	$1,939,000	$159,757	$829,265	$499,739	$1,377,233	$987,725	$2,203,502

Table Notes		
New projects added as of Jan. 2004		Budget
511-09	Portable emergency site facilities	$145,000
511-11	Alert system equipment	$50,000
511-21	Mitigation program	$200,000
Projects removed as of Jan. 2004		
DPW20	Emergency Potable Water Supply Plan	$250,000
WRC29	Multi Agency Water Response	$400,000
MDR08	Mutually Depending Response Identification	$40,000

Appendix B – Compliance

Emergency Management Act	Compliance
s.2.1 (1): Every municipality shall develop and implement an emergency management program and the council of the municipality shall by by-law adopt the emergency management program	**Compliant**
s.2.1 (2): The emergency management program shall consist of:	
(a) an emergency plan as required by section 3;	**Compliant**
(b)Training programs and exercises for employees of the municipality and other persons with respect to the provision of necessary services and the procedures to be followed in emergency response and recovery activities;	**Compliant**
(c) public education on risks to public safety and on public preparedness for emergencies; and	**Compliant**
(d) any other element required by the standards for emergency management programs set under section 14. 2002, c.14, s.4	
S2.1 (3) In developing its emergency management program, every municipality shall identify and assess the various hazards and risks to public safety that could give rise to emergencies and identify the facilities and other elements of the infrastructure that are at risk of being affected by emergencies	**Compliant**
S3. (1) Every municipality shall formulate an emergency plan governing the provision of necessary services during an emergency and the procedures under and the manner in which employees of the municipality and other persons will respond to the emergency and the council of the municipality shall by by-law adopt the emergency plan	**Compliant**
3 (5) Every municipality shall conduct training programs and exercises to ensure the readiness of employees of the municipality and other persons to act under the emergency plan	**Compliant**
3 (6) Every municipality shall review and, if necessary, revise its emergency plan every year	**Compliant**
6.2(1) Every municipality, minister of the Crown and designated agency, board, commission and other branch of government shall submit a copy of their emergency plans and of any revisions to their emergency plans to the Chief, Emergency Management Ontario, and shall ensure that the Chief, Emergency Management Ontario has, at any time, the most current version of their emergency plans	**Compliant**
The plan has all required elements as defined in s.9: An emergency plan formulated under section 3, 6 or 8 shall:	
(a) in the case of a municipality, authorize employees of the municipality or, in the case of a plan formulated under section 6 or 8, authorize Crown employees to take action under the emergency plan where an emergency exists but has not yet been declared to exist;	**Compliant**

Emergency Management Act	Compliance
(b) specify procedures to be taken for the safety or evacuation of persons in an emergency area;	**Compliant**
(c) in the case of a municipality, designate one or more member of council who may exercise the powers and perform the duties of the head of council under this Act or the emergency plan during the absence of the head of council or during his or her inability to act;	**Compliant**
(d) establish committees and designate employees to be responsible for reviewing the emergency plan, training employees in their functions and implementing the emergency plan during an emergency;	**Compliant**
(e) provide for obtaining and distributing materials, equipment and supplies during an emergency	**Compliant**

Community Emergency Management Program Framework	Compliance
Publication of an enhanced emergency response plan to include supporting plans for high risks (e.g. hazardous facility, flood, severe weather, transportation accidents, critical infrastructure etc.)	**Compliant**
Publication of a support plan for the dissemination of emergency information including the designation and arrangement for a local information centre	**Compliant**
Development of an enhanced emergency operations centre to include detailed operating procedures, arrangements, and provision for appropriate specialist and auxiliary staff during an emergency	**Compliant**
Development and implementation of an annual emergency management training program involving appropriate staff, volunteer organizations, auxiliary staff and emergency services	**Compliant**
Development and implementation of an annual emergency management exercise program involving appropriate staff, volunteer organizations, auxiliary staff and emergency services	**Compliant**
Development and implementation of a public education program based on identified high risks	**Compliant**
Development and implementation of an annual self-assessment process to determine the quality and effectiveness of the emergency management program	**Compliant**
Development and implementation of an Incident Management System	**Compliant**

Appendix C – Detailed Management Control Framework Audit Criteria

Control Domain	Controls
A2 - Risk Management	Are all significant program risks being captured and assessed?
	Are follow-up procedures in place and being actioned for the program?
	How are significant internal risks faced by the EMU identified and assessed?
	How are significant external risks faced by the EMU identified and assessed?
A3 - Policies & Procedures	Is there an approved EMP policy and supporting guidance documents?
	Does the policy include a clear policy statement and the definition of key stakeholders at the Department and Branch level?
	Does the policy clear outline roles and responsibilities of all stakeholders?
A4 - Planning	What is the long-term strategic planning process for the EMU?
	How is the annual business planning conducted for the EMU? How is the budget determined?
	Has the WG conducted a comprehensive and thorough vulnerability analysis?
	Has the SC introduced a process to produce, improve and maintain an integrated and comprehensive municipal emergency plan?
A5 - Measurable Performance Targets and Indicators	Do the EMP and EMU have measurable performance targets for each of its key objectives?
B3 - Governance: Authority, Responsibility and Accountability	Are responsibilities, accountabilities and authorities clearly and appropriately defined at the Departmental and Branch level?
	Does the EMU's organizational structure support the objectives of the program?
	Does the EMP governance structure support the objectives of the program?
	Have the composition of the SC and WG been revisited? Do they represent the full scope of the City's emergency management responsibilities?
	Is the CBRN initiative a component of the City's EM structure? Does it report to the SC?
C1 - Knowledge, Skills and Tools	Does EMU have the necessary people, skills, tools and resources to achieve its objectives?
	Is the EMU fully staffed? Does the EMU have qualified staff with the required skills? Is back-up staff available? Is the EMU dependent on consultants/contractors?
	Has senior management ensured appropriate HR allocation to support implementation of the EMU 5-Year action plan?
	Are emergency management best practices sought and used?
	Does the EMU have the required IT tools to meet its objectives?
C3 - Sufficient and Relevant Information	Is there adequate information to allow EMU staff to perform their tasks? Is adequate project information provided? Is insight provided into all city operations?

Control Domain	Controls
C4 - The decisions and actions of different parts of the organization should be coordinated.	Who are the key Departmental and Branch level stakeholders and are they being adequately consulted?
	Who are the key non-City stakeholders and how are they being consulted?
	What other City initiatives need to be coordinated with the EMP? How are these initiatives currently coordinated?
	What other non-City initiatives need to be coordinated with EMP? How are these initiatives currently coordinated?
D2 - Performance/ Reporting	Are program activities and performance (milestones, accomplishments) regularly tracked and reported?
	Are project objectives (milestones, accomplishments) on track for project completion?
	How are project costs vetted, tracked and reported? How is this information used?

Office of the Auditor General

**AUDIT OF BY-LAW ENFORCEMENT
AND INSPECTIONS**

2005 REPORT

Chapter 7

Table of Contents

Executive Summary

Introduction

The Enforcement and Inspections Division (EID) of the By-law Services Branch protects health, safety, and property through the enforcement of a series of regulatory by-laws including, but not limited to: noise; signage on private and public properties; fences; zoning; property standards; pool enclosures; animal care and control; taxi licensing; parking control; and, smoke-free areas. In 2004, approximately 49,000 "Requests for Service" (RFS) were received and responded to. The major RFS categories were parking (16,300); animals (11,300), and noise (8,100).

The objective of this audit was to assess the adequacy of the management and operational practices including: the economy, effectiveness and efficiency of operations; compliance with all laws, regulations and policies; and financial management and controls. The audit was conducted in accordance with the Institute of Internal Auditors' Standards for the Professional Practice of Internal Auditing.

The examination was conducted during the period of April 2005 to August 2005. The scope of the audit included the Enforcement and Inspections Division. The Licensing and Programs Division was included with respect to the administrative support it provides to EID. The scope also included by-law revenue reconciliation procedures conducted by Courthouse & Provincial Offence Services Division of Corporate Services, and discussions with other municipalities (Calgary and Mississauga) regarding best practices. Criteria were discussed with and agreed to by the Director, By-law Services prior to the conduct of the detailed audit procedures. The conclusions were based on a comparison of the situations as they existed at the time of the audit engagement against the audit criteria.

Key Findings and Recommendations

Key changes were underway at the time of the audit through the New Deployment project that would enable EID resources to deliver services in a more efficient and effective manner. Further changes in management practices, systems functionality and technology tools are needed however, for By-law Services Branch to be able to fully establish, monitor or provide assurance that its delivery of EID services meets or exceeds expectations of efficiency and effectiveness.

A strengthening of revenue reconciliations and cash handling procedures were observed during the audit. However, the lack of clear overall responsibility for ensuring appropriate controls over all aspects of the revenue cycle creates vulnerability in the ensuring the completeness, accuracy and timeliness of receipts.

The New Deployment Model and Harmonization projects had generally well prepared, communicated and monitored project plans. However, the pace of change, due diligence

expectations and other drivers are creating a need for systematically managing risk in key areas such as major projects and health and safety.

As part of the audit, the management team was asked to conduct a self-assessment of their management, which was assessed overall as "fairly effective". The self-assessment recognized the need to strengthen management practices. It was observed that the approach to development of management and operational practices and controls does not follow a structured approach. A structured approach can help strike the correct balance between informality and formality in the practices used to manage enforcement and inspections.

Recommendations and Management Responses

Recommendation 1

The Director, By-Law Services Branch, should expand existing service standards to include completion standards and performance targets to improve upon staff utilization, monitoring and reporting for EID activities.

> **Management Response**
>
> Management agrees with this recommendation.
>
> To date, Management has concentrated on setting and monitoring performance standards for the timely prioritization and dispatch of calls.
>
> As set out in the audit findings, by-law requests-for-service (RFS) are categorized as priority 1, 2 or 3 calls in accordance with the urgency of the infraction: for priority 1 calls, complainants are contacted and calls actioned within 24 hours; for priority 2 calls, complainants are contacted and action commenced within 48 hours, and; for priority 3 calls, complainants are contacted within 48 hours and action commenced within 7 days.
>
> Management will undertake to establish completion standards / performance targets and will work to improve staff utilization through a 2006 efficiency review. Given technology upgrades required for tracking purposes, it is expected that completion standards and performance targets will be completed and in place by the end of 2007.
>
> It should be noted that the longer timelines needed to establish those standards are due to the wide variability in the nature and sophistication of different requests for service.   For example, one dog bite call may be resolved within a day based on cooperation of the parties, reliability of information and other factors, while another dog bite call may take several months to close based on availability of witnesses, appeal processes and other factors.

Recommendation 2

The Director, By-Law Services Branch, should ensure Coordinators and Supervisors expand their monitoring activities to include the monitoring of overall performance against established standards to keep a record of their monitoring findings and to report periodically as appropriate on these findings to include suggested actions to take to improve on overall performance achievement.

Management Response

Management agrees with this recommendation.

As noted in recommendation 1, Management will work to establish completion performance standards and agrees that they should be monitored and reported upon. Technology enhancements will be required to implement and track the standards electronically.

Recommendation 3

The Director, By-Law Services Branch, in concert with the Information Technology Services Branch, should pursue opportunities to enhance operational efficiency through the use of available technology tools and ensure that technology opportunities are recorded and evaluated on a periodic basis.

Management Response

Management agrees with this recommendation.

The Information Technology Services (ITS) Branch has already initiated discussions with the By-law Services Branch with respect to reviewing technology requirements and related tools to assist the Branch in pursuing their operational efficiencies. It is anticipated that formal discussions and planning sessions will commence in Q1 of 2006 with a view to providing and defining technology opportunities, budget requirements and a go forward plan by the end of 2006.

Recommendation 4

The Director, By-law Services Branch, should ensure that surprise cash counts are implemented as part of the cash handling activities performed in the Licensing and Programs Division as recommended in the 2004 internal audit.

Management Response

Management agrees with this recommendation.

The Licensing and Programs Division operates a cash handling operation for the sale, renewal and transfer of taxi and other licenses. An internal audit of revenue collection

procedures was conducted in 2004 that examined: segregation of duties and end-of-day procedures; timely processing and recording of receipts; custody of cash; secure storage; centralized receipt of cash; and, supervisor/manager oversight. The (current) 2005 audit found that all 2004 recommendations had been implemented with the exception of surprise cash counts.

Management has already begun the process to undertake an internal audit of its cash management practices and will ensure a formalized approach is in place by the end of Q1 in 2006.

Recommendation 5

The Director, By-law Services Branch, in conjunction with a counterpart in Corporate Services, should:
   a) **formally agree who has overall responsibility for ensuring that appropriate revenue cycle controls for all by-law revenues are in place, and are reviewed, reconciled and evaluated on a regular basis; and**
   b) **ensure a plan is established to identify and correct control weaknesses including an up-to-date universe of deputized organizations and reconciliation of issued parking tickets.**

Management Response

Management agrees with these recommendations.

The Director, By-law Services Branch has met with the City Treasurer and City Clerk to clarify and confirm responsibility for revenue processes and controls.

A number of changes through the ParkSmart program and ticketing administration processes have been implemented to improve accountability overall.

Management recognizes that additional improvements are required to ensure that adequate controls and processes are in place to ensure revenues are being maximized and reconciled. As a result, an interdepartmental committee has been established that will begin meeting regularly in 2006 to ensure appropriate controls are in place and finalized by Q4 of 2006.

Recommendation 6

The Director, By-law Services Branch, should ensure that health and safety risk areas faced by enforcement and inspections officers are assessed annually including assessment of the effectiveness of the measures taken to address health and safety risks.

Management Response

Management agrees with this recommendation.

The 2005 audit found that By-law Services undertook "a good combination of proactive and reactive measures to ensure compliance and that health and safety concerns are effectively addressed" but indicated that it would be beneficial to annually assess the top 5-6 occupational hazards and ensure appropriate mitigation measures are in place.

Management will ensure that this annual review is completed by Q4 of 2006. To support this review, Management is in the process of establishing a joint Occupational Health and Safety Committee comprised of management and operational staff from each of the service areas that will address health and safety risks.

In addition, Management has recognized that enhanced training will reduce health and safety risks faced by officers on a regular basis. As a result, the deployment model has identified the establishment of a training officer and coordinator to ensure officers are properly trained and tested. The training office is expected to be in place by the fourth quarter of 2006.

Recommendation 7

The Director, By-Law Services Branch, should schedule a formal review of the actual achievements of implementation of the new model against its original performance objectives within 12 – 18 months after project initiation and once major aspects are considered implemented.

Management Response

Management agrees with this recommendation. Management has already planned a post-implementation review of the deployment that will be undertaken in the fourth quarter of 2007.

Recommendation 8

The Director, By-Law Services Branch, should require that there be formal, timely, and periodic (probably at least on a quarterly basis) assessments of important project completion dates versus targets for remaining universe of by-laws to be harmonized, until such time as the project is successfully completed.

Management Response

Management agrees with the intent of this recommendation.

Management has established a separate Project Team that meets on a monthly basis and continually reviews project completion dates and priorities. This information is captured on a Project Team Radar chart, which is distributed to all team members and reviewed with the Senior Management Team, the Branch Management Team and reported to Council through regular updates and presentations to various committees such as EPS and ARAC.

Recommendation 9

The Director, By-Law Services Branch, should systematically assess and monitor risk areas that could lead to further delays to the Harmonization project.

Management Response

Management agrees with this recommendation.

Further to the response to Recommendation 8, the Director currently meets, and will continue to meet, on a monthly basis with the project and Branch Management Team to monitor and assess risk areas in the harmonization of by-laws. The Branch is also awaiting a response from the Province on the enactment of a new City of Ottawa Act, which will allow regulations to be enacted differently based on geography. As a result of the challenges related to the rural/urban diversification in terms of enacting new regulations, the Province has also extended the expiry date for the harmonization of the remaining licensing by-laws until the end of 2007. It is anticipated that all of the harmonization work will be completed by this date.

Recommendation 10

The Director, By-law Services Branch, should establish an initiative to identify key strategic, operational and project areas of higher risk where more systematic risk management techniques can be integrated.

Management Response

Management agrees with this recommendation.

Current management practices include risk management in the form of minimizing liability exposure and containment of negative risk in areas affecting both Branch staff and clients and the effective management of opportunity risk. It is recognized that presenting the right information to Branch Management is essential to enabling effective risk management decisions. It is anticipated that the 2006 efficiency review will help meet this objective and will be included as part of the By-law Services work plan.

Recommendation 11

The Director, By-Law Services Branch, should include risk management in EID training plans for managers and staff.

Management Response

Management agrees with this recommendation.

Further to the response to Recommendation 10, as part of the 2006 efficiency review, key operational risks will be identified that can be built into training plans for managers and staff

Recommendation 12

The Director, By-law Services Branch, should ensure a more structured approach to delivering and accounting for EID operational and program performance results including periodic performance reports that compare actual versus planned performance and requires an assessment of significant variances with actions to address those variances.

Management Response

Management agrees with this recommendation.

The Corporate Performance Measurement Framework established OMBI measures as a priority area for performance measurement. The annual Branch Accountability Plan will be strengthened in 2006 to reflect strategic as well as operational and program performance results. Management has already implemented 17 enforcement OMBI performance measurements and 7 licensing performance measurements in 2005 and will be implementing an additional 22 enforcement and 10 inspection OMBI measures in Q1 of 2006. Monitoring and reporting will be occurring on a monthly basis within the Branch and among the Departmental Senior Management Team.

Recommendation 13

The Director, By-law Services Branch, should incorporate a more structured approach to maturing and improving EID management practices through the use of a Management Control Framework and Logic Model.

Management Response

Management agrees with this recommendation.

Management will be completing a Branch Logic Model within Q1 of 2006. This will serve to illustrate the cause and effect relationships between activities, outputs and outcomes and assist management identification of critical evaluation questions and areas of emphasis. The existing management control framework is being strengthened departmentally and within the Branch. The reporting areas, nature of the reports and frequency have been documented and will be actively reviewed by individual managers and collectively by the Branch Management Team.

Recommendation 14

Ensure the EID management team uses the Management Control Framework to self-assess the effectiveness of management practices each year at planning time to determine priority areas for improvement in the coming year.

Management Response

Management agrees with this recommendation.

Further to Recommendation 13, the Branch will use the enhanced Management Control Framework to self-assess management effectiveness annually. The results of ongoing monitoring and reporting at the activity level and periodically at the program level (e.g. the 2006 efficiency review), coupled with financial and human resource performance reporting will inform the annual planning exercise undertaken by the Branch.

General Management Response

The amalgamation of the City of Ottawa in 2001 resulted in the establishment of the By-law Services Branch, which brought together 12 different regulatory frameworks supported by 67 full-time equivalents (FTEs) collectively responsible for administering and enforcing approximately 500 different by-laws. As part of the 2004 budget process, Council in an effort to find additional efficiencies and cost savings approved the restructuring of By-Law Services by consolidating most of the enforcement and inspection services into one area. This resulted in the transfer of parking, zoning and property standards enforcement as well as the transfer of lottery licensing and special event services creating a new By-Law Services Branch comprised of 147 FTEs.

Initially located in 10 different locations operating under several different collective agreements and different service models, the By-law Services Branch has been working very hard to consolidate and harmonize its regulations and polices to ensure that services are delivered in a cost efficient and effective manner. Although approximately 85% of the regulations have been consolidated, By-law Services has faced significant challenges in harmonizing its numerous by-laws and is the only city of comparable size that has had to undergo an amalgamation exercise which has included consolidating and harmonizing various regulations and processes within an urban and rural setting. Even Toronto did not have as extensive a process given that their licensing regulations were already harmonized under an upper tier system. Nor did they have to cope with such diverse urban/rural geography.

The Branch is appreciative and supportive of the audit exercise undertaken in 2005 and generally concurs with the recommendations put forward. The Branch intends to take the opportunity to achieve these objectives through the Branch efficiency review that will be undertaken in 2006.

Résumé

Introduction

La Division de l'application des règlements et des inspections de la Direction des services des règlements municipaux protège la santé, la sécurité et les propriétés par la mise en application d'un ensemble de règlements traitant de sujets comme : le bruit, la signalisation sur les propriétés privées et publiques, les clôtures, le zonage, les normes de biens-fonds, les clôtures de piscine, le soin et contrôle des animaux, la délivrance des permis de taxi, le contrôle du stationnement et les zones libres de fumée. En 2004, on a répondu à environ 49 000 « demandes de service ». Ces demandes de service portaient principalement sur des questions de stationnement (16 300), d'animaux (11 300) et de bruit (8 100).

Cette vérification avait pour objectif l'évaluation de la pertinence des pratiques opérationnelles et de gestion, y compris : l'économie, l'efficience et l'efficacité des opérations; la conformité aux lois, règlements et politiques; et la gestion et les contrôles financiers. La vérification a été conduite dans le respect des normes professionnelles de la vérification interne de l'Institut des vérificateurs internes.

L'évaluation a été faite entre les mois d'avril et d'août 2005. La vérification visait la Division des règlements et des inspections. La Division de la délivrance des permis et programmes a été inclus à l'égard des services administratifs fournis à la Division des règlements et des inspections. La vérification visait aussi les procédures de rapprochement des recettes provenant des infractions aux règlements, procédures qui furent mises en œuvre par les Services de la cour et des infractions provinciales de la Direction des services généraux, et visait également les discussions avec d'autres municipalités (Calgary et Mississauga) au sujet des pratiques exemplaires. Après discussion avec la directrice des Services des règlements municipaux, nous nous sommes entendus sur les critères à utiliser dans l'exécution des procédures détaillées de la vérification. Nous avons basé nos conclusions sur la comparaison des situations au moment de la mission de la vérification aux critères de vérification.

Principales constatations et recommandations

Au moment de la vérification, le nouveau projet de déploiement avait déjà amorcé des changements pour permettre à la Division de l'application des règlements et des inspections de fournir ses services de façon plus efficace et efficiente. Pour que la Direction des services des règlements municipaux soit en mesure de répondre aux attentes d'efficacité et d'efficience dans l'établissement, la prestation et la surveillance des Services des règlements et inspections, et de le démontrer, il faudra apporter d'autres modifications aux pratiques de gestion, à la fonctionnalité des systèmes et aux outils technologiques.

Au cours de la vérification, nous avons observé un renforcement des procédures de rapprochement des recettes et de manutention de la caisse. Cependant, l'absence de responsabilisation claire relative à la mise en place de contrôles adéquats de tous les éléments du

cycle des recettes crée de la vulnérabilité quant à l'intégralité, la précision et l'opportunité des reçus.

Les plans des projets du nouveau modèle de déploiement et d'harmonisation ont généralement été bien préparés, bien communiqués et bien suivis. Néanmoins, la vitesse du changement, les attentes par rapport à la diligence raisonnable et autres moteurs créent la nécessité de gérer les risques de façon systématique dans des secteurs-clés comme les grands projets, la santé et la sécurité.

Au cours de la vérification, nous avons demandé à l'équipe de gestion de s'évaluer elle-même; elle s'est cotée comme étant « *assez efficace* ». Cette autoévaluation reconnaît le besoin de renforcer les pratiques de gestion. Nous avons observé que le développement des pratiques et des contrôles de gestion et des opérations ne fait pas l'objet d'une approche structurée. Pourtant, une approche structurée pourrait contribuer à établir un sain équilibre entre les caractères formels et informels des pratiques employées pour gérer l'application des règlements et les inspections.

Recommandations et réponses de la direction

Recommandation 1

La directrice des Services des règlements municipaux devrait élargir les normes de service existantes pour inclure des normes d'achèvement et des objectifs de rendement pour mieux utiliser les ressources humaines et améliorer les rapports et le suivi des activités d'application des règlements et d'inspection.

Réponse de la direction

La direction est d'accord avec cette recommandation.

À ce jour, la direction s'est concentrée sur l'établissement et le suivi des normes de rendement relatives à la mise en priorité opportune et à la répartition des appels.

Tel que décrit dans les conclusions de la vérification, les demandes de services relatives aux règlements sont cotées comme priorité 1, 2 ou 3 en fonction de l'urgence de l'infraction : pour les appels de priorité 1, on communique avec les plaignants et on répond à la plainte dans les 24 heures; pour les appels de priorité 2, on communique avec les plaignants et on commence le traitement de la plainte dans les 48 heures; et pour les appels de priorité 3, on communique avec les plaignants dans les 48 heures et on commence le traitement de la plainte dans les 7 jours.

La direction établira des normes d'achèvement et des cibles de rendement. Elle fera un examen de l'efficacité en 2006 dans le but d'améliorer l'utilisation du personnel. Étant donné les mises à niveau de la technologie nécessaire pour faire le suivi, on prévoit que les normes d'achèvement et les cibles de rendement seront en place vers la fin de 2007.

À noter qu'il faut plus de temps pour établir ces normes vu la diversité et la complexité des demandes de service. Par exemple, on peut résoudre en une journée une situation relative à la morsure d'un chien si les parties collaborent, si l'information est fiable et si d'autres facteurs sont présents. Par contre, le cas d'une autre morsure de chien peut exiger plusieurs mois à cause de la disponibilité des témoins, des processus d'appel et d'autres facteurs.

Recommandation 2

La directrice des Services des règlements municipaux devrait s'assurer que les coordonnateurs et les superviseurs élargissent leurs activités de suivi pour inclure le suivi du rendement global comparé aux normes établies, et cela afin de documenter les conclusions sur leurs activités de suivi, et qu'ils produisent des rapports périodiques au besoin sur ces résultats avec des suggestions d'amélioration du rendement global.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Tel que noté à la recommandation 1, la direction établira des normes d'achèvement et s'engage à en faire le suivi et à présenter des rapports. Il faudra faire des améliorations technologiques pour mettre en œuvre les normes et en faire le suivi électroniquement.

Recommandation 3

La directrice des Services des règlements municipaux, en collaboration avec la Direction des services de technologie de l'information, devrait trouver des moyens d'améliorer l'efficacité opérationnelle par l'utilisation des outils technologiques disponibles, et s'assurer que les possibilités technologiques sont notées et évaluées périodiquement.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les Services de technologie de l'information ont déjà amorcé des discussions avec la Direction des services des règlements municipaux pour examiner ses besoins en technologie et en outils connexes afin d'aider la Direction à réaliser des économies opérationnelles. On prévoit que des discussions officielles et des séances de planification commenceront au cours du premier trimestre de 2006 afin de définir les possibilités technologiques, les exigences budgétaires et d'établir un plan de mise en œuvre d'ici à la fin de 2006.

Recommandation 4

La directrice des Services des règlements municipaux devrait s'assurer que les comptes de caisse surprise font partie intégrante des activités de manutention de l'argent comptant

effectuées par la Division de la délivrance des permis et des programmes, tel que recommandé par la vérification interne de 2004.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La Division de la délivrance des permis et des programmes traite de l'argent comptant pour les activités reliées à la vente, au renouvellement et au transfert des permis de taxi et autres permis. En 2004, la vérification interne des processus de recouvrement des recettes a examiné : la séparation des responsabilités et des procédures de fin de journée, le traitement et l'enregistrement des reçus en temps opportun, le rangement sécurisé de la caisse, la réception centralisée des espèces, et la surveillance par les superviseurs et les gestionnaires. La vérification actuelle (2005) a constaté que toutes les recommandations ont été mises en œuvre sauf les comptes de caisse surprise.

La direction a déjà entamé le processus visant à faire une vérification interne des pratiques de gestion de caisse et s'assurera d'établir une approche officielle avant la fin du premier trimestre de 2006.

Recommandation 5

La directrice des Services des règlements municipaux, avec son homologue des Services généraux, devrait :
   a) **s'entendre officiellement sur qui a la responsabilité globale de s'assurer que les contrôles du cycle des recettes de tous les règlements municipaux sont établis, examinés, rapprochés et évalués régulièrement; et**
   b) **s'assurer d'établir un plan pour dépister et corriger toute faiblesse des contrôles y compris une mise à jour des organismes délégués et le rapprochement des contraventions de stationnement émises.**

Réponse de la direction

La direction est d'accord avec ces recommandations.

La directrice des Services des règlements municipaux a rencontré le trésorier municipal et le greffier de la Ville pour clarifier et confirmer les responsabilités relatives aux processus et au contrôle des recettes.

Plusieurs modifications ont été mises en œuvre par le biais du programme ParkSmart et des processus de l'administration des contraventions dans le but d'améliorer la responsabilisation globale.

La direction reconnaît que d'autres améliorations sont nécessaires pour assurer des contrôles et des processus adéquats visant l'optimisation et le rapprochement des recettes.

En conséquence, un comité interservices a été mis sur pied et commencera à se réunir régulièrement en 2006 pour s'assurer que les contrôles appropriés sont en vigueur d'ici le quatrième trimestre de 2006.

Recommandation 6

La directrice des Services des règlements municipaux devrait s'assurer que les risques pour la santé et la sécurité auxquels sont exposés les agents d'application et d'inspection sont évalués annuellement, y compris l'évaluation de l'efficacité des mesures prises pour contrer ces risques.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Selon la vérification de 2005, les Services des règlements ont entrepris « un bon ensemble de mesures proactives et réactives pour assurer la conformité aux règlements et pour répondre de façon efficace aux préoccupations de santé et de sécurité ». Par contre, la vérification a indiqué aussi qu'il serait souhaitable d'évaluer tous les ans les 5 ou 6 dangers principaux et d'instaurer des mesures correctives adéquates.

La direction s'assurera de compléter cet examen annuel d'ici le quatrième trimestre de 2006. À l'appui de cet examen, la direction a commencé le processus de formation d'un comité conjoint de santé et sécurité au travail, composé de membres de la direction et du personnel de chaque secteur de service, qui se penchera sur les risques pour la santé et la sécurité.

De plus, la direction reconnaît le fait qu'une meilleure formation réduira les risques pour la santé et la sécurité auxquels sont régulièrement exposés les agents. Par conséquent, le modèle de déploiement comprend la création d'un poste d'agent de formation et de coordination responsable de la formation et de l'évaluation des agents. Le bureau de formation devrait être en place d'ici le quatrième trimestre de 2006.

Recommandation 7

La directrice des Services des règlements municipaux devrait prévoir un examen officiel des réalisations réelles liées à la mise en œuvre du nouveau modèle en rapport à ses objectifs de rendement d'origine, dans les 12 à 18 mois suivant le début du projet, et lorsque les éléments principaux seront en place.

Réponse de la direction

La direction est d'accord avec cette recommandation. La direction a déjà prévu, pour le quatrième trimestre de 2007, un examen du déploiement après sa mise en œuvre.

Recommandation 8

La directrice des Services des règlements municipaux devrait exiger des évaluations officielles, opportunes et périodiques (au moins tous les trimestres) des dates d'achèvement des projets importants comparées aux objectifs des autres règlements à harmoniser, et cela jusqu'à ce que ces projets soient réalisés.

Réponse de la direction

La direction est d'accord avec l'intention de cette recommandation.

La direction a mis sur pied une équipe de projets distincte qui se réunit tous les mois et examine continuellement les dates d'achèvement et les priorités des projets. Ces informations sont inscrites au tableau « radar » de l'équipe de projets qui est distribué à tous les membres de l'équipe. Ce tableau est examiné par l'Équipe de haute direction et l'équipe de gestion de la Direction, puis présenté au Conseil sous forme de mises à jour régulières et de présentations à divers comités comme celui des SPU et le CAAR.

Recommandation 9

La directrice des Services des règlements municipaux devrait évaluer et surveiller systématiquement les éléments de risque qui pourraient retarder encore le projet d'harmonisation.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Pour faire suite à la réponse à la recommandation 8, la directrice rencontre (et continuera à rencontrer), une fois par mois, les équipes de projets et de gestion de la Direction pour faire le suivi et évaluer les zones de risque liées à l'harmonisation des règlements municipaux. La direction attend également une réponse du gouvernement provincial sur la promulgation de la *Loi sur la Ville d'Ottawa* qui permettra l'application différente des règlements en fonction de la situation géographique. À cause des défis posés par la diversité rurale/urbaine relative à la promulgation de nouveaux règlements, le gouvernement provincial a repoussé jusqu'à la fin de 2007 la date d'échéance de l'harmonisation des règlements restants sur les permis. On prévoit que toute l'harmonisation sera terminée à ce moment-là.

Recommandation 10

La directrice des Services des règlements municipaux devrait mettre en œuvre une initiative pour définir les secteurs-clés stratégiques, opérationnels et de projet qui sont à haut risque et où des techniques systématiques de gestion des risques pourraient être appliquées.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les pratiques de gestion actuelles comprennent la gestion des risques sous forme de limitation du risque de responsabilité et le confinement des risques négatifs dans les secteurs qui affectent le personnel de la Direction et les clients, de même que la gestion efficace des risques des possibilités. On reconnaît que la présentation de la bonne information à l'équipe de gestion de la Direction est nécessaire à la prise de décisions efficaces relatives à la gestion des risques. On prévoit que l'examen de l'efficacité de 2006 aidera à la réalisation de cet objectif et qu'il fera partie du plan de travail des Services des règlements municipaux.

Recommandation 11

La directrice des Services des règlements municipaux devrait inclure la gestion des risques dans les plans de formation des gestionnaires et du personnel de la Division de l'application des règlements et des inspections.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Pour faire suite à la réponse à la recommandation 10, les risques opérationnels clés seront définis au cours de l'examen de d'efficacité de 2006 et intégrés aux plans de formation des gestionnaires et du personnel.

Recommandation 12

La directrice des Services des règlements municipaux devrait assurer une approche plus structurée pour produire et justifier les résultats de rendement des opérations et des programmes de la Division de l'application des règlements et des inspections, y compris des rapports de rendement périodiques qui comparent les rendements réel et prévu et requièrent une évaluation des écarts significatifs et des mesures correctives.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Le cadre général de mesure du rendement a établi des mesures OMBI comme priorité pour la mesure du rendement. Le plan de responsabilisation annuel de la Direction sera renforcé en 2006 pour tenir compte du rendement stratégique, opérationnel et de programmes. En 2005, la direction avait déjà mis en œuvre 17 mesures de rendement OMBI sur l'application des règlements et 7 mesures de rendement sur les permis. Au cours du premier trimestre de 2006, la direction prévoit établir d'autres mesures OMBI : 22 sur l'application des règlements et 10 sur les inspections. Le suivi sera fait tous les mois au sein de la Direction et par les membres de l'équipe de la haute direction du département.

Recommandation 13

La directrice des Services des règlements municipaux devrait introduire une approche plus structurée pour améliorer les pratiques de gestion en utilisant un cadre de contrôle de la gestion et un modèle logique.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La direction prévoit compléter un modèle logique de la Direction au cours du premier trimestre de 2006. Cela servira à illustrer les liens de cause à effet entre les activités, les extrants et les résultats, et aidera la direction à déterminer les questions critiques d'évaluation et les secteurs à privilégier. Les services et la Direction sont en train de renforcer le cadre existant de contrôle de la gestion. Les secteurs qui doivent faire l'objet de rapports, la nature et la fréquence des rapports ont été documentés et seront examinés par des gestionnaires individuellement et en groupe par l'équipe de gestion de la Direction.

Recommandation 14

S'assurer que l'équipe de gestion de la Division de l'application des règlements et des inspections utilise le cadre de contrôle de la gestion pour autoévaluer ses pratiques de gestion tous les ans au moment de la planification pour déterminer les priorités d'amélioration de la nouvelle année.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Pour faire suite à la recommandation 13, la Direction utilisera le cadre amélioré de contrôle de la gestion pour évaluer tous les ans l'efficacité de ses pratiques de gestion. Les résultats des suivis continus, des rapports réguliers d'activités et des rapports périodiques sur les programmes (p. ex., l'examen de 2006 sur l'efficacité), de même que les rapports de rendement des finances et des ressources humaines serviront de base à l'exercice de planification entrepris par la Direction.

Réponse générale de la direction

En 2001, à la suite de la fusion de la Ville d'Ottawa, la Direction des services des règlements municipaux a été créée. Celle-ci a réuni 12 cadres de réglementation différents et 67 équivalents à temps plein (ÉTP) chargés d'administrer et d'appliquer quelque 500 règlements municipaux différents. Au cours du processus du budget de 2004, le Conseil a approuvé la restructuration des Services des règlements municipaux en consolidant la plupart des services d'application des règlements et d'inspection dans un secteur, et cela afin de réaliser plus d'efficacité et d'économie. Cela a provoqué le transfert de l'application des règlements relatifs au stationnement, au zonage, aux biens-fonds, ainsi
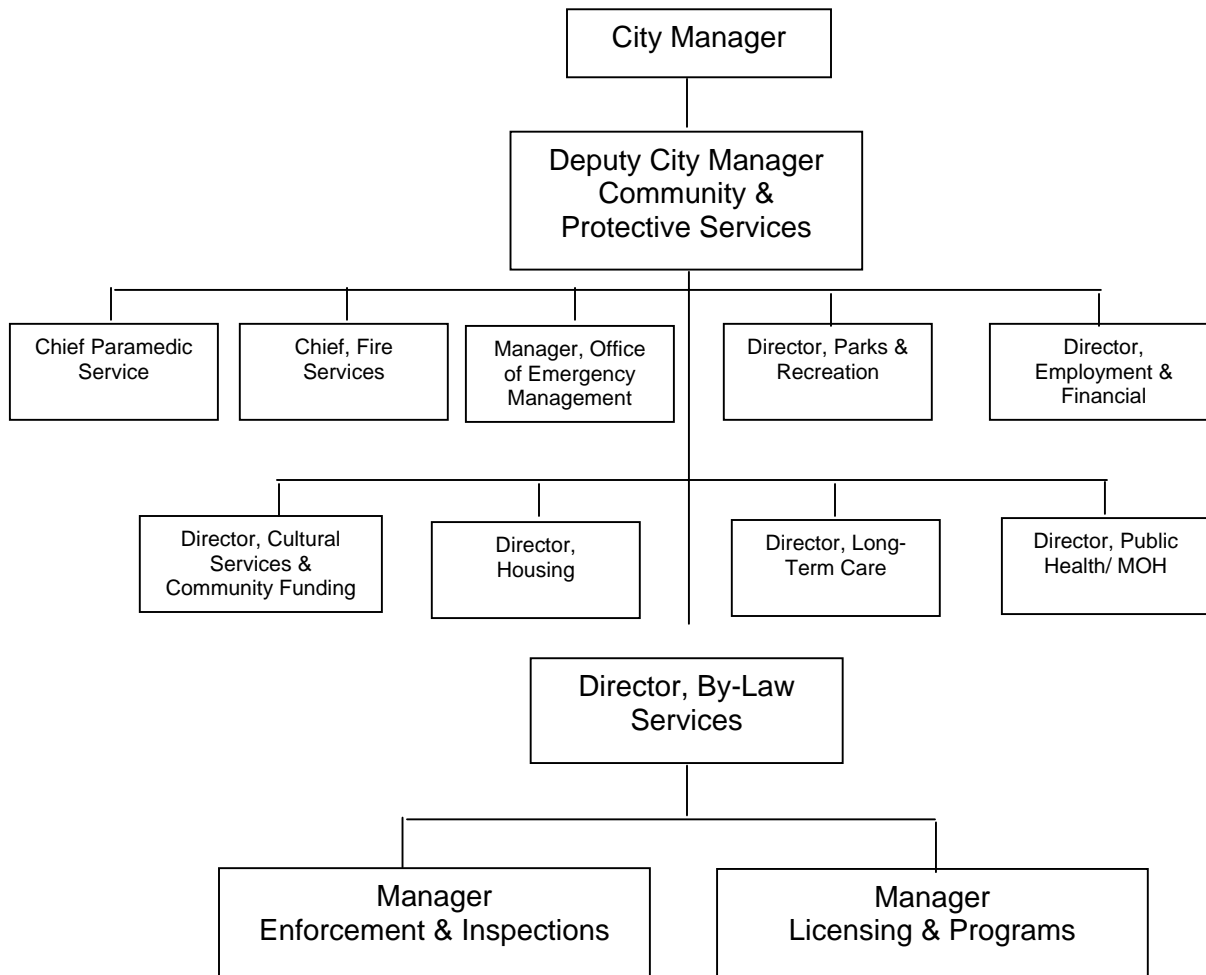
que le transfert des licences de loterie et d'événements spéciaux, et a créé ainsi une nouvelle Direction des services des règlements municipaux avec 147 ÉTP.

Situés à l'origine dans 10 lieux différents, régis par plusieurs conventions collectives différentes et différents modèles de service, les Services des règlements municipaux tâchent de consolider et d'harmoniser leurs règlements et politiques afin de fournir des services de façon économique et efficace. Même si environ 85 % des règlements ont été consolidés, les Services des règlements municipaux ont surmonté d'importants défis pour harmoniser leurs nombreux règlements. Ottawa est la seule ville fusionnée de sa taille qui a dû consolider et harmoniser divers règlements et processus dans des milieux urbains et ruraux. Même la ville de Toronto n'a pas eu à appliquer un processus aussi large puisque ses règlements de délivrance de licences étaient déjà harmonisés en vertu d'un système de palier supérieur. De plus, Toronto n'a pas eu à faire face à une géographie urbaine/rurale aussi diverse.

La Direction apprécie et appuie la vérification de 2005 et approuve de façon générale les recommandations proposées. La Direction a l'intention de profiter de l'examen de l'efficacité de la Direction qui sera entrepris en 2006 pour réaliser ces objectifs.

1.0   Background

By-Law Services is a Branch within the Community & Protective Services Department of the City. The Branch is comprised of two Divisions: Enforcement & Inspections and Licensing & Programs. In 2005, there were 146.4 full-time equivalent positions in By-Law Services. The overall structure of the Branch is presented below.

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                              ┌─────────────────┐
                              │  City Manager   │
                              └─────────────────┘
                                       │
                         ┌──────────────────────────────┐
                         │   Deputy City Manager         │
                         │   Community &                 │
                         │   Protective Services         │
                         └──────────────────────────────┘
```

| Chief Paramedic Service | Chief, Fire Services | Manager, Office of Emergency Management | Director, Parks & Recreation | Director, Employment & Financial |

| Director, Cultural Services & Community Funding | Director, Housing | Director, Long-Term Care | Director, Public Health/ MOH |

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                         ┌─────────────────────┐
                         │  Director, By-Law    │
                         │  Services            │
                         └─────────────────────┘
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| Manager Enforcement & Inspections | Manager Licensing & Programs |

The Enforcement and Inspections Division protects health, safety, and property through the enforcement of a series of regulatory by-laws including, but not limited to: noise; signage on private and public properties; fences; zoning; property standards; pool enclosures; animal care and control; taxi licensing; parking control; and, smoke-free areas. Other related services and activities performed by the Branch include:

- Project and policy work to develop, implement and maintain municipal by-laws;

- Prevention of by-law contraventions through educational programs;

- Officer dispatching;

- Monitoring and enforcement at special events;

- Operation of the municipal spay/neuter clinic; and

- Development and administration of agreements with external agencies (e.g. Pound Services).

In 2004, approximately 49,000 "Requests for Service" (RFS) were received and responded to. The major RFS categories were parking (16,300), animals (11,300), and noise (8,100).

The following table summarizes the key components of the 2004 and 2005 operating budgets for the By-Law Services Branch:

By-Law Services	2004 Budget	2005 Budget
By-Law Enforcement & Licensing	5,609	$6,027
Parking Enforcement	4,799	5,005
Other Programs	1,338	1,367
Total Gross Expenditures	**$11,746**	**$12,399**
Recoveries and Revenues	($17,510)	($17,610)
Net Requirement	**($5,764)**	**($5,211)**

2.0   Objective

The objective of this audit was to assess the adequacy of the management and operational practices of By-Law Enforcement & Inspections within the By-Law Services Branch, including:

- Compliance with all laws, regulations and policies;
- Financial Management and controls; and
- The economy, effectiveness and efficiency of operations.

3.0   Audit Scope

The scope of the audit included an examination of management and operational practices of the Enforcement and Inspections Division (EID).   The Licensing and Programs Division (LPD) of By-Law Services was included in the scope of the audit with respect to the administrative support services it provides to enforcement and inspection (dispatch, financial management, database maintenance).   The scope also included by-law revenue reconciliation procedures conducted by the Courthouse & Provincial Offence Services Division of Corporate Services.

In addition, the scope will include discussions with other municipalities (Calgary and Mississauga) regarding best practices.

4.0   Approach and Methodology

At the outset of this audit, the auditors were to review all operational and management aspects of Enforcement and Inspections including:

- The Division's management framework;
- Examination of operations to assess whether resources are used (staffing and equipment) in an economical and efficient manner;
- Evaluation of performance measures;
- Assessment of compliance to internal policies and procedures;
- Assessment of the strategic alignment of the Division's objectives to overall corporate objectives;
- Follow-up on applicable recommendations arising from the 2001 Audit of Parking Ticket Revenue and Processes;
- Benchmarking services and activities, and expenditures against similar operations in other municipalities; and
- Identifying opportunities to improve the effectiveness, efficiency, or economy of EID activities.

During the conduct of the planning phase of this audit, we refined the audit scope and produced a set of audit issues to be addressed with related audit criteria.

During the detailed examination phase of this audit, we relied upon the following techniques to collect audit evidence regarding current practices for all of the various issues as appropriate for the issue at hand:

- Conducted interviews with a sample of managers and staff;
- Conducted reviews of pertinent files or documentation;
- Selected a sample of files for review of specific transaction practices;

- Conducted a physical walk-around of facilities to get a first-hand impression of the layout and security considerations, etc.;
- Established contact with, interviewed, and obtained copies of pertinent documentation from, a sample of municipal government administrators with respect to identifying best practices; and, finally
- Participated in "ride-alongs" with a sample of Enforcement and Inspection Officers to gain a first-hand impression and flavour of their working environment and the types of problems and issues they encounter when conducting their duties.

5.0 Findings & Recommendations

5.1 Service Delivery

5.1.1 Efficient and Effective Utilization of Staff

Key changes are underway to deploy the Enforcement and Inspection Division's (EID) resources in a more efficient and effective manner. Further changes in management practices, systems functionality and technology tools are required for the By-law Services Branch to be able to fully establish, monitor and provide assurance that the delivery of services meets or exceeds expectations of efficiency and effectiveness.

With almost 50,000 RFSs annually, it is an immediate and prominent issue that EID resources will need to be used efficiently and effectively to meet the needs of residents, visitors and Council members on a timely basis. Accordingly, one of the first issues examined was to identify what objectives had been set for staff resource utilization. It was noted that no formal definition of what constituted economic and efficient utilization of EID staff has been established.

While there were no resource utilization objectives (e.g. RFSs completed per day /per officer), the following sets of priorities are in use including standards for "response" and "action commenced by" for these different priority sets. All of the different by-laws and related by-law circumstances are categorized under three different sets of priorities and service standards as follows:

- Priority 1 - these by-laws have a "response" standard (Officer to establish contact with a complainant that they are the Officer responsible for actioning the complaint) of within one day. Under this category, the Officer must also advise the complainant that they have begun to take "action" (an "action" standard) on the complaint within the same one-day standard;

- Priority 2 - these by-laws have a "response" and an "action" standard of "within 48 hours", i.e. they must both respond to the complainant and commence action to resolve the complaint within the same standard of 48 hours; and finally

- Priority 3 - under these cases the "response" standard is "within 48 hours" but the "action" standard is "within 7 days".

In further discussions with management representatives we determined that:

i.   actions taken by the Officers to resolve complaints must be "reasonable" without a precise definition as to what that meant except that it was desirable that the actions satisfy both the complainant and the "defendant";
ii. actions should be "completed" (or the case closed either by mutual consent of the complainant and the defendant or by the issue of a ticket to the defendant) on a "reasonably timely" basis. Here again this remained undefined. Management indicated that there was too wide a range of individual circumstances surrounding cases that it was not practical to set a standard for "completion" of cases.

It was noted in our discussion with another municipality (Calgary) that completion standards are in use with such standards as 90% completion by 10 days, 95% completion by 30 days and 100% completion by 60 days.

As far as establishing standards to help with identifying workload, management stated that they do not attempt to establish standards for person-hours required to process the different categories of by-law "request for service" (RFS) situations. They stated that they try to consider workload and case assignments based on a "gut-feel" approach considering the differing volumes of the various RFS categories and their knowledge of the work required.

We are concerned that the failure to set standards for workload and for completion times for the different categories of RFS situations leaves management in a position where they cannot give a complete and reliable accounting for key aspects of EID performance. They are put in the position of being unable to ensure that resources are utilized in the most efficient and effective manner and to objectively set a basis for reliably accounting for EID performance based upon calendar time taken to complete actions on the different categories of cases undertaken. Further observations regarding Performance Management are presented in Section 5.4 of this report.

Recommendation 1

The Director, By-Law Services Branch should expand existing service standards to include completion standards and performance targets to improve upon staff utilization, monitoring and reporting for EID activities.

Management Response

Management agrees with this recommendation.

To date, Management has concentrated on setting and monitoring performance standards for the timely prioritization and dispatch of calls.

As set out in the audit findings, by-law requests-for-service (RFS) are categorized as priority 1, 2 or 3 calls in accordance with the urgency of the infraction: for priority 1 calls, complainants are contacted and calls actioned within 24 hours; for priority 2 calls, complainants are contacted and action commenced within 48 hours, and; for priority 3 calls, complainants are contacted within 48 hours and action commenced within 7 days.

Management will undertake to establish completion standards / performance targets and will work to improve staff utilization through a 2006 efficiency review. Given technology upgrades required for tracking purposes, it is expected that completion standards and performance targets will be completed and in place by the end of 2007.

It should be noted that the longer timelines needed to establish those standards are due to the wide variability in the nature and sophistication of different requests for service. For example, one dog bite call may be resolved within a day based on cooperation of the parties, reliability of information and other factors, while another dog bite call may take several months to close based on availability of witnesses, appeal processes and other factors.

Monitoring of Service Delivery

To ascertain the monitoring practices of EID Coordinators and Supervisors (C/S), we discussed these matters with a sample of C/S's and determined that their monitoring activities focused on the following:

- Monitoring of Officer shift start times;
- Monitoring the timeliness of Officer responses to RFS cases;
- Reviewing the commencement and completion of RFS cases;
- Reviewing the MAPP system information to identify all open cases so they could review with the respective responsible Officer as appropriate and as necessary;
- Reviewing all still active cases to ensure that there was an active on-duty officer responsible for continuing action on them; and, finally
- Reviewing the various logs that have to be completed by the Officers on-duty to ensure that they were appropriately completed and accounted for.

In our opinion these are all acceptable monitoring practices. However, if completion standards are established, then C/Ss can monitor cases that have not met the standards and therefore require attention.

In addition, monitoring could be enhanced with additional attention paid to the achievement of overall performance by Officer and by Organization in terms of things like: (i) the percentage of time that overall targets were achieved (such as the number of days required to resolve a particular category of RFS case, e.g. "dog bites", resolved within 3 days, 90% of the time, etc.); and (ii) performance in case "completion" times.

Recommendation 2

The Director, By-law Services Branch should ensure Coordinators and Supervisors expand their monitoring activities to include the monitoring of overall performance against established standards to keep a record of their monitoring findings and to report periodically as appropriate on these findings to include suggested actions to take to improve on overall performance achievement.

Management Response

Management agrees with this recommendation.

As noted in recommendation 1, Management will work to establish completion performance standards and agrees that they should be monitored and reported upon. Technology enhancements will be required to implement and track the standards electronically.

Technological Support of Service Delivery

Our approach here was to interview a sample of managers and staff to determine existing practices which seek to use technology in support of effecting improvements in service delivery performance.

We determined that there has been no recent formal assessment carried out of the technological needs of Enforcement and Inspection Officers and management to support the effective and efficient delivery of EID activities. In addition, we found out that management is not aware of any feasibility studies underway with respect to adopting or adapting new uses of technology to support improved service delivery.

While there may be no formal studies or assessments underway, we can state that there is no shortage of ideas from staff with respect to possible uses of technology that could result in potentially very dramatic impacts in Enforcement and Inspection activities and service to the public. Examples include:

- Providing EID Officers with on-line access to the MAPP computer information system for purposes of entering case resolution and performance information (One supervisor estimates that the average Officer spends up to half of their time maintaining records on case resolution and subsequently re-entering that same information to the MAPP system when they get access to a computer back at the

Office.) Another potential advantage to on-line access is more timely Officer access to key case information on file if it is relevant to their case. In our best practices review, we determined that the Cities of Calgary and Mississauga currently provides on-line access to all of their EID Officers; and,

- Examining the functionality of the MAPP system with respect to providing Bring Forward (B/F) information automatically to Coordinators and Supervisors once completion targets are established. This would ensure more timely and complete control over RFSs that have outstanding actions.

Recommendation 3

The Director, By-law Services Branch, in concert with the Information Technology Services Branch, should pursue opportunities to enhance operational efficiency through the use of available technology tools and ensure that technology opportunities are recorded and evaluated on a periodic basis.

Management Response

Management agrees with this recommendation.

The Information Technology Services (ITS) Branch has already initiated discussions with the By-law Services Branch with respect to reviewing technology requirements and related tools to assist the Branch in pursuing their operational efficiencies. It is anticipated that formal discussions and planning sessions will commence in Q1 of 2006 with a view to providing and defining technology opportunities, budget requirements and a go forward plan by the end of 2006.

5.1.2 Financial Management Practices

Lack of clarity over who has the overall responsibility for ensuring appropriate controls over all aspects of the revenue cycle related to by-law revenue creates vulnerability in the controlling of completeness, accuracy and timeliness.

We reviewed a sample of EID transactions for compliance to payment cycle requirements. We found that purchase order requirements were appropriate and the payments were subject to appropriate receiving and payment validation procedures before invoices were paid. The financial officer performing most of the payment cycle controls is part of Licensing & Programs Division (LPD).

EID generates a significant amount of revenue through enforcement and licenses, parking tickets and other sources. The revenue projection for 2005 is $17.6M. Revenue cycle practices and controls related to this income for the City is shared between the By-law Services Branch and Courthouse & Provincial Offences Services (CPOS) which is part of Corporate Services.

Licensing

The Licensing and Programs Division (LPD) operates a cash handling operation for the sale, renewal and transfer of taxi and other licenses. In July 2004, an internal audit of revenue collection procedures at LPD was conducted by the City. As part of the audit of EID, we followed up on the actions taken by LPD to address the recommendations of the internal audit which covered:

- Segregation of Duties and End-of-Day Procedures
- Timely Processing and Recording of Receipts
- Custody of Cash
- Secure Storage
- Centralized Receipt of Cash
- Supervisor/Manager Oversight

The actions taken to implement the recommendations were reviewed with the LPD supervisor and a walk through was made of the cash handling area and secure storage. For the most part, the recommendations have been implemented with the exception that surprise cash counts and recommendations relating to additional documentation for custody of cash are not yet done.

Parking Tickets

As a result of Corporate re-structuring in 2004, responsibility for the issuance of parking tickets and the administration of the deputization program was transferred to the By-law Services Branch. As part of this restructuring, responsibility for the City's Parking Ticket Management System was transferred to the Courthouse & Provincial Offences Services Division within Corporate Services.

The City has conducted two previous internal audits, in 2001 and in 2003, with a series of recommendations made. The major issues outstanding from the structural changes and previous internal audits are discussed below.

We noted that By-Law Services and CPOS now share roles in the revenue cycle related to controls for completeness, timeliness and accuracy of revenue recording. Responsibilities for completeness and timeliness of recording starts with By-law Officers working in EID who must ensure their parking tickets are input to the Auto Proc system on a timely basis. To facilitate timeliness and accuracy, EID makes maximum use of electronic ticket units that can be uploaded to Auto Proc each day.

LPD is responsible to maintain records of local organizations (e.g. condominiums, universities, property management companies, etc) that are deputized to hand out manual tickets. Deputized organizations are often not timely about submitting information regarding the tickets they have issued. When this occurs, reconciliation difficulties can arise if a payment is received before a record of the revenue is recorded.

CPOS has collection roles where parking tickets are unpaid beyond the due date or are contested in court. To ensure CPOS has accurate information to manage its collection roles, CPOS also has responsibilities to reconcile revenue received as recorded in Auto Proc to revenue received as recorded in SAP, the City's financial system. During our fieldwork we observed that CPOS had succeeded in completely reconciling revenue received as recorded in the two systems for the first time for the month of July 2005. Numerous system problems and lack of timely uploading related to EID and LPD responsibilities had prevented a complete reconciliation since CPOS took on the reconciliation responsibility in 2004.

We were advised that an Early Payment initiative to collect revenues faster is planned for the Fall 2005. As part of this initiative, parking ticket amounts will change such that older tickets held by deputized organizations will need to be replaced. Because the total number of deputized organizations is not fully known, further reconciliation difficulties will occur when old tickets are used.

Currently, the reconciliation performed by CPOS ensures that the details of revenue received according to the operational and financial systems are consistent. As yet, there is no reconciliation of every ticket "issued" to ensure it can be traced to a logical disposition which could be: revenue received; revenue in collection process; revenue cancelled; etc.

The current situation of the sharing of roles in the revenue cycle leaves overall responsibility for revenue management somewhat unclear. While By-law Services and CPOS have been working in cooperation to improve controls over completeness, timeliness and accuracy, it is unclear who has the overall responsibility for ensuring appropriate controls over all aspects of the revenue cycle related to by-law revenue are in place.

Recommendation 4

The Director, By-law Services Branch should ensure that surprise cash counts are implemented as part of the cash handling activities performed in the Licensing and Programs Division, as recommended in the 2004 internal audit.

Management Response

Management agrees with this recommendation.

The Licensing and Programs Division operates a cash handling operation for the sale, renewal and transfer of taxi and other licenses. An internal audit of revenue collection procedures was conducted in 2004 that examined: segregation of duties and end of day procedures; timely processing and recording of receipts; custody of cash; secure storage; centralized receipt of cash, and; supervisor/manager oversight. The (current) 2005 audit found that all 2004 recommendations had been implemented with the exception of surprise cash counts.

Management has already begun the process to undertake an internal audit of its cash management practices and will ensure a formalized approach is in place by the end of Q1 in 2006.

Recommendation 5

The Director, By-law Services Branch, in conjunction with a counterpart in Corporate Services, should:
a) **formally agree who has overall responsibility for ensuring appropriate revenue cycle controls for all by-law revenues are in place and are reviewed, reconciled and evaluated on a regular basis; and**
b) **ensure a plan is established to identify and correct control weaknesses including an up-to-date universe of deputized organizations and reconciliation of issued parking tickets.**

Management Response

Management agrees with these recommendations.

The Director, By-law Services Branch has met with the City Treasurer and City Clerk to clarify and confirm responsibility for revenue processes and controls.

A number of changes through the ParkSmart program and ticketing administration processes have been implemented to improve accountability overall.

Management recognizes that additional improvements are required to ensure that adequate controls and processes are in place to ensure revenues are being maximized and reconciled. As a result, an interdepartmental committee has been established that will begin meeting regularly in 2006 to ensure appropriate controls are in place and finalized by Q4 of 2006.

5.1.3 Compliance with Corporate and Branch Policies

Health and safety of By-law Officers represents one of the most important areas of compliance and overall management attention. While there was a good combination of pro-active and re-active measures to ensure compliance and that health and safety concerns are effectively addressed, the top 5-6 occupational safety and health hazards faced by EID officers are not systematically assessed each year to ensure appropriate mitigation measures are in place.

After discussion with representatives of management, we identified the following actions that are taken by management to ensure that staff are aware of and are in compliance with all-important issues that affect the health and safety of the Enforcement and Inspection Officers in the conduct of their duties:

- After the development of standard operating procedures (SOP's) or acceptance of significant changes to these procedures, management takes steps to ensure that the new SOP's are circulated to all staff and staff are expected to be fluent with the new procedures or the significant changes in procedures;
- The SOP's are written in such a way that they reflect the key health and safety issues that may apply under a given set of circumstances and include specific actions that must be taken by the Officers to protect them from harm when there is any possibility of a health and safety risk to the Officers;
- If there are any significant instances of non-compliance by staff with the SOP's, that these instances are raised at the regularly scheduled Coordinator/Supervisor (C/S) and staff meetings for discussion. If any staff member is found to be in non-compliance on a consistent basis, then it becomes a disciplinary matter between the respective C/S and the staff Officer;
- The C/Ss review all Health and Safety incident reports and personally review these with the Officer or Officers involved to assess the adequacy of the remedial actions taken;
- The C/Ss will review all Quarterly Health and Safety Committee reports; and finally,
- The C/Ss will review all applicable seasonal SOP's that could cause Health and Safety problems and they will review these with the staff at their regularly scheduled staff meetings.

In our opinion, the above actions represent a good combination of: (i) pro-active and re-active measures; (ii) communication with the staff; and (iii) actions initiated by management representatives to help ensure that health and safety concerns will be effectively addressed. However, given the critical health and safety exposure of EID officers and given that exposures change and evolve over time, it would also be beneficial to annually assess the top 5-6 occupational safety and health hazards faced by EID officers and ensure appropriate mitigation measures are in place.

Recommendation 6

The Director, By-Law Services Branch should ensure that health and safety risk areas faced by enforcement and inspections officers are assessed annually including assessment of the effectiveness of the measures taken to address health and safety risks.

Management Response

Management agrees with this recommendation.

The 2005 audit found that By-law Services undertook "a good combination of proactive and reactive measures to ensure compliance and that health and safety concerns are effectively addressed" but indicated that it would be beneficial to annually assess the top 5-6 occupational hazards and ensure appropriate mitigation measures are in place.

Management will ensure that this annual review is completed by Q4 of 2006. To support this review, Management is in the process of establishing a joint Occupational Health and Safety Committee comprised of management and operational staff from each of the service areas that will address health and safety risks.

In addition, Management has recognized that enhanced training will reduce health and safety risks faced by officers on a regular basis. As a result, the deployment model has identified the establishment of a training officer and coordinator to ensure Officers are properly trained and tested. The training office is expected to be in place by the fourth quarter of 2006.

5.2   Organizational Capacity

5.2.1   New Deployment Model
The project plans for the New Deployment Model project are well prepared and well communicated. In addition, the means to monitor project progress has been established. A formal review of the initiative once it has been implemented has not been scheduled but would prove helpful.

Within the past 12 to 18 months, the responsibility for conducting several new services were transferred to the By-Law Services Branch. These services were as follows: (i) Parking; (ii) Property Standards; (iii) Zoning; (iv) Tobacco Control; (v) Special Events; and (vi) Lotteries.

The transfer of these services presented the management of the By-Law Services Branch with an opportunity to reorganize itself and to alter the present deployment practices of the various enforcement components of the new By-Law Services Branch. Branch Management concluded that reorganization was essential in order to streamline the service delivery and ensure efficiencies by eliminating, or significantly reducing, duplications of service.

With these objectives in mind, the Branch set up a "New Deployment Model" (NDM) project to achieve the above objectives. A team was set up and started work on developing and getting Branch approval for an appropriate scope document in June 2004. A final scope document was submitted and approved by Branch management in July 2004. A final deployment and an implementation plan were submitted by the project team in February 2005 just prior to the commencement of this audit. The implementation plan was based upon dates for deliverables for four different components or sets of issues: (i) Human Resources; (ii) Communication and Change Management; (iii) Training; and, finally, (iv) Information Technology issues.

One of the objectives of this audit was to review the plans for the implementation of the NDM project and assess the extent to which milestones, roles and resources are clearly identified and

status reporting is prepared, reviewed and adjustments made on a timely basis. Another objective of the audit was to assess the effectiveness of project communication practices to ensure a reliable and timely understanding of how the new deployment model would impact on the delivery of Branch services and on the staff delivering those services and to gain staff support for a successful transition to the new deployment model.

We reviewed the project plans documentation for this project (project charter documentation) and determined that the project plans were well prepared and well communicated. The project planning documents for this project indicate that they supplied sufficient and appropriate information on project plans to enable the project to be well managed and controlled. Project plans provided detailed information on such things as: (i) Project phases; (ii) major activities; (iii) project milestones; (iv) project deliverables; (v) start dates; (vi) finish dates; (vii) duration of activities and phases; and, finally, on (viii) resources assigned to complete the project. Also, a review of the milestone status summary sheets showed that additional information was planned to be provided on such things as: (i) Status of activities (planned but not complete); (ii) Concerns and early warnings; and, finally, (iii) High risk issues. All of this would supply more than enough information to enable management to exercise effective review and control over project status.

When we discussed this project with By-Law Services Branch Management, they indicated that successful implementation of this project was critically important for the Branch. However, when we reviewed the detailed minutes of the bi-weekly By-Law Services Branch Management Team (BMT) meetings it was not clearly apparent that the NDM project had been subjected to a formal status review at any BMT meetings in 2004 or 2005. We also had been informed by Branch Management that there had been no formal risk analysis undertaken on factors that might adversely affect successful completion of the project even though there was provision in the planning documents for identification of such issues.

On the positive side again, there were plenty of signs, through review of the BMT minutes, that management had given considerable attention to understanding the new deployment model being proposed through discussion at BMT and through several scheduled separate meetings with project team members. It was also obvious that management wanted to ensure that staff would be given an excellent opportunity to understand and question the new model through a detailed presentation to all staff at an all-day "Town-Hall" type meeting with the new model given significant prominence on the agenda at a meeting scheduled in February 2005. In addition, in four separate half-day ride-along sessions with By-Law Officers there was no sign of negative response from staff to the new model being proposed. It appeared as if staff viewed the new model as an opportunity for service improvements and for possible personal job advantages.

Recommendation 7

The Director, By-Law Services Branch should schedule a formal review of the actual achievements of implementation of the new model against its original performance

objectives within 12 – 18 months after project initiation and once major aspects are considered implemented.

> ### Management Response
>
> Management agrees with this recommendation. Management has already planned a post-implementation review of the deployment that will be undertaken in the fourth quarter of 2007.

5.2.2   Harmonization Project

Harmonization project plans were well prepared and well communicated with a well thought out strategy paper including information to address and assess project risk areas. However, it was not apparent that there were formal periodic reviews of all project completion dates versus targets now that the project will likely continue for two years if the Province grants an extension.

In January 2001, the new City of Ottawa was formed out of an amalgamation of twelve (12) municipalities.   The new city inherited all of the by-laws that had been adopted by the previous municipalities. All of the previous municipalities had more or less the same by-law structure with much duplication but also many differences among the 500 or so different by-laws. Action was required to ensure that there was consistency in how the citizens of the new City would be treated instead of administering eleven different sets of by-laws covering basically the same topics.

With this in mind, the new city decided that one of their first orders of business had to be to develop a project which would aim to harmonize all of the different by-laws to eventually end up with one set of by-laws for all of its citizens. Early in 2001, work commenced on a By-law Harmonization project.

Under the issue of organizational capacity, this audit was asked to assess the status of the Harmonization Project and the prospects for effective review and management of the status of the project.

As per the NDM project discussed above, we found that the project plans were well prepared and well communicated with a well thought out strategy paper presented early for management's consideration. The planning documents and the milestone status summary sheets called for similar information as was presented for the NDM project. This included information to address and assess project risk areas.   Again, all of this provides management with an excellent base for exercising effective review and control over the project status.

It is our understanding that there were originally about 150 business licensing by-laws and schedules involving approximately 20,000 provisions and some 10,000 licensees to address. The strategy paper set out priority criteria to help in selecting and scheduling by-laws to be

harmonized. Four years into this process, Branch management has estimated that over 99% of the relevant regulations have been addressed through harmonization efforts to date and that approximately 85% of business licensing harmonization issues have been addressed as well.

From the Harmonization Project plans documentation that we reviewed, it appeared to us that the Harmonization project team had early and clearly laid out some difficulties that would be faced, particularly when attempting to address business licensing harmonization issues, and this included the need for extensive consultation with the business clients over details.

From our review of the BMT minutes, it was apparent that the status of the "Harmonization" Project was a frequent item on the BMT agenda over the last four plus years. It is not clear from the minutes just exactly what was discussed at these meetings but it was clear that progress was being made in harmonized by-laws being presented to the Emergency and Protective Services Committee and ultimately to City Council for final approval.

Having said all this, it was not apparent to us from our review of documentation relating to the project that there was a formal periodic review of all project completion dates versus targets. Nor, in spite of the indications that risk information was addressed in the planning documents, was it apparent that in fact there had been a thorough assessment of risks and the implications that these had in terms of successful completion of the Harmonization Project.

At the time of our drafting of this report document, we were made aware that the City will be asking the Province for a two-year extension to the law permitting the city to review and harmonize its licensing by-laws. If this request is approved, it would extend the timeframe for the Harmonization Project to be completed by December 31, 2007.

Recommendation 8

The Director, By-Law Services Branch should require that there be formal, timely, and periodic (probably at least on a quarterly basis) assessments of important project completion dates versus targets for remaining universe of by-laws to be harmonized, until such time as the project is successfully completed.

Management Response

Management agrees with the intent of this recommendation.

Management has established a separate Project Team that meets on a monthly basis and continually reviews project completion dates and priorities. This information is captured on a Project Team radar chart, which is distributed to all team members and reviewed with the Senior Management Team, the Branch Management Team and reported to Council through regular updates and presentations to various committees such as EPS and ARAC.

Recommendation 9

The Director, By-Law Services Branch should systematically assess and monitor risk areas that could lead to further delays to the Harmonization project.

> **Management Response**
>
> Management agrees with this recommendation.
>
> Further to the response to Recommendation 8, the Director currently meets, and will continue to meet, on a monthly basis with the project and Branch Management team to monitor and assess risk areas in the harmonization of by-laws. The Branch is also awaiting a response from the Province on the enactment of a new City of Ottawa Act, which will allow regulations to be enacted differently based on geography. As a result of the challenges related to the rural/urban diversification in terms of enacting new regulations, the Province has also extended the expiry date for the harmonization of the remaining licensing by-laws until the end of 2007. It is anticipated that all of the harmonization work will be completed by this date.

5.3   Risk Management

Risk management is a discipline that seeks to anticipate future events and circumstance that may impair or disrupt the achievement of organizational objectives. The pace of change, due diligence expectations and other drivers are creating a need for systematically managing risk in key areas of the City such as by-law enforcement and inspection.

We noted some examples of risks being explicitly identified including the Project Charter for the Deployment Model. However, for the most part, risks are being managed informally/initiatively.

The operations of EID pose considerable health and safety risks for By-law Officers and the potential to create considerable reputation loss for the City. In addition, there are significant projects such as by-law harmonization where delays and consultations can lead to additional cost and frustrated residents and visitors.

The benchmarking survey conducted by the audit team on EID practices noted risk management initiatives in other municipalities at the operational level. For example, in Calgary, businesses that are licensed are rated as high, medium and low risk. In addition, Calgary has an organization-wide initiative on risk management and training has been provided the EID managers.

The City of Ottawa does not yet have a corporate level project to strengthen risk management practices. Considering the inherent risk in EID operations and projects, there is no reason to wait for central direction before initiating a more systematic and structured approach to risk management.

Recommendation 10

The Director, By-law Services Branch should establish an initiative to identify key strategic, operational and project areas of higher risk where more systematic risk management techniques can be integrated.

Management Response

Management agrees with this recommendation.

Current management practices include risk management in the form of minimizing liability exposure and containment of negative risk in areas affecting both Branch staff and clients and the effective management of opportunity risk. It is recognized that presenting the right information to Branch Management is essential to enabling effective risk management decisions. It is anticipated that the 2006 efficiency review will help meet this objective and will be included as part of the By-law Services work plan.

Recommendation 11

The Director, By-law Services Branch should include risk management in EID training plans for managers and staff.

Management Response

Management agrees with this recommendation.

Further to the response to Recommendation 10, as part of the 2006 efficiency review, key operational risks will be identified that can be built into training plans for managers and staff.

5.4 Performance Management

By-law Services Branch collects and reports information on its enforcement and inspection activities (e.g. number of requests for a particular service), however, it has not yet established an approach to collecting, monitoring and reporting on how well it performs its activities.

Our review of performance management determined that there was a two-page set of performance indicators and measures identified for the By-Law Services Branch that was created during the Universal Program Review (UPR) exercise conducted for the City of Ottawa in 2003. According to EID Management however, these indicators and measures have never been formally adopted for official use in the management of EID activities.

The set of indicators and measures presented in the UPR paper are measurable in most cases, but they are not always useful for assessment of performance. For example, identifying the absolute average number of RFS cases handled per Officer per year tells you nothing about performance except in a relative way. If the number of cases is rising from year to year, that is about all you

know because you require some further information regarding standards and the meeting of those performance standards before such information becomes useful for performance purposes.

From another perspective, there is some useful information provided about standards set for resolving certain types of RFS situations. For example, it is stated that 3 days has been identified as a standard for resolving "dog bite" cases. Again this is interesting information but one really needs to know the actual number of days being taken to resolve "dog bite" cases before starting to consider actions that will be useful to improve EID performance.

Another example of interesting information is the case where management has set a general target that they will reduce the number of dogs and cats sheltered. This will give you a general indication of which direction your performance is headed but it says nothing about what you can do and what you aim to do. This is also an example of the type of information that limits accountability for results because of the absence of an objective target being set for say reducing the number of dogs and cats sheltered. If a target is not set in advance then there is no objective basis for assessing actual performance.

Performance Reporting Practices

When we discussed this matter with EID Management, they stated that they were not aware of any Branch in the City of Ottawa administration that was required to submit periodic performance reports to City Management. They stated that the Quarterly Activity Report is the key report used relating to the management of EID activities. This report is apparently used to help enlist support (from Council members) for any proposed resource requirements or actions proposed by EID Management.

The Quarterly Activity Report is just that, a report on the number of EID activities conducted. It can be used to tell one whether numbers are increasing or decreasing but it fails to tell you important information on workload as opposed to volumes. Actual workload is determined by multiplying volumes for activities by unit efficiency standards to give you a total workload by activity and by rolling all of these up to give you an indication of the total workload requirements.

Performance Reports

From the above, it is apparent that there are no formal requirements for EID Management to submit periodic reports on their effectiveness and efficiency to higher-level management in the Branch or within the City of Ottawa administration. We were not made aware of any type of performance reports, formal or informal, produced with respect to the management of EID activities. A complete set of performance reports would address: (i) significant aspects of the effectiveness and efficiency of EID operations; (ii) significant aspects of quality and level of service; and, (iii) other significant aspects of numbers or costs that were relevant to proper management of EID operations and good performance.

<u>Recommendation 12</u>

The Director, By-law Services Branch should ensure a more structured approach to delivering and accounting for EID operational and program performance results including periodic performance reports that compare actual versus planned performance and requires an assessment of significant variances with actions to address those variances.

> **Management Response**
>
> Management agrees with this recommendation.
>
> The Corporate Performance Measurement Framework established OMBI measures as a priority area for performance measurement. The annual Branch Accountability Plan will be strengthened in 2006 to reflect strategic as well as operational and program performance results. Management has already implemented 17 enforcement OMBI performance measurements and 7 licensing performance measurements in 2005 and will be implementing an additional 22 enforcement and 10 inspection OMBI measures in Q1 of 2006. Monitoring and reporting will be occurring on a monthly basis within the Branch and among the Departmental Senior Management Team.

5.5   Governance

The current approach to the development of management and operational practices and controls does not follow a structured approach. A structured approach can help strike the correct balance between informality and formality in the practices used to manage enforcement and inspections.

Management practices refer to the overall approach and methods used to establish and communicate organizational objectives and outcomes, manage risk, maintain sufficient organizational capacity, efficiently and effectively deliver services, and monitor the achievement of results.

Most organizations have a mixture of formal and informal practices by which they manage day-to-day delivery of services, and periodically set objectives and account for resources used in the achievement of results. Part and parcel of organizational maturity is striking the correct balance of informality/formality that ensures that service is not impaired by excessive control and vice versa.

Maintaining an effective balance between informality and formality in terms of management practices can be efficiently addressed using a set framework management controls or Management Control Framework (MCF). The MCF is a structured approach that organizes management practices into a logical series of groupings. The MCF set out below in Exhibit 1 has five (5) groups of management controls, namely: Governance; Risk Management; Organizational Delivery; and Monitoring & Learning. Additional details regarding each of the eighteen (18) management practices set out in the five (5) groups can be found in Appendix A.

Exhibit 1: Management Control Framework

Interviews and reviews of documentation revealed EID's approach to development of management practices does not follow a structured approach incorporating a MCF. Using the MCF above, the management team for EID (Director, By-law Services, Manager, Enforcement and Inspections, and Manager, Licensing and Programs) completed a self-assessment of the effectiveness of management practices. Their self-assessment, illustrated below in **Exhibit 2**, indicated room for improvement in many management practices. Over the five (5) areas of self-assessment, the average assessment was 2.78 on a scale of 5. According to the assessment rating scheme, a 2.78 would roughly equate to an assessment of *"fairly effective practices – some formalized"*.

Exhibit 2

Management Control Framework Self-Assessment
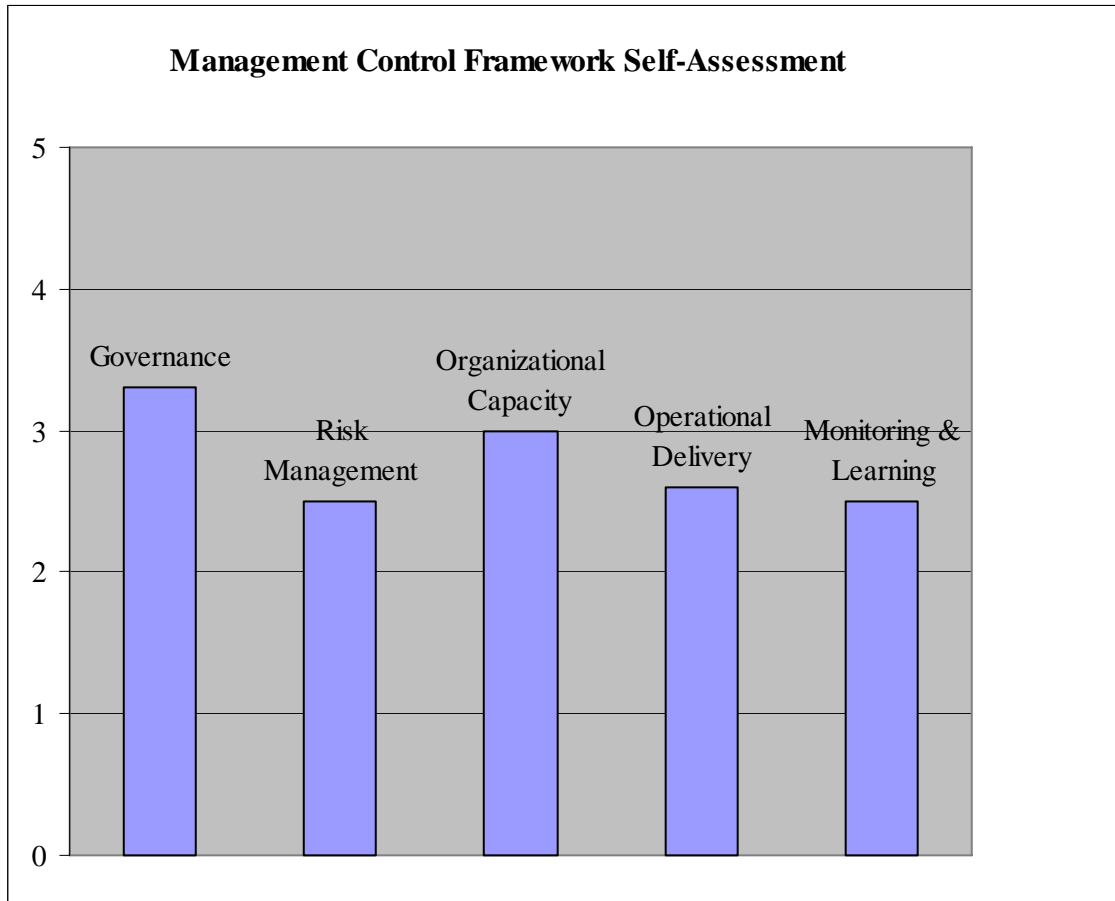
The rating scheme is 1 = poor practices – lots of gaps; 2 = some good practices but ad hoc and unstructured; 3 = fairly effective practices – some formalized; 4 = effective practices – most formalized and structured; 5 = very effective practices, well structured, regularly evaluated and updated.

Logic Model

The self-assessment in **Exhibit 2** above indicates management practices for Monitoring & Learning were rated the lowest overall. The focus of this group involves the use of measurable performance targets and indicators to track and provide accountability for results.   Interviews and document reviews revealed that EID has activity tracking (e.g. # of Requests for Service (RFS) for a given by-law) and some service standards (e.g. respond within one day to Priority 1 incidents).

We did not note any inconsistency in terms of EID objectives to corporate objectives. However, we observed that EID did not make use of any tools such as a Logic Model to tell their performance story by linking how EID resources ($ and FTEs) are used to conduct key activities (e.g. respond to RFSs), which in turn generate key outputs (e.g. tickets, charges, resolutions) which in turn contributes to compliance to by-laws and broader City objectives for a safer and healthier community for residents and visitors.

The Logic Model provides an architecture for guiding the development of performance indicators by highlighting the organization's <u>key</u> activities, outputs and outcomes. Using a structured approach such as a Logic Model can ensure efficiency and effectiveness in maturing and improving management practices for Monitoring & Learning.

An initial sample Logic Model was developed by the Audit Team and is included as **Appendix B.**

Recommendation 13

The Director, By-law Services should incorporate a more structured approach to maturing and improving EID management practices through the use of a Management Control Framework and Logic Model.

Management Response

Management agrees with this recommendation.

Management will be completing a Branch Logic Model within Q1 of 2006. This will serve to illustrate the cause and effect relationships between activities, outputs and outcomes and assist management identification of critical evaluation questions and areas of emphasis. The existing management control framework is being strengthened departmentally and within the branch. The reporting areas, nature of the reports and frequency have been documented and will be actively reviewed by individual managers and collectively by the Branch Management Team.

Recommendation 14

The Director, By-law Services should ensure the EID management team uses the Management Control Framework to self-assess the effectiveness of management practices each year at planning time to determine priority areas for improvement in the coming year.

Management Response

Management agrees with this recommendation.

Further to Recommendation 13, the Branch will use the enhanced Management Control Framework to self-assess management effectiveness annually. The results of ongoing monitoring and reporting at the activity level and periodically at the program level (e.g. the 2006 efficiency review), coupled with financial and human resource performance reporting will inform the annual planning exercise undertaken by the Branch.

General Management Response

The amalgamation of the City of Ottawa in 2001 resulted in the establishment of the By-law Services Branch, which brought together 12 different regulatory frameworks supported by 67 full-time equivalents (FTEs) collectively responsible for administering and enforcing approximately 500 different by-laws. As part of the 2004 budget process, Council in an effort to find additional efficiencies and cost savings approved the restructuring of By-Law Services by consolidating most of the enforcement and inspection services into one area. This resulted in the transfer of parking, zoning and property standards enforcement as well as the transfer of lottery licensing and special event services creating a new By-Law Services Branch comprised of 147 FTEs.

Initially located in 10 different locations operating under several different collective agreements and different service models, the By-law Services Branch has been working very hard to consolidate and harmonize its regulations and polices to ensure that services are delivered in a cost efficient and effective manner. Although approximately 85% of the regulations have been consolidated, By-law Services has faced significant challenges in harmonizing its numerous by-laws and is the only city of comparable size that has had to undergo an amalgamation exercise which has included consolidating and harmonizing various regulations and processes within an urban and rural setting. Even Toronto did not have as extensive a process given that their licensing regulations were already harmonized under an upper tier system. Nor did they have to cope with such diverse urban/rural geography.

The Branch is appreciative and supportive of the audit exercise undertaken in 2005 and generally concurs with the recommendations put forward. The Branch intends to take the opportunity to achieve these objectives through the Branch efficiency review that will be undertaken in 2006.
.

Appendix A – Audit Criteria

Audit Issue #1 – Governance practices ensure the adequacy of management controls and the alignment of EID Division's objectives with overall corporate objectives.

Criteria:
- Ongoing management of EID and its operations should be guided by a framework of management controls which are:
  - Clearly defined;
  - Consistent with overall By-Law Branch and City of Ottawa practices; and
  - Consistently applied.

- A Logic Model should be used to strengthen management controls. The Model should:
  - Illustrate the relationship between inputs ($, FTEs); major activities/ services; outputs and
  - Identify key partners, stakeholders and risks.

- Performance Information should clearly demonstrate support to EID, By-Law Services Branch and Corporate Objectives.

Audit Issue #2 – Organizational capacity is ensured through implementation of the New Deployment Model and appropriate communications.

Criteria:

- Implementation of the New Deployment Model should be managed systematically with explicit plans, milestones and responsible parties.

- The plans are reviewed and adjusted on a timely basis.

- Communication processes are effective, transparent and timely to support the achievement of EID desired outcomes.

Audit Issue #3 – Delivery of services ensures appropriate resource utilization, compliance to policies, procedures, monitoring of service delivery and use of technology tools.

Criteria:

- Economic utilization of EID staff should reflect the most appropriate choice for staff utilization.

- Efficient utilization of EID staff should reflect efforts to identify and minimize time loss given:
    - the routine associated with the chosen staff utilization alternative;
    - the technology associated with a given alternative and
    - targets for service and performance re compliance with by-laws.

- Staff should comply with all Corporate and Branch Policies, in particular Health and Safety and Finance (e.g. financial procedures should provide assurance that parking ticket revenue can be reconciled and every ticket issued be fully accounted for.)

- Monitoring of delivery should include quality control and quality assurance.

- Technology tools should be used to supports the efficient and effective delivery of by-law enforcement.

Audit Issue #4 – Risks to/from enforcement and inspection are identified and managed.

Criteria:

- Risk Management practices ensure risk is managed with an appropriate balance of formal and informal practices at all levels, and that mitigation measures are cost-effective to the level of risk involved and the organization's tolerance for risk.

Audit Issue #5 – Performance in achieving EID objectives is measured and used to adjust delivery

Criteria:

- Performance measures should be:
    - relevant to the achievement of objectives and management of the Division operations;
    - measurable;
    - designed to only include factors directly controllable by EID management and staff;

- reflective of standards established for EID performance based on management estimates and/or best practices;
- Actual performance measurement should be recorded, summarized, and reported to appropriate levels of management in a timely fashion;
- Performance reports should be compared against standards, significant variances identified, and corrective measures taken as appropriate;
- Performance indicators and measures should be assessed for changes periodically.

Audit Issue #6 – Follow-up of the 2001 Parking Audit

Criteria:

- Follow-up actions taken should have addressed the audit recommendations and eliminated or alleviated reported audit observations/problems.

Audit Issue #7 – EID practices in comparison to other municipalities.

Criteria:

- Lessons learned from other comparable Municipal Government Administrations should be investigated on a periodic basis to identify their best practices for By-Law Enforcement and Inspection.

Appendix B – Management Control Framework

MANAGEMENT CONTROL FRAMEWORK
Governance
1. Strategic Leadership Clear organizational objectives that set direction are established and communicated.
2. Governance Framework A governance framework to oversee the achievement of objectives is established.
3. Organizational Culture Organizational culture ensures values and ethics are defined, communicated and consistently reflected in practices and actions.
4. Monitoring and Reporting Performance Performance is monitored and reported against established objectives and outcomes.
Risk Management
5. Risk Management Infrastructure A risk management policy, guidelines, corporate risk profile, and recording and reporting capability are established to ensure explicit and systematic management of risk.
6. Risk Management Practices Risk management practices exist to ensure relevant and valid risks are identified timely, assessed appropriately and cost-effective mitigation strategies are established and monitored.
Organizational Capacity
7. Authority, Responsibility and Accountability Authority, responsibility and accountability are clearly defined and consistent with the organization's objectives so that decisions and actions are taken by the appropriate people.
8. Human Resource Management Human resource policies and practices enable recruitment, training and retention and overall management of human resources.
9. Financial Management Financial resources are budgeted, committed, properly authorized, monitored and reported.
10. Knowledge, Skills and Tools People have the necessary knowledge, skills and tools to support the achievement of the organization's objectives.
11. Communication Process Communication processes support the organization's values and the achievement of its objectives.
12. Information Management information systems provide sufficient and relevant information on resources, results and controls in a timely manner to enable people to perform their assigned responsibilities.
Operational Delivery

MANAGEMENT CONTROL FRAMEWORK
13. Operational Policies Policies are designed to support the achievement of objectives and are cascaded throughout the organization to ensure each unit understands its role and contribution.
14. Delivery Processes and Controls Delivery processes include basic and supervisory controls that ensure timely, accurate, authorized and completeness.
15. Monitoring of Delivery Quality control and assurance functions are established and operate as intended.
Monitoring and Learning
16. Monitoring Performance Objectives and related plans include measurable performance targets and indicators.
17. Integrity of Information Performance measurement system share valid, accurate, reliable, clear, relevant and comprehensive information for decision-making and reporting.
18. Decision-Making Decision-making incorporates performance information.

Appendix C – Sample Logic Model

Logic Model - City of Ottawa By-Law Enforcement and Inspection

What are we doing/proposing to do, what outcomes are we seeking, and how do these link to the City's strategic outcomes?

Resources (Inputs)	Key Activity Areas (direct control)	Outputs (direct control)	Immediate Outcomes (1-3 years) (direct influence)	Intermediate Outcomes (4-5 years) (indirect influence)	Final Outcomes (limited influence)
➢ E&I Division's FTE's ➢ L&P Division's FTE's ➢ $E&I Division's (O&M) ➢ $L&P Division's (O&M)	➢ Patrols to monitor and enforce regulatory by-laws /programs • Traffic and Parking • Property Standards; • General; • Special Events; • Tobacco Control; ➢ Respond to Requests for Service (RFS) ➢ Receive and deposit cash	➢ Tickets for infractions issued; ➢ Advisory warnings given; ➢ Issues/ complaints between parties are addressed between parties; ➢ Inspection reports	➢ Progress is made in raising the level of by-law awareness to acceptable levels; ➢ Progress is made in increasing the level of compliance to acceptable levels; ➢ Progress is made in achieving a reasonably balanced level of revenues generated from by-law infractions with overall satisfactory levels of compliance to by-laws	➢ Levels of compliance with by-laws reach reasonable and acceptable levels; ➢ Target levels of ticket revenues generated reach optimum levels; ➢	➢ Residents and visitors are safe and healthy (contributing influence) ➢ City residents and taxpayers are generally satisfied with the manner, costs and results of by-law enforcement and inspection activities.
	➢ Develop, distribute and provide educational materials and addresses to city groups potentially affected by specific by-laws	➢ Brochures ➢ Addresses given to city groups	➢ Progress is made in providing sufficient quality and easily understood materials on sufficient by-law topics to sufficient numbers of residents and visitors; ➢ Progress is made in improving the quality and ease of understanding of educational materials among target groups and individuals	➢ Progress is made in improving compliance with by-laws as a direct result of educational activities	

Ottawa

Office of the Auditor General

AUDIT OF INTERNET USAGE AND CONTROLS

2005 REPORT

Chapter 8

Table of Contents

Executive Summary

1.1 Introduction

The Audit of Internet Usage and Controls was part of the 2005 audit plan brought forward by the City's Auditor General and received by City Council on December 15, 2004.

1.2 Background

There are approximately 9,000 users of the Internet within the City of Ottawa. All users have access to e-mail, World Wide Web, and other Internet communications protocols (for example, MSN messenger chat, FTP, and specialized library catalogue systems protocols) within the City of Ottawa. To facilitate this communication and transfer of information, the City has 220 high-speed wide-area network connections and 60 dial-up connections.

Information Technology Services Branch reported a total of 26.7 million Internet "hits", performed by 6,226 users who accessed the Internet during the month of October 2005, which represents an average of 4,282 hits per user for that month.

The City's e-mail systems transfer over 200,000 e-mails daily.

The use of the City's Internet and e-mail services are regulated and governed through two (2) policies. For the purpose of this audit, we reviewed the following policies, which were in effect at the time of our review:

- Responsible Computing Policy (August 13, 2001); and
- Responsible Use of the Internet Policy (December 11, 2003).

The Ottawa Public Library (OPL) has a requirement for increased flexibility and less restrictive filtering of Internet and e-mail content that result in less stringent application of security controls.

1.3 Audit Scope

The audit scope is limited to Information Technology (IT) strategy, policies, procedures and other controls (including the technical tools) that define and control the City of Ottawa's use of the Internet. In particular, the following were reviewed:

- o Information Management/Information Technology (IM/IT) Security strategy
- o Responsible Use policies
- o Incident investigation policies
- o Service request policies
- o Firewalls
- o Anti-Spam filtering
- o Anti-Virus filtering
- o Content filtering
- o 8 large City sites and 6 small City sites
- o Internet traffic (sites visited) for conformance to Responsible Use of the Internet Policy
- o E-mail usage for compliance to policy

The Ottawa Police Service was not included in the audit.

1.4 Audit Objective

The audit objective is to provide an independent and objective assessment of:

o   The adequacy, effectiveness and reliability of security strategy, policy, measures and controls in place over the usage of the Internet and e-mail; and

o   To determine whether Internet and e-mail usage is compliant with City policies.

1.5 Key Findings and Recommendations

The key findings and recommendations from this audit can be summarized in the following items.

On the whole, the e-mail controls to safeguard system/information confidentiality, integrity and availability worked as expected. Specifically, we found that the security controls surrounding the e-mail isolation of dangerous attachments were successful. Even though knowledgeable users were found to be able to bypass file type blocking controls, they were not able to bypass anti-virus controls and the nine anti-virus engines blocked malicious file content.

Although, we found that Library and Employment Centre Public Desktop Lockdown could be greatly improved from providing an automated Windows XP patching, and the latest Symantec Antivirus version.

Finally, we determined that the implementation of the anti-spam firewall in January 2004 had greatly reduced the amount of SPAM e-mail that City staff must process and, reduced the possibility of the SPAM setting off a malicious software infestation, and reduced the e-mail delivery system resource requirements.

Recommendation 1

That Information Technology Services investigate the tools used to perform blocking by file type to enable this feature regardless of extension.

Recommendation 2

That Information Technology Services deploy the latest Symantec Antivirus version.

Recommendation 3

That Information Technology Services update the configuration of the Antivirus systems to include anti-virus checking on read from disk and before program execution.

Management Response

Management agrees with recommendations 1, 2 and 3.

IT Services is investigating a new feature recently available for the first layer of virus-scanning protection, which permits blocking of file types regardless of the extension used. Testing to ensure there is no negative impact on e-mail delivery services will occur in Q1 2006.

IT Services considers that the risk of using the current version of Symantec Antivirus (7.61) is mitigated as three additional layers of anti-virus and malicious file protection also safeguard the City network, and Symantec continues to issue updated virus signature files per the support agreement up to January 31, 2006.

It is not uncommon for an organization of the size of the City of Ottawa to delay or skip version upgrades of software products. Upgrades are done either because the new functionality offered is needed by the City and is supported by a business case for the upgrade, or because the product is no longer supported by the vendor. IT Services has evaluated the additional features and business case for each new version as it is released. In fact, the City partnered with Symantec in Q1 2005 to beta-test version 10, as this is the first version to add features to safeguard against the current threat from spyware. Following this evaluation, Symantec recommended in late Q3 2005 that the City begin a managed upgrade directly from version 7.61 to Symantec Antivirus version 10.

IT Services initiated the upgrade to Symantec Antivirus 10 in Q4 2005, to be completed by January 31, 2006. This upgrade includes an assessment of the productivity impact of including anti-virus checking on read from disk and before program execution.

Recommendation 4

That Information Technology Services:
- **Review the level of awareness of the SPAM e-mailbox and increase visibility if warranted; and**
- **Continue monitoring of the effectiveness of the current SPAM filtering tool.**

Management Response

Management agrees with these recommendations.

The spam@ottawa.ca mailbox continues to be part of IT Services' ongoing security awareness program. Over 1,000 e-mails received by City staff from external sources are submitted monthly to the SPAM mailbox for review. In addition, four City Brief articles were published in 2005 on the topic of SPAM, each including a reminder about the availability of the SPAM mailbox. IT Services will continue to remind staff of the SPAM e-mailbox regularly.

Upgrades to the SPAM filtering service are implemented by IT Services when available from the vendor, to ensure continued effectiveness of the service. As noted in the report, monitoring of the SPAM filtering service is performed daily, and reviewed monthly by IT Services.

October data from MessageLabs indicated that 65% of all e-mail worldwide was identified as SPAM. Of the 50,000 e-mails received from external sources daily to the City's 9,000 e-mail users, slightly over 50% is identified as SPAM and immediately rejected. Roughly 0.5% of these e-mails are SPAM that is not identified or rejected, and successfully reaches a City recipient – 250 e-mails per day for the entire City. Users are encouraged to forward SPAM messages to IT Services to assist in increasing the effectiveness of the SPAM filtering service.

HTTP Web Site Filtering

While the Websense content filtering tool is generally regarded as a success, it also identifies a key weakness to the overall City security posture. The City network is a homogenous group of devices without separation from one another by security controls. The implication is that an outbreak of a security incident can quickly impact all systems on the network. The City security model relies on strong perimeter security to help prevent such incidents. Most users on the City network are protected through a variety of protective security devices largely associated with the perimeter. The Ottawa Public Library users are partially exempt from some of these controls. The result is that the strong perimeter security controls are negated potentially allowing malicious code to move onto the City network. This bypass of some controls is a weakness in the security posture of the City.

Recommendation 5

That Information Technology Services:

▪ **Tighten the Websense service implementation to reduce possibility of service bypass.**

Management Response

Management agrees with this recommendation.

In 2005, prior to the audit, IT Services launched an extensive project to enhance the rigour of the Websense implementation, scheduled for completion in Q1 2006. At the time of writing this response (November 2005), an extensive range of additional Websense filtering features is now in place.

The audit findings identified one small site (the Don Gamble Community Centre) that allowed City of Ottawa staff unfiltered access to the Internet. This was a subnet routing issue that misidentified these four City staff to Websense as Library staff workstations, which are unfiltered (see below). IT Services has corrected this routing issue.

▪ **Review some level of Library filtering to reduce the risk, such as a limited number of isolated general use systems for unfiltered web access. If this cannot be completed to an appropriate level, then Information Technology Services should consider separating the Ottawa Public Library from the City's system.**

Management Response

Unfiltered Internet access is provided to Ottawa Public Library (OPL) staff for reasons of intellectual freedom. This is as a result of a Library Board directive and therefore is a governance issue with the Library Board and outside the jurisdiction of the IT Services Branch.

Since 2001, a considerable amount of effort from IT Services has been directed to manage the risk of this configuration. For example, Library workstations are on separate network segments that make it easy to isolate viruses, worms and spyware in the event of a malicious code outbreak. On the advice of IT Services staff, Library Management agreed, in October 2005, to allow IT Services to protect their workstations from Internet-borne malicious code. The workstations used by Library staff do not allow staff to visit malicious websites, however they remain completely unfiltered for all other website content.

Given the OPL is governed by the Library Board, it may not be possible to influence the Board to reverse the decision to allow unlimited access to Internet sites based on the principle of intellectual freedom. Therefore if filtering cannot be implemented to a reasonable level, ITS Branch agrees with the recommendation that consideration should be given to separate the Ottawa Public Library from the City's system. This would be a significant undertaking as the Ottawa Public Library (OPL) is spread across 33 different sites throughout the City. Furthermore, separating the Ottawa Public Library from the City of Ottawa network would incur significant additional costs, due to the sharing of business applications and IT Services resources between OPL and the City.

It is estimated that the cost to separate the Ottawa Public Library from the City's network would be $30,000 of one time capital funding and $150,000 of annual operating costs, including the funding of 1 additional FTE (or equivalent). A budget pressure will be identified for the 2007 budget.

Anti-Virus

Recommendation 6

That Information Technology Services:
- **Deploy the latest Symantec Antivirus version; and**
- **Update the configuration of the Anti-Virus systems includes anti-virus checking before file read and before program execution.**

Management Response

Management agrees with this recommendation.

IT Services considers that the risk of using the current version of Symantec Antivirus (7.61) is mitigated as three additional layers of anti-virus and malicious file protection also safeguard the City network, and Symantec continues to issue updated virus signature files per the support agreement up to January 31, 2006.

It is not uncommon for an organization of the size of the City of Ottawa to delay or skip version upgrades of software products. Upgrades are done either because the new functionality offered is needed by the City and is supported by a business case for the upgrade, or because the product is no longer supported by the vendor. IT Services has evaluated the additional features and business case for each new version as it is released. In fact, the City partnered with Symantec in Q1 2005 to beta-test version 10, as this is the first version to add features to safeguard against the current threat from spyware. Following this evaluation, Symantec recommended in late Q3 2005 that the City begin a managed upgrade directly from version 7.61 to Symantec Antivirus version 10.

IT Services initiated the upgrade to Symantec Antivirus 10 in Q4 2005, to be completed by January 31, 2006. This upgrade includes an assessment of the productivity impact of including anti-virus checking on read from disk and before program execution.

Log Management

Log management practices need to be improved. Effective log management allows an organization to detect malicious activity, understand current levels of events, and track trends of various operational

metrics. If was found that not all security device logs were being saved to permanent storage. It was also found that the logs that were collected were not routinely analyzed for significant events or trend analysis. Finally, the level of coverage of logging was not sufficient to record and detect all significant events on key security enforcement devices.

Recommendation 7

That Information Technology Services:
- **Review logging and monitoring processes and systems for effective operational system health and policy enforcement monitoring;**
- **Identify log events that require "real time" detection and alerting and implement appropriate processes;**
- **Review all security devices to ensure appropriate logging coverage;**
- **Ensure all device clocks are centrally synchronized for effective event correlation;**
- **Review regulatory and City policy requirements for an appropriate logging data retention period;**
- **Consider feeding log and monitoring data into a Security Information Management (SIM) tool for automated event analysis and correlation, to better provide a near real time City security posture;**
- **Ensure all devices are logging operational health and security events as a minimum; and**
- **Enable system logging on all devices.**

Management Response

Management does not completely agree with these recommendations.

Industry best practices do not support full logging on all devices at all times due to the high cost. IT Services implements additional logging and alerting on a selective basis, such as with certain high-risk devices or where there is a concern with a particular device.

As part of the Enterprise Security Review project initiated in Q1 2005, IT Services has contracted a third party security company to perform a detailed review of logging and monitoring processes and systems, including an assessment of the cost impact of these recommendations. The review will be completed in Q1 2006. If additional logging is required, a budget pressure will be identified in the 2007 budget. IT Services has implemented alerting for device failure on all servers and network devices.

IT Services has updated all firewalls to receive a synchronized time from NRC.

A review of regulatory and City policy requirements for logging data will be completed in Q2 2006, following the detailed review of logging and monitoring processes and systems in Q1 2006. Log data will be retained in accordance with the City's Records Management Policy and By-Law.

The need for additional logging and Security Information Management (SIM) tool will be assessed in Q2 2006 and if required a budget pressure will be identified in the 2007 budget. Additional logging is estimated to cost between $75,000-$150,000. To purchase and implement a SIM is $150,000, with

ongoing operating costs in excess of $200,000 per year. Ongoing FTE (or equivalent) requirements are unknown at this time.

Change Management

Change management process for security devices need to be improved and enforced. It was found that the existing change management process was not being followed for all devices. Therefore, a linkage is not available between the configurations on security devices and the requestor and approver of these configurations. This tracking is important for periodic security reviews.

Recommendation 8

That Information Technology Services:
- **Implement a more robust Change Management process/system within Corporate Services; and**
- **Enforce the formal Change Management process for all changes to the firewalls and other security systems.**

Management Response

Management agrees with these recommendations.

The current Change Management process in place since 2001 was enhanced in Q4 2005 to encompass all IT Services divisions and the requirement to comply with the City's Records Management Policy.

The Chief Information Officer reminded all IT Services Managers and Program Managers in November 2005, of the requirement to adhere to this Change Management process. This includes the requirement to document results achieved and record these centrally using the City's Records Management framework.

IT Security Policies

The IT Security policies were found to have some deficiencies in both content and interpretation. Not all users and systems were bound by the IT Security policies restricting use of the Internet. In particular, the Ottawa Public Library use of the Internet is governed by the requirement for intellectual freedom. The interpretation of this intellectual freedom results in various applications and services being installed for use by Library staff that bypass some of the controls implemented such as e-mail anti-virus filtering. Installation or configuration changes to access remote (i.e. on the Internet) data sources were also discovered on City workstations. In addition, the growing need to encrypt data to maintain confidentiality introduces the need to develop a policy to manage such encryption. Issues with encryption include key management (ensure that the ability to decrypt documents is maintained) and strength of encryption (ensure that the data or communication is sufficiently protected). The current IT Security policies state that encryption should be used to protect sensitive data, but don't currently address how this should be done.

Recommendation 9

That Information Technology Services ensure the policy prohibit the installation of software not officially sanctioned.

Management Response

Management agrees with this recommendation.

Section 6.4 of the revised Responsible Computing Policy, approved by City Management in September 2005, states: "Users shall not install or download software, shareware, freeware or any other application program onto City-owned IT assets without the express written permission of ITS."

Recommendation 10

That Information Technology Services ensure the policy prohibit the use of non-City approved computing resources for processing City data and assets.

Management Response

Management does not completely agree with this recommendation.

This recommendation applies to the following two situations:

- Use of non-City hardware by staff and/or consultants on the City network (e.g., laptops). Processing City data and assets using non-City hardware (e.g., home computers). IT Services concurs with the recommendation with respect to the use of non-City hardware on the City network (e.g., laptops). In section 6.3 of the revised Responsible Computing Policy, approved by City Management in September 2005, the Policy states: "Non-City hardware shall not be connected to the Corporate network without the express written consent of the ITS Branch."

- IT Services does not agree with this recommendation with respect to processing City data and assets using non-City hardware (e.g., home computers). Such a restriction would prohibit the use of web-mail from a home computer, or working from home on a Word document or Excel spreadsheet. The Responsible Computing Policy clearly defines employee obligations to safeguard electronic and information records in their custody, whether being processed at a City facility or not. The City's Defence-in-Depth Strategy mitigates the risk to the corporation from malicious software brought from a non-City computing environment.

Recommendation 11

That Information Technology Services review the retention periods for e-mail (including deleted e-mail) and compare to use of this data as corporate records and industry best practices.

Management Response

Management agrees with this recommendation.

The retention period for e-mail was reviewed against federal, provincial, and municipal legislation prior to approval of the Records Retention and Disposition By-law approved by Council and the Records Management Policy in 2003. Automated retention rules for e-mail were implemented as a part of an upgrade to the Exchange Server product in September 2005, to ensure compliance with this by-law and policy.

Recommendation 12

That Information Technology Services review the users with administrator rights on their workstations, and where not justified and required, remove the administrator privileges for that user.

Management Response

Management agrees with this recommendation.

A rigorous documented formal process is followed whenever any user requires local administrative rights.

As part of the Enterprise Security Review project, a review will be conducted regarding administrative access rights for IT Services with recommendations provided to the IT Services Management team in Q1 2006. This review will be repeated on an annual basis.

More restrictive administrative rights for laptop users are being implemented as part of the life cycle laptop replacement program. At this point, funding is available to replace roughly 100 units of the total fleet of 900.

Roughly 50% of the current fleet of City laptops are now running a version of the operating system that offers administrative rights control. IT Services plans to implement these administrative rights restrictions by the end of Q1 2006. The remaining 50% of the City laptop fleet needs to be replaced.

Funding of $700,000 and one (1) additional FTE (or equivalent) will be required in order to accelerate this replacement program to be completed over twelve (12) months. A budget pressure will be identified for the 2007 budget to accelerate this replacement program to be completed over twelve (12) months.

Recommendation 13

That Information Technology Services:
- **Review organization roles and responsibilities with accompanying agreements, such as Service Level Agreements (SLAs); and**
- **Clearly define roles/responsibilities and define processes to ensure control implementation and monitoring is covered.**

Management Response

Management disagrees with these recommendations.

IT Services has reviewed existing organizational roles and responsibilities, and believes that these roles and responsibilities are clearly delineated and effective. Separation of duties and other organizational control mechanisms are fully implemented and maintained across the entire branch.

Encryption Policy

Recommendation 14

That Information Technology Services develop an Encryption Policy to address key aspects of encryption related to the City's operations and requirements.

Management Response

Management agrees with this recommendation.

Encryption technologies are currently used to safeguard specific systems, but these *de facto* standards are not presently in one reference document. Existing encryption standards will be collected and documented by Q2 2006.

Recommendation 15

That Information Technology Services identify tools for encryption of sensitive e-mail content.

Management Response

Management disagrees with this recommendation.

The revised Responsible Computing Policy, section 7.1, as approved by City Management in September 2005 stipulates that sensitive information is not to be transmitted via the corporate e-mail system.

An enterprise wide e-mail encryption solution would be for internal use only and would not necessarily be compatible with external partners, as there is no national or international standard for e-mail encryption.

Should an enterprise-wide e-mail encryption solution be required, it is estimated to cost $100,000 and require 2 FTEs (or equivalent) to administer. A budget pressure would be identified for the 2007 budget.

Recommendation 16

That Information Technology Services implement strong encryption on the link between DC2 and the library lab network that uses the Internet for communication.

Management Response

Management agrees with this recommendation.

IT Security will investigate the use of this link and the safeguards currently in place in Q4 2005.

User IT Security Awareness

Recommendation 17

That Information Technology Services:

- **Create a program with annual user IT Security policy review with mandatory quarterly/semi-annually IT Security awareness briefings;**
- **Continue the Security flash e-mail awareness campaign notifying users of significant e-mail attacks; and**
- **Improve the effectiveness of the IT Security awareness campaign.**

Management Response

Management agrees with these recommendations.

A formal IT Security Awareness program already exists. Awareness articles are issued through City Briefs on a monthly basis, Management Bulletins are also issued as necessary, and IT Security awareness briefings occur to address strategic issues or groups. Awareness activities have been part of the annual planning cycle since 2003. Flash e-mail awareness campaigns will continue.

A third party review to measure and assess the current awareness targets and associated delivery strategy was scheduled to begin October 2005 as part of the Corporate IT Security Awareness Program. This review was deferred to 2006 due to a City-wide budget freeze, and will include specific recommendations and a workplan identifying the priority messaging targets

Internet Usage

The Internet policies should be revised to limit personal use of the Internet to incidental or occasional use only and compliance to the policies should be monitored. Overall, a large amount of the Internet usage was for personal use.

A sample of 50 random user accounts was scrutinized for the month of May 2005. The spread for this group ranged from 44,220 hits (or 2,106 hits per day for the highest user account) to no hits for the lowest user account. The review was based on a statistically valid sample and found that average personal use of the Internet for this group was 53%.

The Top 50 user accounts were scrutinized for the month of May 2005. The spread for this group differed greatly and ranged from 2,098,002 hits (or 99,905 hits per day for the highest user account) to 29,761 hits (or 1,417 hits per day for the lowest user account). We found that their average personal use of the Internet was 66%.

Below is the summary of Internet usage, as reported by Information Technology Services Branch, for the month of October 2005.

TOP 100 PERMITTED WEBSITES VISITED DURING OCTOBER 2005
Per Information Technology Services Branch

Category (per ITS)	Examples	% of Top 100 Website "hits"	% of Total Internet Traffic (Oct 2005)
Internet Search Engines	www.google.ca kh.google.com cdn.mapquest.com	41.7%	25.9%
Advertising	ad.doubleclick.net adcounter.theglobeandmail.com adme.411.ca	29.3%	18.2%
Sports, Shopping & Entertainment	www.tsn.ca www.mls.ca	5.3%	3.3%
News and Media	OttawaSun.com CBC.ca	4.2%	2.6%
References	weatheroffice.ec.gc.ca www.Isuc.on.ca	2.4%	1.5%
Job Search	Workopolis.com	2.0%	1.3%
Information Technology	download.windowsupdate.com www.microsolft.com	1.6%	1.0%
City of Ottawa Application	Interfleet.ca Library.Ottawa.on.ca	1.2%	0.7%
Other	Includes "uncategorized"	12.2%	7.6%
Totals		**99.9%**	**62.1%**

The Responsible Use of the Internet Policy regulates and provides direction for appropriate usage of the Internet to be observed by all users. During the course of our audit, we found non-compliance with the existing policy within the following areas:

- Usage, if subjected to public scrutiny, does not cause embarrassment or concern to the City;
- Access to non-City e-mail systems and accounts through the Internet (such as Hotmail) from City workstations is strictly prohibited;

- All employee use of the network and Internet is tracked and monitored;
- Users will not use the Internet for illegal or immoral purposes;
- Peer-to-Peer File Sharing;
- Web-chat;
- Internet auction;
- Shared accounts;
- Personal and Dating; and
- Personal Web Sites.

We were unable to conclude whether personal Internet usage by employees occurred during normal working hours, as Information Technology Services Branch did not provide the Office of the Auditor General with the "point in time" records.

Personal e-mail usage was not as high as that of the Internet. Based on a sample of 50 random users, approximately 16% of e-mails were found to be personal. All users had at least some business requirement for e-mail use.

An analysis of the top 50 e-mail users could not be performed, as Information Technology Services was unable to generate an accurate report. We would expect that an organization such as the City of Ottawa would have proven tools to accurately and quickly provide reports such as top e-mail users, random users, sent e-mails, received e-mails, and other e-mail metrics to be used to analyze e-mail usage. Alternative methods to track and monitor high e-mail users should be obtained.

The Responsible Use of the Internet Policy specifically allows personal use of this corporate resource. While it may be expected that some minimum level of incidental personal usage may occur, we would expect that the level of personal use of the Internet should be similar to the expectations of limited personal use of the telephone. The City's policy on e-mail use only permits incidental personal use of e-mail, similar to the expectation of limited telephone use. Given the high personal use of Internet we found, the City's Responsible Use of the Internet Policy should be revised to limit personal use of the Internet to incidental or occasional only.

In order for managers to monitor staff to ensure that they are using Internet and e-mail appropriately, managers need to be provided with reports of Internet and e-mail usage. Information Technology Services is responsible for monitoring and controlling the use of the Internet and e-mail. This should include a process for reporting high volume or unusual usage patterns to managers so that they may evaluate if appropriate usage has occurred.

Currently, Information Technology Services does not provide regular reports of use of Internet or e-mail to departmental managers for review to ensure staff is using these tools appropriately. Monitoring can be accomplished through a process to provide reports to management for these reviews.

Policy Compliance – Internet and E-mails

Recommendation 18

That Information Technology Services:
- **Monitor and control the use of the Internet and e-mail usage by City employees;**
- **Develop appropriate recording tools that provide reliable reporting of e-mail usage;**

- **Develop and implement a process to provide managers with reports of their staff's Internet and e-mail usage so that management can evaluate if appropriate usage of e-mail and Internet is occurring; and**
- **Revise the Responsible Computing Policy to limit use of the Internet to mainly business purposes and limit personal usage to incidental or occasional only.**

<u>Management Response</u>

Management agrees with these recommendations.

IT Services uses Websense to monitor and control the use of the Internet at a macro or system level. Prior to the audit, IT Services launched an extensive project to enhance the rigour of the Websense implementation, scheduled for completion in Q1 2006. An extensive range of additional Websense filtering features is now in place that enhances the monitoring of Internet usage and blocking of websites that are not consistent with the Code of Conduct and Responsible Computing Policy. Monthly reviews of Websense reports by IT Services will continue, and changes to categories, website blocking, and follow-up investigations will continue.

In 2006 IT Services will enhance Internet monitoring using existing Websense reporting tools. A detailed analysis of a minimum of 50 Internet accounts will be conducted on a semi-annual basis for compliance with the Responsible Computing Policy. Instances of non-compliance will be investigated in conjunction with managers and the Labour Relations unit within Employee Services Branch. It is projected that this level of review and follow-up will generate the equivalent of 1.5 FTEs (2,700 hours) of staff effort to implement.

IT Services/Labour Relations will be contacting the respective managers of the 50 random and 50 top users generated throughout the audit. IT Services in consultation with Labour Relations will provide the Internet log report along with guidelines on how to interpret the data set and how to approach employees with any concerns that might be presented on their Internet usage.

IT Services will continue to produce management reports and metrics using Promodag, and will investigate additional monitoring tools and reporting capabilities that would enable monitoring of individual e-mail accounts. Evidence of non-compliance with the Responsible Computing Policy will be investigated in conjunction with managers and Labour Relations. At this time, the additional effort to review and follow-up is not known pending identification and selection of new tools. A budget pressure would be identified for 2007 to acquire and implement additional monitoring and reporting tools.

The revised Responsible Computing Policy clearly states that the Internet and e-mail are provided for "legitimate business use in the course of assigned duties and only incidentally for personal use", and that disciplinary action, including dismissal, are consequences of non-compliance. The Responsible Computing Policy will be reviewed to ensure that it applies equally to both Internet usage and e-mail usage, and reflects our current practices.

Overall Management Comments

Information Technology Services (ITS) concurs with many of the recommendations proposed by the Auditor General. Where Management does not agree with the findings and/or recommendations proposed by the Auditor General, an explanation is provided to substantiate this position. In all cases, this is the result of further research or consultation with vendor suppliers, security experts, and industry best practices.

In cases where Management has already commenced an action, a status update has been provided. Where no action has been taken, the proposed timeline and any budgetary implications and expected outcomes have been identified.

1.6 Conclusion

This audit reviewed the adequacy, effectiveness and reliability of security measures and controls in place over the usage of the Internet and e-mail and assessed whether usage is compliant with City policies. While security controls currently implemented were found to be generally effective and reliable, there were gaps in the adequacy of the controls. The audit also reviewed the compliance of usage of the Internet and e-mail to the current policy statements and found that there is considerable personal use of these tools. The Responsible Use of the Internet Policy and the Responsible Computing Policy should be revised to limit the use of the Internet to mainly business purposes and limit personal usage to incidental or occasional only. A program to monitor and control Internet and e-mail usage should also be established.

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

Résumé

1.0 Introduction

La vérification de l'utilisation et de contrôles d'Internet était incluse dans le plan de vérification de 2005 proposé par le vérificateur général de la Ville et reçu par le Conseil municipal le 15 décembre 2004.

1.1 Contexte

La Ville d'Ottawa compte environ 9 000 internautes. Tous ces utilisateurs ont accès à la messagerie électronique, au Web ainsi qu'à d'autres protocoles de communication Internet (par exemple, le logiciel de clavardage en ligne MSN Messenger, le protocole FTP et les protocoles spécialisés des systèmes de classification des bibliothèques) au sein de la Ville d'Ottawa. Pour faciliter cette communication et le transfert d'information connexe, la Ville offre 220 connexions Internet haute vitesse et 60 accès par ligne commutée.

La Direction des services de technologie de l'information a signalé qu'au total, 26,7 millions de requêtes avaient été effectuées sur Internet par les 6 226 utilisateurs l'ayant utilisé en octobre 2005, ce qui représente une moyenne de 4 282 requêtes par utilisateur pour ce mois.

Les systèmes de courriel de la Ville transfèrent chaque jour plus de 200 000 courriels.

L'utilisation des services Internet et des services de courriel de la Ville est réglementée et régie par deux (2) politiques. Aux fins de la présente vérification, nous avons examiné les politiques suivantes, en vigueur au moment de notre examen.

- Utilisation responsable des ordinateurs - politique municipale (13 août 2001); et
- Politique sur l'utilisation responsable de l'Internet (11 décembre 2003).

En raison de son besoin de flexibilité et d'un filtrage moins restrictif du contenu Internet et du contenu de courriels, la Bibliothèque publique d'Ottawa (BPO) profite d'une application moins stricte des contrôles de sécurité.

1.2 Portée de la vérification

La portée de la vérification se limite à la stratégie, aux politiques, aux procédures et aux autres contrôles de technologie de l'information (TI) (y compris les outils techniques) qui définissent et limitent l'utilisation d'Internet par la Ville d'Ottawa. Les points suivants ont notamment été examinés :

- o stratégie de sécurité de la de la Gestion de l'information des Services de technologies de l'information (GI/TI);
- o politiques d'utilisation responsable;
- o politiques d'enquêtes sur les incidents;
- o politiques de demandes de services;
- o coupe-feu;
- o filtrage anti-pourriel;
- o filtrage antivirus;
- o filtrage de contenu;

o 8 grands sites et 6 petits sites municipaux;
o conformité du trafic Internet (sites consultés) avec la Politique d'utilisation responsable de l'Internet;
o conformité de l'utilisation du courriel avec la politique.

Le Service de police d'Ottawa n'étaient pas inclus dans cette vérification.

1.3   Objectif de la vérification

La vérification vise à fournir une évaluation indépendante et objective pour :

▪ évaluer la suffisance, l'efficacité et la fiabilité de la stratégie, de la politique, des mesures et des contrôles de sécurité en place pour l'utilisation d'Internet et du courriel; et
▪ déterminer si l'utilisation d'Internet et du courriel est conforme aux politiques municipales.

1.4   Principales constatations et recommandations

Les principales constatations et recommandations de la présente vérification peuvent être ainsi résumées.

Dans l'ensemble, les contrôles de courriels visant à protéger la confidentialité, l'intégrité et la disponibilité des systèmes et de l'information fonctionnaient comme prévu. Plus particulièrement, nous avons conclu à l'efficacité des contrôles de sécurité visant l'isolation des pièces jointes dangereuses incluses dans les courriels. Bien que des utilisateurs avertis aient pu passer outre les contrôles de blocage par type de fichier, ils ne pouvaient contourner les contrôles antivirus puisque neuf moteurs antivirus bloquaient le contenu des fichiers malveillants.

Nous avons cependant conclu que le verrouillage des ordinateurs de bureau publics, dans les bibliothèques et centres d'emploi, pourrait être sensiblement amélioré si la correction de programme automatisée de Windows XP et la plus récente version de Symantec Antivirus étaient installées sur ces derniers.

Enfin, nous avons jugé que la mise en place du coupe-feu anti-pourriel en janvier 2004 avait sensiblement réduit la quantité de pourriels que doit traiter le personnel de la Ville. Cela a également réduit le risque que les pourriels déclenchent une attaque logicielle malveillante, en plus de réduire les exigences en matière de ressource de système pour l'envoi et la réception du courriel.

Recommandation 1

Que les Services de technologie de l'information examinent les outils utilisés pour effectuer le blocage par type de fichier, pour ainsi activer cette fonction, quelle que soit l'extension du fichier.

Recommandation 2

Que les Services de technologie de l'information déploient la plus récente version de Symantec Antivirus.

Recommandation 3

Que les Services de technologie de l'information mettent à jour la configuration des systèmes antivirus pour y inclure un contrôle antivirus qui s'activerait au moment de l'extraction de fichiers et avant l'exécution d'un programme.

Réponse de la direction

La direction est d'accord avec les recommandations 1, 2 et 3.

Les Services de TI examinent en ce moment une nouvelle fonction, disponible depuis peu, pour la première couche de protection associée à la détection de virus. Elle permettrait de bloquer certains types de fichiers, quelle que soit l'extension de ces derniers. Des essais seront effectués pendant le premier trimestre de 2006 pour ainsi s'assurer que ce logiciel ne nuira pas à l'envoi et à la réception de courriels.

Les Services de TI jugent que le risque posé par l'utilisation de la version actuelle de Symantec Antivirus (7.61) est limité. En effet, le réseau municipal est également protégé par trois couches supplémentaires de protection contre les virus et fichiers malveillants, et Symantec continue d'émettre les mises à jour des fichiers de signatures de virus, conformément à l'entente de soutien, jusqu'au 31 janvier 2006.

Il n'est pas inhabituel qu'une organisation de la taille de la Ville d'Ottawa retarde ou saute des mises à niveau logicielles. Ces mises à niveau sont effectuées soit parce que la Ville a besoin de la nouvelle fonctionnalité offerte et qu'une analyse de rentabilisation appuie cette mise à niveau, soit parce que le fournisseur n'offre plus de soutien pour le produit visé. Les Services de TI évaluent les nouvelles caractéristiques et l'analyse de rentabilité pour toutes les nouvelles versions et ce, au moment de leur lancement. En fait, la Ville s'est associée à Symantec au premier trimestre de 2005 pour procéder à un essai bêta de la version 10 puisque cette version était la première à ajouter des fonctions de protection contre la menace posée par les logiciels espions. À la suite de cette évaluation, Symantec a recommandé, vers la fin du troisième trimestre de 2005, que la Ville entame une mise à niveau gérée pour passer directement de la version 7.61 à la version 10 de Symantec Antivirus.

Au quatrième trimestre de 2005, les Services de TI ont entamé la mise à niveau pour passer à la version 10 de Symantec Antivirus, mise à niveau qui doit être terminée avant le 31 janvier 2006. Cette mise à niveau comprend une évaluation des répercussions sur la productivité qu'aurait l'ajout d'un contrôle antivirus pendant l'extraction des fichiers et avant l'exécution d'un programme.

Recommandation 4

Que les Services de technologie de l'information,
- **examinent le niveau de sensibilisation des utilisateurs par rapport à la boîte de pourriels et au besoin en augmentent la visibilité au besoin;**
- **continuent de surveiller l'efficacité des outils actuels de filtrage des pourriels.**

Réponse de la direction

La direction est d'accord avec cette recommandation.

L'adresse spam@ottawa.ca continue d'être incluse dans le programme permanent de sensibilisation à la sécurité mis en place par les Services de TI. Chaque mois, plus de 1 000 courriels reçus de l'externe par le personnel de la Ville sont envoyés à la boîte de pourriels pour examen. De plus, quatre articles « La ville en bref » ont été publiés en 2005 sur le thème des pourriels et chacun comportait un rappel sur la disponibilité de cette adresse. Les Services de TI vont continuer à rappeler régulièrement au personnel l'existence de la boîte de pourriels.

Quand elles sont disponibles auprès du fournisseur, les mises à niveau du service de filtrage des pourriels sont effectuées par les Services de TI pour garantir l'efficacité continue de ce service. Comme il est indiqué dans le rapport, le service de filtrage des pourriels est surveillé chaque jour et examiné chaque mois par les Services de TI.

Les données de MessageLabs indiquent qu'en octobre, 65 % de tous les messages envoyés dans le monde étaient des pourriels. Des 50 000 messages reçus chaque jour de l'externe par les 9 000 utilisateurs de la messagerie électronique de la Ville, un peu plus de 50 % sont jugés être des pourriels et sont immédiatement rejetés. Environ 0,5 % de ces messages sont des pourriels qui ne sont pas identifiés ni rejetés et parviennent donc jusqu'à un destinataire de la Ville. Cela représente 250 messages par jour pour l'ensemble de la Ville. Les utilisateurs sont encouragés à transmettre les pourriels aux Services de TI afin de contribuer à l'amélioration de l'efficacité du service de filtrage.

Filtrage site Web - Protocol HTTP

Alors que l'outil de filtrage de contenu Websense est généralement jugé efficace, il met également en lumière une faiblesse fondamentale de la position globale de la Ville en matière de sécurité. Le réseau municipal est un ensemble homogène de dispositifs non séparés les uns des autres par des contrôles de sécurité. Ainsi, si un incident de sécurité se produit, tous les systèmes du réseau pourront rapidement être touchés. Le modèle de sécurité de la Ville repose sur une sécurité périmétrique robuste qui contribue à la prévention de tels incidents. La majorité des utilisateurs du réseau municipal sont protégés par une gamme de dispositifs de sécurité préventive liés en grande partie au périmètre. Les utilisateurs de la Bibliothèque publique d'Ottawa sont partiellement exemptés de certains de ces contrôles. Il en découle donc que les contrôles robustes de sécurité périmétrique peuvent être annulés, ce qui pourrait permettre à des programmes malveillants de pénétrer le réseau municipal. Ce contournement de certains contrôles est une faiblesse de la sécurité de la Ville.

Recommandation 5

Que les Services de technologie de l'information resserrent la mise en œuvre du service Websense pour ainsi réduire la possibilité de contourner ce service.

Réponse de la direction

La direction est d'accord avec cette recommandation.

En 2005, avant la vérification, les Services de TI avaient lancé un vaste projet, devant se terminer au cours du premier trimestre de 2006, et visant à utiliser Websense de façon plus rigoureuse. Au moment où nous rédigeons la présente réponse (novembre 2005), une vaste gamme de fonctions de filtrage Websense supplémentaires a déjà été mise en place.

Les constatations de la vérification ont permis d'identifier un petit site (le Centre communautaire Don-Gamble) qui permettait au personnel de la Ville d'Ottawa d'avoir accès à Internet sans filtrage. Ainsi, un problème de routage de sous-réseau indiquait à Websense que ces quatre employés municipaux travaillaient sur des postes de la Bibliothèque non visés par le filtrage (voir ci-dessous). Les Services de TI ont corrigé ce problème.

- **Que les Services de technologie de l'information examinent la possibilité de fixer, pour la bibliothèque, un certain degré de filtrage, comme un nombre limité de systèmes à usage général isolés offrant un accès non filtré à Internet, pour ainsi réduire les risques. Si cela ne peut être accompli au niveau approprié, les Services de technologie de l'information devraient alors songer à isoler la Bibliothèque publique d'Ottawa du système municipal.**

Réponse de la direction

Le personnel de la Bibliothèque publique d'Ottawa (BPO) bénéficie d'un accès non filtré à Internet pour des raisons de liberté intellectuelle. Puisque cela découle d'une directive du Conseil de la Bibliothèque et constitue donc une question de gouvernance liée au Conseil de la Bibliothèque, elle n'est pas du ressort de la Direction des services de TI.

Depuis 2001, d'importants efforts ont été réalisés par les Services de TI pour gérer les risques que posait cette configuration. Ainsi, les postes de travail de la bibliothèque se trouvent sur des segments de réseau distincts, ce qui facilite l'isolement des virus, des vers et des logiciels espions en cas d'irruption de programmes malveillants. Sur les conseils du personnel des Services de TI, la direction de la bibliothèque a consenti, en octobre 2005, à autoriser ces Services à protéger les postes de travail contre les programmes malveillants circulant sur Internet. Les postes de travail utilisés par les membres du personnel de la bibliothèque ne permettent pas l'accès à des sites malveillants. Cependant, l'accès à tous les autres sites reste entièrement libre, sans filtrage.

Puisque la BPO est régie par le Conseil de la Bibliothèque, il ne sera peut-être pas possible d'inciter ce dernier à revenir sur sa décision de permettre un accès illimité aux sites Internet en raison du principe de liberté intellectuelle. Ainsi, s'il est impossible d'appliquer un filtrage à un degré raisonnable, la Direction des services de TI est d'accord avec à la recommandation selon laquelle il faudrait songer à isoler la Bibliothèque publique d'Ottawa du système municipal. Cela constituerait une opération d'importance puisque la Bibliothèque publique d'Ottawa (BPO) offre 33 sites, répartis dans toute la ville. En outre, isoler la Bibliothèque publique d'Ottawa du réseau de la Ville d'Ottawa engagerait des frais supplémentaires non négligeables puisque la BPO et la Ville partagent certaines applications de gestion et ressources des Services de TI.

L'on estime qu'isoler la Bibliothèque publique d'Ottawa du réseau municipal coûterait 30 000 $ en capital de départ et 150 000 $ en charge d'exploitation annuelles, y compris le financement d'un ÉTP supplémentaire (ou l'équivalent). Une pression budgétaire sera indiquée dans le budget de 2007.

Antivirus

Recommandation 6

Que les Services de technologie de l'information,
- **déploient la plus récente version de Symantec Antivirus;**
- **mettent à jour la configuration des systèmes antivirus pour inclure un contrôle antivirus pendant l'extraction des fichiers et avant l'exécution d'un programme.**

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les Services de TI jugent que le risque posé par l'utilisation de la version actuelle de Symantec Antivirus (7.61) est limité. En effet, le réseau municipal est également protégé par trois couches supplémentaires de protection contre les virus et fichiers malveillants, et Symantec continue d'émettre les mises à jour des fichiers de signatures de virus, conformément à l'entente de soutien, jusqu'au 31 janvier 2006.

Il n'est pas inhabituel qu'une organisation de la taille de la Ville d'Ottawa retarde ou saute des mises à niveau logicielles. Ces mises à niveau sont effectuées soit parce que la Ville a besoin de la nouvelle fonctionnalité offerte et qu'une analyse de rentabilité appuie cette mise à niveau, soit parce que le fournisseur n'offre plus de soutien pour le produit visé. Les Services de TI évaluent les nouvelles caractéristiques et l'analyse de rentabilité pour toutes les nouvelles versions et ce, au moment de leur lancement. En fait, la Ville s'est associée à Symantec au premier trimestre de 2005 pour procéder à un essai bêta de la version 10 puisque cette version était la première à ajouter des fonctions de protection contre la menace posée par les logiciels espions. Après cette évaluation, Symantec a recommandé, vers la fin du troisième trimestre de 2005, que la Ville entame une mise à niveau gérée pour passer directement de la version 7.61 à la version 10 de Symantec Antivirus.

Au quatrième trimestre de 2005, les Services de TI ont entamé la mise à niveau pour passer à la version 10 de Symantec Antivirus, mise à niveau qui doit être terminée avant le 31 janvier 2006. Cette mise à niveau comprend une évaluation des répercussions sur la productivité qu'aurait l'ajout d'un contrôle antivirus pendant l'extraction des fichiers et avant l'exécution d'un programme.

Gestion des journaux

Les pratiques de gestion des journaux doivent être améliorées. Une gestion efficace de ces journaux permet à une organisation de détecter les activités malveillantes, de comprendre les niveaux actuels des événements et de suivre les tendances à l'égard de différentes mesures d'exploitation. L'on a constaté que les journaux des différents dispositifs de sécurité n'étaient pas tous conservés dans une mémoire permanente. Il a également été noté que les journaux recueillis ne faisaient pas l'objet d'analyses de routine permettant d'analyser les événements ou tendances notables. Enfin, le degré de

couverture de la journalisation n'était pas suffisant pour enregistrer et détecter tous les événements importants liés aux dispositifs principaux d'application des mesures de sécurité.

Recommandation 7

Que les Services de technologie de l'information,
- **examinent les processus et systèmes de journalisation et de surveillance pour assurer un fonctionnement efficace et sain du système opérationnel et une surveillance de l'application des politiques,**
- **identifient les événements journalisés qui exigent une détection et une alerte en « temps réel » et que soient mis en œuvre les processus appropriés,**
- **examinent tous les dispositifs de sécurité pour ainsi garantir une journalisation et une couverture appropriées,**
- **s'assurent que les horloges de tous les dispositifs font l'objet d'une synchronisation centralisée pour assurer une corrélation efficace des différents événements,**
- **examinent toutes les exigences réglementaires et exigences connexes aux politiques municipales pour assurer une période appropriée de conservation des données de journalisation,**
- **songent à transmettre les données de journalisation et de surveillance à l'outil de gestion de la sécurité de l'information pour ainsi obtenir une analyse et une corrélation automatisées des événements et fournir à la Ville une meilleure image de la sécurité en temps quasi réel,**
- **garantissent que tous les dispositifs assurent au minimum la journalisation des événements connexes à la santé et la sécurité des systèmes,**
- **activent la journalisation pour tous les dispositifs.**

Réponse de la direction

La direction n'ait pas entièrement d'accord avec ces recommandations.

Les meilleures pratiques de l'industrie n'encouragent pas la journalisation complète et en tout temps de tous les dispositifs et ce, en raison du coût élevé d'une telle opération. Les Services de TI effectuent une journalisation et un alertage sélectifs, notamment pour certains dispositifs très vulnérables ou lorsqu'un certain dispositif soulève des inquiétudes.

Dans le cadre du projet d'examen de la sécurité d'entreprise (Enterprise Security Review) entamé au premier trimestre de 2005, les Services de TI ont signé un contrat avec une entreprise de sécurité chargée d'effectuer un examen détaillé des processus et des systèmes de journalisation et de surveillance, y compris une évaluation des répercussions financières de ces recommandations. Cet examen se terminera pendant le premier trimestre de 2006. Si un élargissement de la journalisation est requis, une pression budgétaire sera indiquée dans le budget de 2007. Les Services de TI ont mis en place un système d'alerte en cas de défaillance des dispositifs pour tous les serveurs et périphériques de réseau.

Les Services de TI ont aussi mis à jour les coupe-feu pour qu'ils utilisent l'heure synchronisée du CNRC.

Un examen des exigences réglementaires et des exigences connexes aux politiques municipales concernant les données de journalisation sera achevé au deuxième trimestre de 2006, après l'examen

détaillé des processus et des systèmes de journalisation et de surveillance du premier trimestre de 2006. Les données de journalisation seront conservées en conformité avec la Politique de gestion des dossiers de la Ville et avec les règlements municipaux en la matière.

Le besoin d'élargissement de la journalisation, ainsi que l'outil de gestion de la sécurité de l'information seront évalués pendant le deuxième trimestre de 2006 et, le cas échéant, une pression budgétaire sera indiquée dans le budget de 2007. L'on estime qu'un élargissement de la journalisation coûterait de 75 000 à 150 000 $. L'achat et la mise en œuvre d'un outil de gestion de la sécurité de l'information atteindraient 150 000 $ alors que les coûts d'exploitation continus dépasseraient les 200 000 $ par an. Les exigences liées à un ÉTP (ou l'équivalent) continu ne sont pas encore connues.

Gestion du changement

Le processus de gestion du changement connexe aux dispositifs de sécurité doit être amélioré et renforcé. L'on a constaté que les dispositifs ne respectaient pas tous le processus existant de gestion du changement. Par conséquent, il n'y a aucun lien entre les configurations des dispositifs de sécurité et le demandeur et l'approbateur de ces configurations. Ce suivi est important pour les examens périodiques en matière de sécurité.

Recommandation 8

Que les Services de technologie de l'information,
- **mettent en œuvre un processus/système de gestion du changement plus robuste au sein des Services généraux;**
- **appliquent le processus officiel de gestion du changement à tous les changements effectués sur les coupe-feu et autres systèmes de sécurité.**

Réponse de la direction

La direction est d'accord avec ces recommandations.

Le processus actuel de gestion du changement, en place depuis 2001, a été amélioré au quatrième trimestre de 2005 pour englober toutes les divisions des Services de TI, ainsi que les exigences de conformité avec la Politique de gestion des dossiers de la Ville.

En novembre 2005, le chef de l'information a rappelé à tous les gestionnaires de services de TI et aux gestionnaires de programmes la nécessité de se conformer à ce processus de gestion du changement. Cela inclut l'exigence de documenter les résultats obtenus et de les consigner de façon centralisée selon le cadre de gestion des dossiers de la Ville.

Politiques de sécurité des TI

L'on a constaté que les politiques de sécurité des TI comportaient certaines carences au niveau du contenu et de l'interprétation. Tous les utilisateurs et systèmes n'étaient pas liés par les politiques de sécurité des TI restreignant l'utilisation d'Internet. De façon plus particulière, l'utilisation d'Internet par la Bibliothèque publique d'Ottawa est régie par l'exigence de liberté intellectuelle. Il découle de l'interprétation de cette liberté intellectuelle que différents services et applications installés pour être

utilisés par le personnel de la bibliothèque passent outre certains des contrôles, comme le filtrage antivirus du courriel. Des modifications apportées à l'installation ou à la configuration pour permettre l'accès à distance (sur Internet) à des sources de données ont également été découvertes sur des postes de travail municipaux. En outre, le besoin croissant de crypter les données pour conserver la confidentialité crée le besoin d'élaborer une politique de gestion de ce cryptage. Certaines des questions liées au cryptage incluent la gestion des clés (garantir le maintien de la capacité à décrypter les documents) et la solidité du cryptage (garantir que les données ou les communications sont suffisamment protégées). Dans leur forme actuelle, les politiques de sécurité des TI indiquent que le cryptage doit être utilisé pour protéger les données confidentielles, mais elles ne précisent pas la façon dont cela doit être fait.

Recommandation 9

Que les Services de technologie de l'information s'assurent que la politique interdit l'installation de logiciels n'ayant pas reçu d'approbation officielle.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La section 6.4 de la version révisée de l'Utilisation responsable des ordinateurs - politique municipale, approuvée par la direction de la Ville en septembre 2005, prévoit : « Il est interdit aux utilisateurs de télécharger ou d'installer des logiciels, des partagiciels, des gratuiciels ou toute autre application sur les ressources informatiques de la Ville sans en avoir obtenu au préalable l'autorisation écrite des STI. »

Recommandation 10

Que les Services de technologie de l'information s'assurent que la politique interdit d'utiliser des ressources informatiques non approuvées par la Ville pour le traitement de données et d'actifs municipaux.

Réponse de la direction

La direction n'ait pas entièrement d'accord avec cette recommandation.

Cette recommandation s'applique aux deux situations suivantes :

- L'utilisation, sur le réseau municipal, par du personnel ou des consultants, de matériel n'appartenant pas à la Ville (par ex., ordinateurs portables). Traitement de données et d'actifs municipaux avec du matériel n'appartenant pas à la Ville (par ex., ordinateurs domestiques). Les Services de TI approuvent cette recommandation en ce qui a trait à l'utilisation, sur le réseau municipal, de matériel n'appartenant pas à la Ville (par ex., ordinateurs portables). La section 6.3 de la version révisée de l'Utilisation responsable des ordinateurs - politique municipale, approuvée par la direction de la Ville en septembre 2005, prévoit : « Aucun matériel n'appartenant pas à la Ville ne doit être connecté à son réseau sans une autorisation écrite des STI à cet effet. »

- Les Services de TI n'approuvent pas cette recommandation en ce qui a trait au traitement de données et d'actifs municipaux avec du matériel n'appartenant pas à la Ville (par ex.,

ordinateurs domestiques). Une telle restriction interdirait l'utilisation de messageries électroniques depuis un ordinateur domestique ou le travail à domicile sur un document Word ou une feuille de calcul Excel. La Politique d'activité informatique responsable définit clairement les obligations des employés quant aux mesures de protection qui doivent être prises à l'égard des documents et des renseignements informatiques dont ils ont la garde, que ceux-ci soient traités dans un établissement municipal ou non. La stratégie municipale de défense en profondeur atténue le risque pour la municipalité que posent les logiciels malveillants provenant d'environnements informatiques autres que municipaux.

Recommandation 11

Que les Services de technologie de l'information examinent les périodes de conservation du courriel (y compris des messages supprimés) et les comparent à l'utilisation de ces données en tant que documents municipaux ainsi qu'aux meilleures pratiques de l'industrie.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La période de conservation du courriel a été examinée en regard des lois fédérales, provinciales et municipales, avant l'approbation du Règlement sur la conservation et le déclassement des dossiers, approuvé par le Conseil municipal, et de la Politique de gestion des documents, en 2003. Les règles de conservation automatisée des courriels ont été mises en œuvre en septembre 2005 dans le cadre d'une mise à niveau du produit Exchange Server, pour garantir la conformité avec ce règlement et cette politique.

Recommandation 12

Que les Services de technologie de l'information examinent la liste des utilisateurs possédant des droits d'administrateur sur leur poste de travail, et retirent les privilèges de gestion des utilisateurs pour lesquels ils ne sont ni justifiés ni requis.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Une procédure officielle documentée et rigoureuse est suivie chaque fois qu'un utilisateur demande des droits locaux de gestion de réseau.

Dans le cadre du projet d'examen de la sécurité d'entreprise, un examen sera effectué à l'égard des droits d'accès à la gestion de réseau des Services de TI, et des recommandations seront présentées à l'équipe de direction des Services de TI au premier trimestre de 2006. Cet examen sera effectué tous les ans.

Dans le cadre du programme de remplacement des ordinateurs portables lié à leur cycle de vie, des droits d'administrateur plus restrictifs sont actuellement mis en place pour les utilisateurs d'ordinateurs portables. À l'heure actuelle, un budget est offert pour le remplacement d'environ 100 unités, dans un parc comptant un total de 900 unités.

Environ 50 % des ordinateurs portables du parc actuel de la Ville utilisent un système d'exploitation permettant de contrôler les droits d'administrateur. Les Services de TI prévoient mettre en œuvre ces restrictions des droits d'administrateur avant la fin du premier trimestre de 2006. Les 50 % restants du parc municipal d'ordinateurs portables doivent être remplacés.

Un budget de 700 000 $ ainsi qu'un budget pour un (1) ÉTP (ou l'équivalent) supplémentaire seront nécessaires pour accélérer ce programme de remplacement, pour qu'ainsi, il puisse être effectué en douze (12) mois. Une pression budgétaire sera indiquée dans le budget de 2007 pour accélérer ce programme de remplacement afin qu'il puisse être terminé en douze (12) mois.

Recommandation 13

Que les Services de technologie de l'information,
- **examinent les rôles et responsabilités de l'organisation, ainsi que les ententes s'y rattachant, telles les ententes sur les niveaux de service (ENS);**
- **définissent clairement les rôles/responsabilités, ainsi que des processus pour garantir que l'application et la surveillance des contrôles sont couvertes.**

Réponse de la direction

La direction n'ait pas d'accord avec ces recommandations.

Les Services de TI ont examiné les rôles et responsabilités existants dans l'organisation et croient que ces rôles et responsabilités sont clairement délimités et efficaces. La répartition des responsabilités et les autres mécanismes de contrôle organisationnels sont entièrement mis en œuvre et maintenus dans l'ensemble de la Direction.

Politique de cryptage

Recommandation 14

- **Que les Services de technologie de l'information élaborent une politique de cryptage visant les principaux aspects du cryptage, à l'égard des activités et des besoins de la Ville.**

Réponse de la direction

La direction est d'accord avec cette recommandation.

Des technologies de cryptage sont actuellement utilisées pour protéger des systèmes particuliers, mais ces normes *de facto* ne sont pas consignées dans un document de référence unique. Les normes de cryptage existantes seront recueillies et documentées avant le deuxième trimestre de 2006.

Recommandation 15

- **Que les Services de technologie de l'information identifient des outils de cryptage des courriels à contenu délicat.**

Réponse de la direction

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

La section 7.1 de la version révisée de l'Utilisation responsable des ordinateurs - politique municipale, telle qu'elle a été approuvée par la direction de la Ville en septembre 2005, prévoit qu'aucun renseignement de nature délicate ne doit être transmis via le système de courriel municipal.

Une solution de cryptage du courriel utilisée dans l'ensemble de la Ville ne serait qu'à usage interne et ne serait pas nécessairement compatible avec des partenaires externes, puisqu'il n'y a aucune norme nationale ou internationale pour le cryptage du courriel.

Si une solution de cryptage du courriel appliquée à toute l'entreprise était requise, l'on estime qu'elle coûterait 100 000 $ et que son administration demanderait 2 ÉTP (ou l'équivalent). Une pression budgétaire serait indiquée dans le budget de 2007.

Recommandation 16

- **Que les Services de technologie de l'information mettent sur pied un cryptage résistant sur le lien entre le gestionnaire de périphérique 2 et le réseau laboratoire de la bibliothèque qui utilise Internet pour ses communications.**

Réponse de la direction

La direction est d'accord avec cette recommandation.

Au quatrième trimestre de 2005, la Sécurité des TI va étudier l'utilisation de ce lien et les mesures de protection actuellement en place.

Sensibilisation des utilisateurs à la sécurité des TI

Recommandation 17

Que les Services de technologie de l'information,
- **créent un programme comprenant un examen annuel de la politique sur la sécurité des TI vis-à-vis des utilisateurs, et des séances trimestrielles/semestrielles obligatoires de sensibilisation à la sécurité des TI,**
- **poursuivent leur campagne de sensibilisation à la sécurité par courriel Flash, en avertissant les utilisateurs des attaques majeures transmises par courriel;**
- **améliorent l'efficacité de la campagne de sensibilisation à la sécurité des TI.**

Réponse de la direction

La direction est d'accord avec cette recommandation.

Un programme officiel de sensibilisation à la sécurité des TI existe déjà. Des articles de sensibilisation sont publiés tous les mois, dans « La ville en bref ». Des Bulletins des gestionnaires sont également publiés au besoin, et des séances de sensibilisation à la sécurité des TI sont tenues et abordent des questions ou s'adressent à des groupes stratégiques. Des activités de sensibilisation sont incluses dans le cycle de planification annuel depuis 2003. Les campagnes de sensibilisation par courriel Flash vont se poursuivre.

Il a été prévu qu'un examen indépendant visant à mesurer et à évaluer les cibles actuelles de sensibilisation et la stratégie de communication connexe commencera en octobre 2005, dans le cadre du Programme municipal de sensibilisation à la sécurité des TI. Cet examen a été reporté en 2006 en raison d'un gel budgétaire à l'échelle de la ville. Il inclura des recommandations précises ainsi qu'un plan de travail identifiant les cibles prioritaires des messages.

Utilisation d'Internet

Les politiques portant sur Internet doivent être révisées afin de limiter l'utilisation personnelle d'Internet, de façon à ce qu'elle ne soit qu'accessoire ou occasionnelle, et le respect des politiques doit être surveillé. De façon générale, une grande majorité de l'utilisation d'Internet est d'ordre personnel.

Un échantillon aléatoire de 50 comptes utilisateurs a fait l'objet d'un examen approfondi pendant le mois de mai 2005. Pour ce groupe, le nombre de requêtes se situait dans une étendue allant de 44 220 requêtes (soit 2 106 requêtes par jour pour le plus gros compte utilisateur) à zéro requête pour le plus petit compte utilisateur. L'examen était fondé sur un échantillon statistiquement valide. Il a permis de constater que la proportion moyenne d'utilisation d'Internet à des fins personnelles de ce groupe était de 53 %.

Les cinquante plus gros comptes utilisateurs ont fait l'objet d'un examen approfondi pour le mois de mai 2005. Pour ce groupe, le nombre de requêtes se situait dans une très large étendue, allant de 2 098 002 (soit 99 905 requêtes par jour pour le plus gros compte utilisateur) à 29 761 requêtes (soit 1 417 requêtes par jour pour le plus petit compte utilisateur). Nous avons constaté que la proportion moyenne de leur utilisation d'Internet à des fins personnelles était de 66 %.

Le tableau ci-dessous présente un aperçu de l'utilisation d'Internet, comme l'a indiqué la Direction des services de technologie de l'information, pour le mois d'octobre 2005.

LES 100 SITES WEB AUTORISÉS LES PLUS VISITÉS EN OCTOBRE 2005
Selon la Direction des services de technologie de l'information

Catégorie (selon les STI)	Exemples	Pourcentage des 100 premières requêtes de sites Web	Pourcentage du trafic Internet total (oct. 2005)
Moteurs de recherche Internet	www.google.ca kh.google.com cdn.mapquest.com	41,7 %	25,9 %
Publicité	ad.doubleclick.net adcounter.theglobeandmail.com adme.411.ca	29,3 %	18,2 %
Sports, magasinage et divertissement	www.tsn.ca www.mls.ca	5,3 %	3,3 %
Actualités et médias	OttawaSun.com CBC.ca	4,2 %	2,6 %
Références	weatheroffice.ec.gc.ca www.Isuc.on.ca	2,4 %	1,5 %
Recherche d'emploi	Workopolis.com	2,0 %	1,3 %
Technologies de l'information	download.windowsupdate.com www.microsolft.com	1,6 %	1,0 %
Application de la Ville d'Ottawa	Interfleet.ca Library.Ottawa.on.ca	1,2 %	0,7 %
Autres	Comprend les sites « non classifiés »	12,2 %	7,6 %
Total		**99,9 %**	**62,1 %**

La Politique sur l'utilisation responsable de l'Internet prévoit des règlements et des directives sur l'utilisation appropriée d'Internet que doivent respecter tous les utilisateurs. Dans le cadre de notre vérification, nous avons constaté que la politique existante n'était pas respectée dans les domaines suivants :

- l'usage, s'il fait l'objet d'un examen public, n'est pas susceptible de mettre la Ville dans l'embarras ou de constituer pour elle une source de préoccupation;

- l'accès à partir des postes de travail de la Ville à des systèmes et à des comptes de courrier électronique auxquels la Ville ne souscrit pas (comme Hotmail) est strictement interdit;
- l'utilisation faite par tous les employés du réseau informatique et d'Internet fait l'objet d'une surveillance et d'un suivi;
- les utilisateurs ne doivent pas se servir de l'Internet à des fins illégales ou immorales;
- le partage de fichiers poste à poste;
- discussion sur le Web;
- services d'enchères par Internet;
- les comptes partagés;
- les annonces personnelles et les sites de rencontres; et
- les sites Web personnels.

Nous n'avons pas pu déterminer si l'utilisation d'Internet à des fins personnelles par les employés se faisait pendant les heures normales de travail. En effet, la Direction des services de technologie de l'information n'a pas fourni au Bureau du vérificateur général copie instantanée des dossiers.

L'utilisation personnelle du courriel n'était pas aussi importante que celle d'Internet. D'après un échantillon aléatoire de 50 utilisateurs, l'on a constaté que 16 % environ des courriels étaient d'ordre personnel. Tous les utilisateurs utilisaient le courriel pour une raison liée au minimum à un besoin d'affaires.

Une analyse des cinquante plus gros utilisateurs du courriel n'a pu être effectuée. En effet, les Services de technologie de l'information n'ont pas pu produire de rapport exact. Nous serions en droit d'attendre d'une organisation comme la Ville d'Ottawa qu'elle ait des outils éprouvés pour produire avec rapidité et exactitude des rapports sur des domaines tels les plus gros utilisateurs du courriel, les échantillons aléatoires d'utilisateurs, les messages envoyés et reçus et autres mesures connexes au courriel pouvant être utilisées pour l'analyse de l'utilisation de la messagerie électronique. Des méthodes de rechange pour suivre et surveiller les gros utilisateurs du courriel devraient exister.

La Politique sur l'utilisation responsable de l'Internet autorise expressément l'utilisation de cette ressource municipale à des fins personnelles. Bien qu'il soit raisonnable de s'attendre à une utilisation occasionnelle minimale d'Internet à des fins personnelles, nous pourrions nous attendre à ce que le degré d'utilisation d'Internet à ces fins soit similaire à nos attentes à l'égard des restrictions limitant l'utilisation personnelle du téléphone. La politique de la Ville sur l'utilisation du courriel n'autorise son utilisation à des fins personnelles que de façon accessoire, à l'instar des restrictions relatives à l'utilisation du téléphone. Puisque nous avons constaté une forte utilisation d'Internet à des fins personnelles, la Politique municipale sur l'utilisation responsable d'Internet doit être révisée afin de limiter l'utilisation personnelle d'Internet de façon qu'elle ne soit qu'accessoire ou occasionnelle.

Afin que les gestionnaires surveillent le personnel pour garantir que celui-ci utilise Internet et le courriel de façon appropriée, des rapports sur l'utilisation d'Internet et du courriel devront leur être fournis. Il incombe aux Services de technologie de l'information de surveiller et de contrôler l'utilisation d'Internet et du courriel. Cela doit inclure un processus de production de rapports sur les forts volumes et tendances d'utilisation inhabituelles, rapports devant être fournis aux gestionnaires afin que ceux-ci soient en mesure de déterminer si l'utilisation est appropriée.

À l'heure actuelle, les Services de TI ne fournissent pas aux gestionnaires de services des rapports réguliers sur l'utilisation d'Internet ou du courriel, pour que ceux-ci les examinent et s'assurent ainsi que

leur personnel utilise ces outils de façon appropriée. Cette surveillance peut être effectuée au moyen d'un processus visant à fournir des rapports à la direction en vue de ces examens.

Respect de la politique – Internet et courriel

Recommandation 18

Que les Services de technologie de l'information,
- **surveillent et contrôlent l'utilisation d'Internet et du courriel par les employés municipaux;**
- **élaborent des outils d'enregistrement appropriés pour fournir des rapports fiables sur l'utilisation du courriel;**
- **élaborent et mettent sur pied un processus permettant de fournir aux gestionnaires des rapports sur l'utilisation d'Internet et du courriel par leur personnel, de façon que la direction puisse déterminer si cette utilisation est appropriée;**
- **révisent l'Utilisation responsable des ordinateurs - politique municipales, afin de limiter l'utilisation d'Internet de façon qu'elle se fasse principalement à des fins professionnelles, et afin de limiter l'utilisation personnelle de façon qu'elle ne soit qu'accessoire ou occasionnelle.**

Réponse de la direction

La direction est d'accord avec ces recommandations.

Les Services de TI utilisent Websense pour surveiller et contrôler l'utilisation d'Internet au niveau global ou au niveau du système. Avant la vérification, les Services de TI ont lancé un vaste projet qui devrait être terminé pendant le premier trimestre de 2006. Ce projet vise à mettre Websense en œuvre de façon plus rigoureuse. Une vaste gamme de dispositifs de filtrage Websense supplémentaires a déjà été mise en place, ce qui améliore la surveillance de l'utilisation d'Internet et le blocage des sites Web non conformes au Code de conduite et à l'Utilisation responsable des ordinateurs - politique municipale. Les examens mensuels des rapports Websense par les Services de TI vont se poursuivre, ainsi que les modifications des catégories, le blocage des sites Web et les études complémentaires.

En 2006, les Services de TI vont améliorer la surveillance d'Internet à l'aide des outils de production de rapport Websense existants. Une analyse approfondie d'un minimum de 50 comptes Internet sera effectuée chaque semestre pour vérifier le respect de l'Utilisation responsable des ordinateurs - politique municipale. Les cas de non-respect seront examinés avec le concours des gestionnaires et de la section des Relations de travail de la Direction des services aux employés. Il est prévu que la mise sur pied de cet examen et ce suivi nécessitera de la part du personnel un travail équivalent à 1,5 ÉTP (2 700 heures).

Les Services de TI/Relations de travail contacteront les gestionnaires respectifs des 50 utilisateurs pris au hasard et des 50 plus gros utilisateurs examinés dans le cadre de la vérification. Les Services de TI, en collaboration avec les Relations de travail, fourniront le rapport de consultation d'Internet, ainsi que des lignes directrices sur la façon d'interpréter l'ensemble des données et d'approcher les employés à l'égard des préoccupations que pourrait soulever leur utilisation d'Internet.

Les Services de TI vont continuer de produire des rapports et des paramètres à l'aide de Promodag. Ils mettront également à l'étude des outils de surveillance et des capacités de production de rapports

supplémentaires pouvant permettre de surveiller les comptes de courrier électronique individuels. Les cas de non-respect de l'Utilisation responsable des ordinateurs - politique municipale seront examinés en collaboration avec les gestionnaires et les Relations de travail. À l'heure actuelle, l'effort supplémentaire à fournir pour effectuer ces examens et ce suivi n'est pas connu car il faudra attendre que les nouveaux outils soient identifiés et sélectionnés. Une pression budgétaire serait indiquée pour 2007, pour l'acquisition et la mise en œuvre de nouveaux outils de surveillance et de production de rapports.

La version révisée de l'Utilisation responsable des ordinateurs - politique municipale indique clairement que l'Internet et le courriel sont fournis pour « un usage professionnel justifié dans le cadre des fonctions assignées, mais peut également servir à des fins personnelles, à condition qu'il n'y ait pas d'abus », et que le non-respect entraînera des mesures disciplinaires pouvant aller jusqu'au renvoi. L'Utilisation responsable des ordinateurs - politique municipale sera révisée afin de garantir qu'elle s'applique de façon égale à l'utilisation d'Internet et à l'utilisation des courriels et tient compte de nos pratiques courantes.

Commentaires généraux de la direction

Les Services de technologie de l'information (STI) approuvent bon nombre des recommandations présentées par le vérificateur général. Là où la direction ne sons pas d'accord avec les constatations ou les recommandations présentées par le vérificateur général, une explication est fournie pour prouver le bien-fondé de cette position. Dans tous les cas, cela découle de recherches ou de consultations supplémentaires effectuées au niveau des fournisseurs, des experts en sécurité informatique et des meilleures pratiques de l'industrie.

Dans les cas où la direction a déjà entamé une action, une mise à jour de l'état de cette action a été fournie. Lorsque aucune action n'a été entreprise, le calendrier proposé, les incidences budgétaires et les résultats escomptés ont été identifiés.

1.6 Conclusion

Dans le cadre de cette vérification, la suffisance, l'efficacité et la fiabilité des mesures et des contrôles de sécurité en place à l'égard de l'utilisation d'Internet et du courriel ont été examinées, et la conformité de l'utilisation d'Internet et du courriel avec les politiques municipales a été évaluée. Bien que l'on ait constaté que les contrôles de sécurité actuellement en place sont généralement efficaces et fiables, des lacunes ont été identifiées au niveau de la suffisance de ces contrôles. La vérification incluait également un examen de la conformité de l'utilisation d'Internet et du courriel avec les énoncés de la politique actuelle. L'on a constaté que l'utilisation de ces outils à des fins personnelles est considérable. La Politique sur l'utilisation responsable de l'Internet et l'Utilisation responsable des ordinateurs - politique municipale devraient être révisées afin de limiter l'utilisation d'Internet de façon qu'elle se fasse principalement à des fins professionnelles, et afin de limiter l'utilisation personnelle de façon qu'elle ne soit qu'accessoire ou occasionnelle. Un programme visant à surveiller et à contrôler l'utilisation d'Internet et du courriel devrait également être établi.

Nous remercions la gestion pour la courtoisie et l'assistance qu'ils nous ont offertes pendant cette vérification.

1.0 Introduction

The Audit of Internet Usage and Controls was part of the 2005 audit plan brought forward by the City's Auditor General and received by City Council on December 15, 2004. This report documents the results of the audit findings including those controls and usage compliance components that were found to be functioning effectively and those that require remediation or implementation. The lifeblood of every organization is its information assets. For the City of Ottawa the vast amount of information assets is managed within Information Technology Services resources. The security of City assets must be protected with appropriate safeguards to ensure the continued confidence of both City constituents and staff. This audit is a review of the safeguarding of the City network from Internet threats.

2.0 Background

The use of the City's Internet and e-mail services are regulated and governed through two (2) policies. For the purpose of this audit, we reviewed the following policies, which were in effect at the time of our review:

- ▪ Responsible Computing Policy (August 13, 2001); and
- ▪ Responsible Use of the Internet Policy (December 11, 2003).

2.1 Internet Security Background

Proper control and protection of information assets is vital to City operations. In addition, the regulatory compliance implications and the public's level of trust expectations mean that the City must ensure appropriate information security management measures.

The basic building blocks of information security include the following properties:

- • **Confidentiality**: information is made available or disclosed only to authorized individuals, entities, applications, or processes;

- • **Integrity**: information consistency and authorized changes only; and

- • **Availability**: information is readily accessible to its authorized users when needed.

It is broadly understood that an organization's required connectivity to the Internet brings substantial business benefits. However, it is also widely understood that continuously updated security measures must be implemented to reduce the risk of the Internet's ever evolving security threats to an organization's information and systems.

The Internet threats range from mild annoyances to harmful and destructive incidents. A failure to protect against these threats could include the following:
- • Loss of critical information assets
- • Loss of integrity of data
- • Unwanted disclosure of confidential information
- • Severed communications such as www.Ottawa.ca web site inaccessible from Internet or Internet bound e-mail failure

- Disruption of critical services
- Lost or delayed transactions

The consequences to the City could be:
- Damaged reputation
- Loss of public support
- Loss of staff faith
- Financial losses

2.2 Audit Scope

There are approximately 9,000 users of the Internet within the City of Ottawa. All users have access to e-mail, World Wide Web, and other Internet communications protocols such as MSN messenger chat for Ottawa Public Library users (on June 1, 2005, Instant Messaging was blocked for all staff excluding Ottawa Public Library), FTP, and specialized library catalogue systems protocols within the City of Ottawa. To facilitate this communication and transfer of information, the City's internal network has 220 high-speed wide-area network connections and 60 dial-up connections.

There are six ways the City network connects to the Internet:
1. Main Internet connection for public-facing Internet services such as Ottawa.ca, e-mail, and City & Library staff Internet usage;
2. Connection for Library public-use workstations;
3. Connection for OC Transpo public website;
4. ADSL connections for EFA public-use workstations;
5. ADSL connections using secure VPN tunneling between City facilities; and,
6. An isolated test connection for use in Information Technology Services lab environment.

Information Technology Services Branch reported a total of 26.7 million Internet "hits", performed by 6,226 users who accessed the Internet during the month of October 2005, which represents an average of 4,282 hits per user for that month.

The City's e-mail systems transfer over 200,000 e-mails daily.

The Ottawa Police Service was not included in the audit.

The audit included an investigation of a number of security controls within the City Internet infrastructure including the following:
- Internet firewalls
- Anti-Virus technology
- Anti-Spam technology
- Internet content filtering
- Key policies and procedures governing the use of, and the controls on Internet usage (for example, IM/IT Security Strategy, Responsible Use policies, Incident Investigation policies, Service Request policies).

The audit included an investigation of controls at the following sites using sampling techniques examining the Internet controls:
- 8 large City sites
- 6 small City sites
- The audit fieldwork was conducted during August and September 2005.

- The fieldwork included interviews with 23 City managers and staff for knowledge of policies and procedures.

In addition, the audit examined compliance of top users by volume and a random sample of users to the following policies using sampling techniques:
- Internet traffic (sites visited) for conformance to Responsible Use of the Internet Policy;
- Review e-mail usage for compliance to Responsible Computing Policy; and
- The sampling period for this audit was the month of May 2005 for Internet usage and the week of September 19 to 25, 2005 for e-mail usage.

3.0 Audit Objective

The audit objective is to provide an independent and objective assessment of:
- The adequacy, effectiveness and reliability of security strategy, policy, measures and controls in place over the usage of the Internet and e-mail; and
- Determine whether Internet and e-mail usage is compliant with the City policies.

4.0 Approach

Our approach to the audit was as follows:
- Review documentation collected (policies, protocols, procedures, and technical configuration documents affecting the management of Internet and e-mail);
- Conduct a Vulnerability Assessment against two City Internet sites or access points;
- Plan and conduct site visits and tests on 8 large sites and 6 small sites to both review the technical controls and also staff knowledge and practices of Internet and e-mail policies;
- Assess tools/mechanisms/logs used by managers to monitor and control processes;
- Review usage logs and compare to policy;
- Review staff Internet traffic to determine compliance to policy; and
- Review a sample of e-mail to determine policy compliance.

5.0 Acknowledgement

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

6.0 Observations, Findings, and Recommendations

6.1 Top "What is Working"

6.1.1 E-mail Dangerous Attachment Isolation

Positive impact on system/information confidentiality, integrity and availability.

This control quarantines inbound and outbound e-mail file attachments that are potentially dangerous. File types included in the quarantine list as those files that are typically executed by the Windows operating system. Examples of these attachments include traditional Windows executables (files end with extension of .exe) and other file types that may be business related but have the potential to contain malicious software. Heavy external e-mail usage users have observed a reduction of incoming e-mail with dangerous attachments. Users who required the

quarantined file attachments found the process to have the attachment released effective and efficient. The majority of the quarantined e-mails were deemed unnecessary and were deleted.

The findings were as follows:
- Anti-virus filtering correctly scanned and corrected attachments with viruses[1] including various archive formats.
- The quarantine feature correctly quarantined blocked file types.
- Restricted file types normally quarantined or blocked (such as .exe) could be bypassed by renaming the file attachments.

It was found that attachment filtering based on file name worked well. While it was not possible to bypass the anti-virus by renaming attachments, it was possible to bypass the restricted file types (such as .exe executable files) by renaming to allowed file types. Therefore, if a user wants to bypass this control, it is easy to do so.

Business Impact

This security control greatly reduces the City problems associated with e-mail propagated inappropriate information, malicious software attachments, and vulnerability exploitation, with results ranging from the embarrassment of inappropriate material found on systems, to disclosure of privacy information.

Savvy users cannot bypass anti-virus controls, however they can bypass file type blocking controls. Nonetheless the nine anti-virus engines will still block malicious file content.

Recommendation 1

That Information Technology Services investigate the tools used to perform blocking by file type to enable this feature regardless of extension.

See Management response with Recommendations 2 and 3.

6.1.2 Library and Employment Center Public Desktop Lockdown

Positive impact on system/information confidentiality, integrity and availability.

This control refers to the safeguards on personal computers that prevent non-privileged users from easily and quickly changing the configuration or adding software that causes these PCs to become attack vectors into the City network or the Internet, or result in theft of information. It is important to note that the computer network for the Ottawa Public Library patrons and the computer network for City staff share a common hardware platform on logically separate communication channels. Therefore, accidental or intentional configuration changes to the Ottawa Public Library patron PCs could, theoretically, provide a method and means to attack the City corporate network, exploiting any weaknesses in the logical segmentation of the City corporate network and the Ottawa Public Library patron network. However, during testing performed during this audit, the test cases used to attempt configuration changes on these systems failed to effect changes to the systems (see below).

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[1] EICAR test virus used for all virus testing. EICAR is a benign string that triggers anti-virus controls to enable safe testing of anti-virus systems.

The findings were as follows:
- The anti-virus system detected files infected with the EICAR virus on attempts to write the file to disk.
- The anti-virus did not detect a read of a file infected with the EICAR virus.
- The anti-virus did not detect the execution of the EICAR virus.
- The anti-virus pattern file was found to be up to date.
- It was not possible to modify key system files to change the operation or configuration of the system.
- It was not possible to change the IP routing on the system (which could be used to attack the network).
- The Bajai content filtering software was found to prevent access to common blocked sites. The Bajeye content filtering also functioned to block offensive images in most cases.

The anti-virus system on these systems did detect the test virus when attempting to write a virus to disk, however it failed to detect the virus on read or execute. This configuration error could allow a virus to attack the network if executed from an e-mail or Internet download or from removable storage.

Various attempts were made to change the configuration of these systems. The configuration lockdown proved effective against the attacks. The same controls also prevent a malicious hacker posing as a patron to either capture confidential information from other patrons or as an attack vector against other hosts on the Internet.

The Bajai content filtering system prevents access sites on the blocked policy list. In addition, the Bajeye filtering tool prevented the loading of images that met the blocking criteria. However, like all current blocking tools, it does not cover all web sites on the Internet nor all images (e.g. tanned skin could cause the Bajeye filter to fail).

The system developed on Deep Freeze technology provides effective system lockdown and simple reboot quick recovery. It includes a regularly updated Symantec Antivirus, in addition to a regularly updated centralized and distributed (respectively) Bajeye web filtering.

Business Impact

This security service greatly reduces patron misuse of City public resources, while providing them a heightened level of protection against inappropriate material, malicious software and Internet abuses. It also significantly reduces the program's information technology support costs. However, providing an automated Windows XP patching, and the latest Symantec Antivirus version, incorporating additional malicious software protection, would greatly improve library and employment centre patron protection.

Recommendation 2

That Information Technology Services deploy the latest Symantec Antivirus version.

Recommendation 3

That Information Technology Services update the configuration of the Antivirus systems to include anti-virus checking on read from disk and before program execution.

Management Response

Management agrees with recommendations 1, 2 and 3.

IT Services is investigating a new feature recently available for the first layer of virus-scanning protection, which permits blocking of file types regardless of the extension used. Testing to ensure there is no negative impact on e-mail delivery services will occur in Q1 2006.

IT Services considers that the risk of using the current version of Symantec Antivirus (7.61) is mitigated as three additional layers of anti-virus and malicious file protection also safeguard the City network, and Symantec continues to issue updated virus signature files per the support agreement up to January 31, 2006.

It is not uncommon for an organization of the size of the City of Ottawa to delay or skip version upgrades of software products. Upgrades are done either because the new functionality offered is needed by the City and is supported by a business case for the upgrade, or because the product is no longer supported by the vendor. IT Services has evaluated the additional features and business case for each new version as it is released. In fact, the City partnered with Symantec in Q1 2005 to beta-test version 10, as this is the first version to add features to safeguard against the current threat from spyware. Following this evaluation, Symantec recommended in late Q3 2005 that the City begin a managed upgrade directly from version 7.61 to Symantec Antivirus version 10.

IT Services initiated the upgrade to Symantec Antivirus 10 in Q4 2005, to be completed by January 31, 2006. This upgrade includes an assessment of the productivity impact of including anti-virus checking on read from disk and before program execution.

6.1.3 E-mail SPAM

Positive impact on system/information integrity and availability.

While there is great debate about a conclusive definition for SPAM, it can be loosely defined as follows;

> *A simple definition of spam is unsolicited e-mail messages, generally commercial or promotional in nature, usually sent in bulk. The key word here is unsolicited.*
>
> *Most spam messages are commercial advertisements for products or services, but many non-commercial messages can also be considered spam, such as: promotional messages, political messages, press releases, charitable solicitations, scams and "get rich quick" schemes, jokes, chain letters, hoax messages that advise the recipient to forward the message to all entries in their address book.[2]*

The findings were as follows:

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[2]The Open Group, http://www.opengroup.org/messaging/public/apr-2003/spam_call_to_action.htm#what%20is%20spam

- Based on responses from user questionnaires that asked if users were receiving SPAM, all users reported dramatic reductions in SPAM since the introduction of the SPAM filtering tools.
- High volume Internet and e-mail users reported a small amount of SPAM continues to penetrate the e-mail system (about 1% per day for e-mail users receiving 100 or more e-mails per day).
- While there is a SPAM e-mailbox for users to send any SPAM e-mail that penetrates the SPAM filters for analysis, none of the users interviewed during the site visits recalled its existence. It should be noted that the sample size consisted of 23 staff and managers. In addition, some of the users interviewed received less than 1 SPAM e-mail per month and are perhaps not inclined to report these e-mails.
- The SPAM e-mailbox has been monitored daily since 2003. Since the implementation of the anti-spam firewall in January 2004, samples of recurring spam have been submitted to the anti-spam vendor for inclusion in the spam filtering rulebase. The spam e-mailbox and firewall are also regularly monitored for emergent virus, worm, and "phishing" threats. Trends are monitored and reported on monthly to the Chief Information Officer.

Users have observed a significant reduction in e-mail SPAM. There are still SPAM e-mails being received by high volume e-mail users however, these e-mails are a more targeted type of e-mail that does not meet the technical match criteria currently used by the City's SPAM filters. This does not represent a failure of the current SPAM system used by the City but rather is a result of more sophisticated SPAM e-mails designed to bypass the current technology. Regardless, all users reported a dramatic reduction in the volume of SPAM e-mail received which is supported by the system reports identifying substantial volumes of e-mail being blocked.

Business Impact

This has significantly reduced the amount of SPAM e-mail that City staff must process and, reduced the possibility of the SPAM setting off a malicious software infestation, and reduced the e-mail delivery system resource requirements.

Recommendation 4

That Information Technology Services:
- **Review the level of awareness of the SPAM e-mailbox and increase visibility if warranted; and**
- **Continue monitoring the effectiveness of the current SPAM filtering tool.**

Management Response

Management agrees with these recommendations.

The spam@ottawa.ca mailbox continues to be part of IT Services' ongoing security awareness program. Over 1,000 e-mails received by City staff from external sources are submitted monthly to the SPAM mailbox for review. In addition, four City Brief articles were published in 2005 on the topic of SPAM, each including a reminder about the availability of the SPAM mailbox. IT Services will continue to remind staff of the SPAM e-mailbox regularly.

Upgrades to the SPAM filtering service are implemented by IT Services when available from the vendor, to ensure continued effectiveness of the service. As noted in the report,

monitoring of the SPAM filtering service is performed daily, and reviewed monthly by IT Services.

October data from MessageLabs indicated that 65% of all e-mail worldwide was identified as SPAM. Of the 50,000 e-mails received from external sources daily to the City's 9,000 e-mail users, slightly over 50% is identified as SPAM and immediately rejected. Roughly 0.5% of these e-mails are SPAM that is <u>not</u> identified or rejected, and successfully reaches a City recipient – 250 e-mails per day for the entire City. Users are encouraged to forward SPAM messages to IT Services to assist in increasing the effectiveness of the SPAM filtering service.

6.1.4 HTTP Web Site Filtering

Positive impact on system/information confidentiality, integrity and availability.

The City has implemented a number of different controls to enforce the Responsible Use of the Internet Policy. In addition, this service also supports the protection of the City network from sites known to include malicious software. This section discussed the control of the most prevalent form of Internet use, the HTTP protocol common to most web sites. It excludes all other protocols (including the HTTPS protocol common to online banking and purchasing sites), but HTTP is the dominant protocol for transferring data from web sites. Notwithstanding some implementation issues that could minimize this control, the Websense and Bajeye http web site filtering is working well at implementing Responsible Use of the Internet Policy controls.

The findings were as follows:
▪ The Websense content filtering tool worked to block a wide range of productivity impacting and prohibited sites as defined in the Responsible Use of the Internet Policy.
▪ Websense content blocking of the Premium Security group sites (sites known to contain malicious code are included in this Premium Group) was not tested, but should be effective in preventing users from browsing sites that are known to contain malicious software thus protecting the City network.
▪ Websense was not universally implemented for all users within the City network. In particular, the Ottawa Public Library staff are a general exception to this standard, as per the Ottawa Public Library Board Policy.
▪ A handful of hosts (servers or workstations) were found exempt from the HTTP content filtering.
▪ Four workstations at the Don Gamble Complex were found to be exempt from Websense filtering.
▪ A computer savvy user can use various methods to bypass the Websense controls.

Testing of the control verified that standard request for websites on the banned lists is correctly blocked. However, further testing showed that it is possible to bypass the intent of the controls through various methods such as proxy servers, remote control servers, and specific bypasses such as viewing images that would otherwise be blocked through images.google.com.

The Ottawa Public Library Board Policy regarding Internet usage for staff is guided by their intellectual freedom standards. This freedom that Ottawa Public Library staff enjoy includes unfiltered web site access and services such as webmail and instant messaging.

Finally, this control blocks access to a specific Websense category that includes sites known to contain malicious code. However, since all Library staff are exempt from this filtering, the risk to the Library systems and the whole internal City network is increased as they are interconnected. There is no separation or additional controls between the Library staff and the rest of the City network. Thus, the controls in place prevent users on the City network from visiting a web site known to contain malicious software, which can be visited by an Ottawa Public Library user. An exploited Library system could go on to propagate malicious software or be leveraged to leak information from any part of the City's network.

Business Impact

This security control greatly reduces the risk of Internet inappropriate material exposure to City staff by blocking access to these sites. In addition, further sites including some webmail sites are blocked leading to a reduced misuse of time spent "surfing" for non-business reasons.

This service further limits staff exposure to numerous web sites which contain malicious software and system vulnerability exploitation code which would be unknowing or misleadingly installed, leading to potential information disclosure or system unavailability.

A minimum level of Library filtering should be put in place to protect the City's network. If staff from the Ottawa Public Library continue to be bound by separate policies for use of the Internet (in particular allowing unfiltered access, access to external e-mail systems, and access to unauthorized applications using the Internet such as peer-to-peer), then Information Technology Services should consider separating the unfiltered Ottawa Public Library staff from the rest of the City network via key safeguards such as firewalls and other security systems. (Note: this model is already used with the Ottawa Police network).

Recommendation 5

That Information Technology Services:
- **Tighten the Websense service implementation to reduce possibility of service bypass.**

  Management Response

  Management agrees with this recommendation.

  In 2005, prior to the audit, IT Services launched an extensive project to enhance the rigour of the Websense implementation, scheduled for completion in Q1 2006. At the time of writing this response (November 2005), an extensive range of additional Websense filtering features is now in place.

  The audit findings identified one small site (the Don Gamble Community Centre) that allowed City of Ottawa staff unfiltered access to the Internet. This was a subnet routing issue that misidentified these four City staff to Websense as Library staff workstations, which are unfiltered (see below). IT Services has corrected this routing issue.

- **Review some level of Library filtering to reduce the risk, such as a limited number of isolated general use systems for unfiltered web access. If this cannot be completed to an appropriate level, then Information Technology Services should consider separating the Ottawa Public Library from the City's system.**

Unfiltered Internet access is provided to Ottawa Public Library (OPL) staff for reasons of intellectual freedom. This is as a result of a Library Board directive and therefore is a governance issue with the Library Board and outside the jurisdiction of the IT Services Branch.

Since 2001, a considerable amount of effort from IT Services has been directed to manage the risk of this configuration. For example, Library workstations are on separate network segments that make it easy to isolate viruses, worms and spyware in the event of a malicious code outbreak. On the advice of IT Services staff, Library Management agreed, in October 2005, to allow IT Services to protect their workstations from Internet-borne malicious code. The workstations used by Library staff do not allow staff to visit malicious websites, however they remain completely unfiltered for all other website content.

Given the OPL is governed by the Library Board, it may not be possible to influence the Board to reverse the decision to allow unlimited access to Internet sites based on the principle of intellectual freedom. Therefore if filtering cannot be implemented to a reasonable level, ITS Branch agrees with the recommendation that consideration should be given to separate the Ottawa Public Library from the City's system. This would be a significant undertaking as the Ottawa Public Library (OPL) is spread across 33 different sites throughout the City. Furthermore, separating the Ottawa Public Library from the City of Ottawa network would incur significant additional costs, due to the sharing of business applications and IT Services resources between OPL and the City.

It is estimated that the cost to separate the Ottawa Public Library from the City's network would be $30,000 of one time capital funding and $150,000 of annual operating costs, including the funding of 1 additional FTE (or equivalent). A budget pressure will be identified for the 2007 budget.

6.1.5 Desktop/Laptop Enterprise Anti-virus

Positive impact on City system/information confidentiality, integrity and availability.

Anti-virus on the City system is enforced at up to three layers within the network. Within the network, the desktop PCs and servers are protected by Symantec Antivirus; Microsoft Exchange (the e-mail server) (running Antigen which uses seven unique parallel anti-virus scanning engines), and the SPAM filter solution (running Kaspersky Anti-Virus). Therefore, e-mail may be scanned by up to three independent anti-virus systems using nine unique virus-scanning engines. Other communications such as web-based browsing are filtered by the desktop anti-virus solution and the Websense filtering software. With a small exception, City systems had corporate Symantec Antivirus running with up-to-date virus signatures.

The findings were as follows:

- The signature files on all anti-virus systems were found to be up to date.
- Anti-virus was found deployed on nearly all workstations and servers inspected.
- The configuration of the Symantec Antivirus on the desktop was found to not scan files on read or on program execution for viruses.
- The Symantec Antivirus is several versions out of date and no longer officially supported and lacks some of the new security features available in later versions.

Testing of the anti-virus systems showed that the EICAR test virus was detected correctly when written to disk, however, the configuration did allow read of files and execution of files without correct scanning. This configuration introduces vulnerability in the anti-virus posture of the City. The configuration of anti-virus systems needs to be examined to provide broader coverage of detection of virus events before they can be executed. It was found that it is possible to execute programs containing virus (a benign test virus) of City systems. While the particular configuration vulnerability weakness limits exposure, it must be investigated and remedial actions performed.

The current version of Symantec Antivirus was found to be several versions out of date and no longer fully supported. According to the Symantec documentation, they will only provide a best effort phone support. There will be no code corrections provided on the current version that the City uses. There is a small risk that the Symantec software may not operate in the City's environment due to configuration or program changes and Symantec will not provide a fix for that environment.

The City is an active beta tester of the latest version of the Symantec Antivirus. Based on the recommendation of Symantec, who assessed the functionality improvements between version 7 and version 9 as minimal and given the current threat environment, the City agreed to work with Symantec to pilot test a beta version of version 10 prior to conducting a managed upgrade in Q4 2005. Version 10 is the first Symantec product to address the ever-increasing Spyware problem. The City has evaluated and accepted the current risk noted above. Reducing this risk is a support contract that the City of Ottawa maintains from Sensible Security Solutions to provide 24x7 support for all anti-virus products used by the City, including those provided by Symantec, and services in defense of any malicious code outbreaks. Finally, anti-virus definitions continue to be released for the current anti-virus client; and, targeted desktop anti-spyware cleanup tools are used by the Service Desk.

Adoption of the latest version of Symantec will increase the coverage of anti-spyware controls on the City network. As with the improvement multiple anti-virus scanning engines provide, multiple spyware vendors will provide greater depth of coverage preventing spyware code.

Business Impact

This essential security service severely restricts the effects of a virus infestation to an individual system and via ripple effect, the network as a whole. This includes system unavailability, and modified, lost or leaked information.

However, the client version is now three major revisions old and is no longer officially supported, restricting its functionality and support. In addition, this particular version does not incorporate the expanded threat detection capabilities of the latest version. While the City does

have a layer of malicious website blocking from Websense, the latest Symantec Antivirus software adds an additional layer of protection against spyware threats – a key emerging attack vector.

Recommendation 6

That Information Technology Services:
▪ **Deploy the latest Symantec Antivirus version; and**
▪ **Update the configuration of the Anti-Virus systems includes anti-virus checking before file read and before program execution.**

Management Response

Management agrees with this recommendation.

IT Services considers that the risk of using the current version of Symantec Antivirus (7.61) is mitigated as three additional layers of anti-virus and malicious file protection also safeguard the City network, and Symantec continues to issue updated virus signature files per the support agreement up to January 31, 2006.

It is not uncommon for an organization of the size of the City of Ottawa to delay or skip version upgrades of software products. Upgrades are done either because the new functionality offered is needed by the City and is supported by a business case for the upgrade, or because the product is no longer supported by the vendor. IT Services has evaluated the additional features and business case for each new version as it is released. In fact, the City partnered with Symantec in Q1 2005 to beta-test version 10, as this is the first version to add features to safeguard against the current threat from spyware. Following this evaluation, Symantec recommended in late Q3 2005 that the City begin a managed upgrade directly from version 7.61 to Symantec Antivirus version 10.

IT Services initiated the upgrade to Symantec Antivirus 10 in Q4 2005, to be completed by January 31, 2006. This upgrade includes an assessment of the productivity impact of including anti-virus checking on read from disk and before program execution.

6.2 Top Challenges

6.2.1 HIGH Priority - Logging and Device Monitoring

Negative impact on system/information confidentiality, integrity and availability.

System log files contain essential information about the operational health and also about security events. Examples of log information include authentication events (e.g. failed logins), changes to configuration, and reboots as well as information about traffic and data events. The collection and review of this data is critical to understanding "normal" patterns and detecting deviation from "normal" patterns can indicate potential operational health or security events. In addition, device status needs to be monitored in near "real time" to ensure that the device status is known and that there are timely alerts to significant operational events.

The findings were as follows:

- Device logging was found to be limited on some devices and non-existent on one key security device.
- Logged event timestamps are suspect given that the clocks on the key devices are not centrally synchronized – one clock was observed to be around five hours off.
- Logging analysis, when performed, is manually intensive.
- Device logging analysis was found to be ad hoc for a number of devices.
- The PIX firewalls are reachable via the telnet management protocol from anywhere within the City network.

The PIX firewalls were found to be logging at level 4. This level was selected due to a need to minimize the amount of log data generated. However, level 4 logging excludes the recording of certain events such as failed or successful logins or configuration changes, both of which are critical to identifying attempted or successful compromise of these systems. One firewall was found to be logging to the console only – this has a very limited memory and is overwritten when the buffer fills. Given that the firewall is reachable from an IP address on the City's corporate network, attempts to use a brute force attack on the firewall password and other potential attacks must be monitored. A record of when changes have been made to the firewall must also be tracked. This allows correlation of modifications to the firewall configuration to change requests submitted.

Correlation and temporal sequencing of events is critical to incident investigation. It was found that the system times on the PIX firewalls was set manually and not automatically synchronized with a central time server. One firewall was found to be 5 hours off the current time. These inconsistent times would make incident investigation difficult or impossible. The corporate servers investigated were found to be configured to synchronize their times with a central timeserver.

Logging analysis, when performed, is manually intensive. A review of the logs from the PIX firewalls required manual manipulation of large numbers of log files. Information Technology Services only review firewall log files when a suspected event has occurred. Review of firewall log files is not performed proactively to identify events or establish baselines for various system parameters. Log review of anti-virus events was found to be effective but given that it is a manual activity, is only performed during regular daytime business hours, and is subject to human error.

There was little monitoring of the reliability of the some services. The Websense HTTP filtering system consists of the corporate firewall for the enforcement and the Websense server for the database and validation service. A review of the log files from the firewall indicated a small number of consistent failures of this system to function properly. The firewall failed to properly validate user requests to access web sites. The level of failures was not significant – less than 1000 URL looks up requests per day failed: these failures were due to a too busy server or Websense was offline for maintenance. However, there was no evidence that Information Technology Services are periodically monitoring to determine the reliability of the service. Trend analysis of the reliability of services that fail open is required to detect failure levels.

The key corporate firewalls are operating in a redundant mode. However, monitoring of these systems for the operational health of the primary and secondary devices was found to be ad hoc. It is possible and probable that the failure of the primary PIX firewall at any of these locations would remain unnoticed. There is evidence in the logs that this may have been the case during early 2004. Essentially, failure of the primary PIX firewalls would go undetected resulting in potential complete failure should the secondary firewall fail.

Finally, given the large volume of log data, automated tools to assist review of not just individual system logs, but also a system wide view of the log data for correlated analysis. A centralized log repository and analysis tools will provide analysts with all relevant log information for investigation. Correlation of multiple events on individual systems and correlation of events on different systems can help identify threats.

Business Impact

The limited logging and monitoring of key security network points means that enforcement control effectiveness cannot be properly measured. Events ranging from the access to the web based public registration service, to successful or attempted breach of confidentiality of client privacy information from an automated credit card payment system or other sensitive data could occur without timely detection. Timely detection will help the City respond proactively to such threats.

A limited 3-month retention of logging information further severely hampers any security incident investigation or control auditing.

In addition, centralized log analysis can help reduce the effort required by IT Security to analyze log events from multiple systems for correlation.

Recommendation 7

That Information Technology Services:
- **Review logging and monitoring processes and systems for effective operational system health and policy enforcement monitoring;**
- **Identify log events that require "real time" detection and alerting and implement appropriate processes;**
- **Review all security devices to ensure appropriate logging coverage;**
- **Ensure all device clocks are centrally synchronized for effective event correlation;**
- **Review regulatory and City policy requirements for an appropriate logging data retention period;**
- **Consider feeding log and monitoring data into a Security Information Management (SIM) tool for automated event analysis and correlation, to better provide a near real time City security posture;**
- **Ensure all devices are logging operational health and security events as a minimum; and**
- **Enable system logging on all devices.**

Management Response

Management does not completely agree with these recommendations.

Industry best practices do not support full logging on all devices at all times due to the high cost. IT Services implements additional logging and alerting on a selective basis, such as with certain high-risk devices or where there is a concern with a particular device.

As part of the Enterprise Security Review project initiated in Q1 2005, IT Services has contracted a third party security company to perform a detailed review of logging and monitoring processes and systems, including an assessment of the cost impact of these recommendations. The review will be completed in Q1 2006. If additional logging is required, a budget pressure will be identified in the 2007 budget. IT Services has implemented alerting for device failure on all servers and network devices.

IT Services has updated all firewalls to receive a synchronized time from NRC.

A review of regulatory and City policy requirements for logging data will be completed in Q2 2006, following the detailed review of logging and monitoring processes and systems in Q1 2006. Log data will be retained in accordance with the City's Records Management Policy and By-Law.

The need for additional logging and Security Information Management (SIM) tool will be assessed in Q2 2006 and if required a budget pressure will be identified in the 2007 budget. Additional logging is estimated to cost between $75,000-$150,000. To purchase and implement a SIM is $150,000, with ongoing operating costs in excess of $200,000 per year. Ongoing FTE (or equivalent) requirements are unknown at this time.

6.2.2 MEDIUM Priority - Change Management

Negative impact on system/information confidentiality, integrity and availability.

The process/system for tracking and auditing enforcement system, architecture and policy implementation changes – although a formal process – is not consistently followed. In many cases, change documentation was missing or incomplete. A formal repeatable change management process is necessary for effective multidiscipline team coordination. It also provides the foundation of disaster recovery and incident response management.

The finding was as follows:
▪   Change requests could not be produced for a selection of inbound rules on the firewall.

Currently, it is not possible to track firewall rules to the rule requestor. Periodic reviews of rules on firewalls should be conducted, however, given that rules are not tracked to requesters, it would be difficult for the City to perform this task, thus it is possible that rules exist on the firewall for which there is no current requirement.

Business Impact

A solid Change Management process/system provides a mechanism to ensure only authorized security control openings in the City's defensive posture. The authorization process is based on proper risk management to ensure the appropriate City security controls for regulatory

compliance and the demands of its citizens. Should a system fail, or a security breach occur, complete Change Management records would help ensure fast, effective recovery with minimal loss of information or disruption. It will also provide a basis to analyze the breach to determine if control readjustment could be instituted to prevent a reoccurrence.

Recommendation 8

That Information Technology Services:
- **Implement a more robust Change Management process/system within Corporate Services; and**
- **Enforce the formal Change Management process for all changes to the firewalls and other security systems.**

Management Response

Management agrees with these recommendations.

The current Change Management process in place since 2001 was enhanced in Q4 2005 to encompass all IT Services divisions and the requirement to comply with the City's Records Management Policy.

The Chief Information Officer reminded all IT Services Managers and Program Managers in November 2005, of the requirement to adhere to this Change Management process. This includes the requirement to document results achieved and record these centrally using the City's Records Management framework.

6.2.3 MEDIUM Priority - IT Security Policy, Policy Interpretation, and Policy Application

Negative impact on system/information confidentiality, integrity and availability.

A review of the IT Security policies, the interpretation of the policies, and the application of those policies was conducted. The policies ensure that authority for IT security is assigned, management intent for IT Security is defined, and consistent interpretation of the need for IT security is applied by the practitioners within the organization.

The findings were as follows:
- Not all users and systems were bound by the Security policy. In particular the Ottawa Public Library staff were exempt from key policy directives designed to protect the network.
- The IT Security policies do not prohibit the use of non-City systems for processing City data.
- The IT Security policy does not explicitly prohibit the installation of unauthorized software. This, combined with the large number of users who have administrator rights on their system, allows users to install software such as SKYPE (a VOIP software) and Limewire (a Gnuttella P2P software), and other software that may introduce malicious software, spyware, or introduce other IT support problems on the network.
- There was no cryptographic policy despite the guidance of using such software in the IT Security Policy for e-mails with sensitive content.
- A large number of users (~1500) were found to have administrator rights to their local workstation giving them the ability to install software or change the configuration.

Of concern was the incomplete application of key components of the Responsible Use of the Internet Policy. In particular, the Ottawa Public Library staff are exempted from all Internet content filtering (for HTTP web sites). It is important to recall that the City network is linked together on a common network infrastructure with homogeneous PCs and common infrastructure. All major City departments and the Ottawa Public Library services share the network and IT Systems on that network without separation by security controls. This City network is protected at the perimeter through various controls mandated through policy. One of these key controls protecting the perimeter is the prevention of City employees from accessing certain web sites known to contain malicious code. The intent of these sites is to cause an "infection" of the computers that connect to these sites – these computers are the City PCs. To protect against this threat, users and the City network must be prevented from other City users traveling to these sites. The Ottawa Public Library staff are currently exempt from the content filtering policy that prevents access to these malicious sites. Ottawa Public Library staff could navigate or be linked to these sites and cause "infection" of the whole City network. While recognizing that the Ottawa Public Library staff need access to a broad range of sites for academic purposes, access to sites that exist purely for the purpose of propagating malicious software should be prevented.

Some policy gaps were observed, including the absence of a policy on use of non-City controlled desktops/laptops for City network access and information processing, and a cryptographic policy.

There are two key considerations that do not appear to address the alignment of services with security of those services:
- Security services should have the same SLA as the business service it is protecting.
- Security service should fail open ONLY when there is an overwhelming need for the service to operate despite the failure of the security service.

Several instances of non-standard PC software were found while investigating traffic on the network. In particular, the VoIP software SKYPE and the P2P software Limewire was found installed on some PCs. Both of these software were installed for personal use, yet consume system resources and potentially cause reduced PC productivity through system impact and other negative system impacts.

The large number of users with administrator rights on their local workstations introduces security vulnerabilities. Users with administrator rights can install software. Evidence was found of unauthorized software on workstations that could introduce malicious code (unreliable source for these applications), could cause system performance problems (unstable program code due to design and development standards not robust), and could cause a negative impact to the network.

It is recognized that a large percentage of these users require administrator privileges to configure laptops to suit the different operating environments. Information Technology Services should review alternate methods to allow the minimum required level of configuration and software access.

Interviews of employees during the site visits, both new and longer-term employees had security policy awareness that ranged from cursory to complacent. Most leveraged the attitude "if I can't do it, then I am not allowed".

Business Impact

Clearly defined policies lead to better interpretation and application of these policies across a multi-disciplined team. Combined they lead to a highly level of system and information security. Without them, systems become vulnerable to attack and information confidentiality is at risk.

Effective policies require a means to measure their implementation, especially if the policy has a possible effect on resource allocation. The policy's implementation and monitoring mechanisms are the responsibility of Information Technology Services.

Recommendation 9

That Information Technology Services ensure the policy prohibit the installation of software not officially sanctioned.

Management Response

Management agrees with this recommendation.

Section 6.4 of the revised Responsible Computing Policy, approved by City Management in September 2005, states: "Users shall not install or download software, shareware, freeware or any other application program onto City-owned IT assets without the express written permission of ITS."

Recommendation 10

That Information Technology Services ensure the policy prohibit the use of non-City approved computing resources for processing City data and assets.

Management Response

Management does not completely agree with this recommendation.

This recommendation applies to the following two situations:

- Use of non-City hardware by staff and/or consultants on the City network (e.g., laptops). Processing City data and assets using non-City hardware (e.g., home computers). IT Services concurs with the recommendation with respect to the use of non-City hardware on the City network (e.g., laptops). In section 6.3 of the revised Responsible Computing Policy, approved by City Management in September 2005, the Policy states: "Non-City hardware shall not be connected to the Corporate network without the express written consent of the ITS Branch."

- IT Services does not agree with this recommendation with respect to processing City data and assets using non-City hardware (e.g., home computers). Such a restriction would prohibit the use of web-mail from a home computer, or working from home on a Word document or Excel spreadsheet. The Responsible Computing Policy clearly

defines employee obligations to safeguard electronic and information records in their custody, whether being processed at a City facility or not. The City's Defence-in-Depth Strategy (see section 7.2.4 C) mitigates the risk to the corporation from malicious software brought from a non-City computing environment.

Recommendation 11

That Information Technology Services review the retention periods for e-mail (including deleted e-mail) and compare to use of this data as corporate records and industry best practices.

Management Response

Management agrees with this recommendation.

The retention period for e-mail was reviewed against federal, provincial, and municipal legislation prior to approval of the Records Retention and Disposition By-law approved by Council and the Records Management Policy in 2003. Automated retention rules for e-mail were implemented as a part of an upgrade to the Exchange Server product in September 2005, to ensure compliance with this by-law and policy.

Recommendation 12

That Information Technology Services review the users with administrator rights on their workstations, and where not justified and required, remove the administrator privileges for that user.

Management Response

Management agrees with this recommendation.

A rigorous documented formal process is followed whenever any user requires local administrative rights.

As part of the Enterprise Security Review project, a review will be conducted regarding administrative access rights for IT Services with recommendations provided to the IT Services Management team in Q1 2006. This review will be repeated on an annual basis.

More restrictive administrative rights for laptop users are being implemented as part of the life cycle laptop replacement program. At this point, funding is available to replace roughly 100 units of the total fleet of 900.

Roughly 50% of the current fleet of City laptops are now running a version of the operating system that offers administrative rights control. IT Services plans to implement these administrative rights restrictions by the end of Q1 2006. The remaining 50% of the City laptop fleet needs to be replaced.

Funding of $700,000 and one (1) additional FTE (or equivalent) will be required in order to accelerate this replacement program to be completed over twelve (12) months. A budget pressure will be identified for the 2007 budget to accelerate this replacement program to be completed over twelve (12) months.

6.2.4 MEDIUM Priority - IT Security Delivery Roles

Negative impact on system/information confidentiality, integrity and availability.

The role and authority of IT Security must be clear to all City staff for the group to function effectively.

The following roles and responsibilities were not clearly defined:
- IT Security desires that all Internet access be monitored using Websense; currently, some firewall rules still exist which bypass this monitoring.

Filtering exclusions are implemented on both the CISCO PIX (operational, policy implementation and monitoring control - TI) and Websense servers (system control – server group, application control – TI and policy control – TI & IT Security). IT Security would like to see all the exception definitions removed from the PIX and defined on Websense so that all activity could be logged. This activity has been ongoing through 2005 during the joint reengineering of the Websense product between TI and IT Security.

Regarding the specific issue noted above, Websense should be used to monitor all Internet traffic.

Business Impact

Clearly defined policy implementation authority and roles lead to better enforcement and auditing the security policies across a multi-disciplined team. Clear delimitation leads to a highly level of system and information security. Without them, systems become vulnerable to attack and information confidentiality is at risk.

Recommendation 13

That Information Technology Services:
- **Review organization roles and responsibilities with accompanying agreements, such as SLAs; and**
- **Clearly define roles/responsibilities and define processes to ensure control implementation and monitoring is covered.**

Management Response

Management disagrees with these recommendations.

IT Services has reviewed existing organizational roles and responsibilities, and believes that these roles and responsibilities are clearly delineated and effective. Separation of duties and other organizational control mechanisms are fully implemented and maintained across the entire branch.

6.2.5 MEDIUM Priority - Encryption Policy

Negative impact on system/information confidentiality, integrity and availability.

An encryption policy is required to identify both the minimum strength of encryption and define under what circumstances encryption should be applied. In addition, key management should be defined. This encryption policy should be applied to both data communications and data storage. However, the scope of this audit applies only to data communication.

Internet communication using weak encryption was found connecting DC4 to an Ottawa Public Library test system. The communication terminated on the PIX firewall at DC4 and a firewall located in the 100 Constellation library test lab. Internet communication is via an Allstream (AT&T) Internet circuit. This weak encryption could result in confidential information being exposed to unauthorized entities.

In addition, the City's Responsible Computing Policy identifies that encryption should be used for the transmission of sensitive e-mail content. Yet, there appears to be no policy or approved tools for this control.

Business Impact

Possible compromise of either the applications or systems located at this site. This weakness could result in exposure of compromised data, or exploitation of the systems protected by the encrypted communications tunnel.

Recommendation 14

That Information Technology Services develop an Encryption Policy to address key aspects of encryption related to the City's operations and requirements.

Management Response

Management agrees with this recommendation.

Encryption technologies are currently used to safeguard specific systems, but these *de facto* standards are not presently in one reference document. Existing encryption standards will be collected and documented by Q2 2006.

Recommendation 15

That Information Technology Services identify tools for encryption of sensitive e-mail content.

Management Response

Management disagrees with this recommendation.

The revised Responsible Computing Policy, section 7.1, as approved by City management in September 2005 stipulates that sensitive information is not to be transmitted via the corporate e-mail system.

An enterprise wide e-mail encryption solution would be for internal use only and would not necessarily be compatible with external partners, as there is no national or international standard for e-mail encryption.

Should an enterprise-wide e-mail encryption solution be required, it is estimated to cost $100,000 and require 2 FTEs (or equivalent) to administer. A budget pressure would be identified for the 2007 budget.

Recommendation 16

That Information Technology Services implement strong encryption on the link between DC2 and the library lab network that uses the Internet for communication.

Management Response

Management agrees with this recommendation.

IT Security will investigate the use of this link and the safeguards currently in place in Q4 2005.

6.2.6 LOW Priority - User IT Security Awareness

Negative impact on system/information confidentiality, integrity and availability.

Technology cannot completely protect networks and systems from security threats. Users are a key component of any security plan and contribute to security through the reporting of security incidents, identification of security weaknesses, and prevention of successful attacks through recognition of dangers of certain types of actions or activities.

The findings were as follows:
▪   Users who were interviewed during the site visits did not recall the IT Security Awareness material published by IT Security.
▪   Users who were interviewed during the site visits did recall the IT Security broadcast e-mails warning of malicious activity on the Internet (active viruses and worms such as Slammer, Zotob, etc)

Business Impact

All the security controls in the world will not completely eliminate the vulnerability risk. This is especially true when people are deeply embedded in all processes. When City staff are continuously made aware of the latest security threats, they act as the first line of defense in the City security posture.

Security awareness programs would keep the first line of defense well informed of the latest security threats. They could identify the potential of a malicious e-mail attachment slipping through the security controls. They would leverage their intelligence to recognize harmful attachment signs to prevent opening it, thereby preventing a very embarrassing situation for the City, avoid negative publicity, or avoid legal implications.

Recommendation 17

That Information Technology Services:
▪   **Create a program with annual user IT Security policy review with mandatory quarterly/semi-annually IT Security awareness briefings;**
▪   **Continue the Security flash e-mail awareness campaign notifying users of significant e-mail attacks; and**
▪   **Improve the effectiveness of the IT Security awareness campaign.**

Management Response

Management agrees with these recommendations.

A formal IT Security Awareness program already exists. Awareness articles are issued through City Briefs on a monthly basis, Management Bulletins are also issued as necessary, and IT Security awareness briefings occur to address strategic issues or groups. Awareness activities have been part of the annual planning cycle since 2003. Flash e-mail awareness campaigns will continue.

A third party review to measure and assess the current awareness targets and associated delivery strategy was scheduled to begin October 2005 as part of the Corporate IT Security Awareness Program. This review was deferred to 2006 due to a City-wide budget freeze, and will include specific recommendations and a workplan identifying the priority messaging targets

6.3 Policy Compliance

Policy compliance refers to the observed use of e-mail and Internet browsing by employees compared to the stated policy intent for use of the City's systems. The policy compliance analysis is reported in the following two sections. The first section is the web browsing referring primarily to the HTTP protocol commonly referred to as WWW (World Wide Web). The second section is e-mail compliance reports. Policy compliance does not directly impact on the confidentiality, integrity, or availability of information assets and resources, but rather is a measure of the conformity of the users to the intended and expected use of these services. The Responsible Use policies do state that personal use of these services is accepted provided that such use does not cost the City any additional money (above the cost to provide the service for business use) and that employees use these services for personal use only outside of their business hours.

To perform this analysis, log files and actual content were reviewed to classify each type of visit as either "Business Use", "Personal Use", or "Indeterminate". Each is defined below in section 6.3.1. The classification of the instances of use of the services is based in part on the employee's position compared to the subject of the communication. We performed this classification manually by reviewing both the Websense categories for URLs (universal resource location) or by reviewing actual URLs visited. A URL is the address of a web page on the World Wide Web.

A characteristic of web pages is embedded advertising. Advertisement manifests as sections of a web page that are loaded when the user selects the page. The advertisements often are sourced from different sites than the original web page. Users have no control over advertisement, yet the Websense tool still categorized these as a hit for the user. Most of these hits are classified by Websense as "PG ADS". Therefore to prevent skewing the results, advertisement hits on this particular group have been removed from the analysis and results below.

Finally, there are two distinct groups for which analysis has been performed:
- Random 50 – from across the entire City computer user group, a random selection of 50 user names (employees only, not generic accounts) was selected for analysis. Both e-mail and Internet use was analyzed.
- Top 50 – from across the entire City computer user group, the top 50 user names (employees and generic accounts) were selected for analysis. Top 50 was selected on volume. Only Internet use was analyzed for the top 50, as the e-mail data was not available.

Data for the month of May 2005 was analyzed for the review of Internet usage. Data from a week in September 2005 was used for the e-mail analysis.

For comparison purposes, we also include a summary of Internet usage, as reported by Information Technology Services Branch, for the month of October 2005.

TOP 100 PERMITTED WEBSITES VISITED DURING OCTOBER 2005
Per Information Technology Services Branch

Category (per ITS)	Examples	% of Top 100 Website "hits"	% of Total Internet Traffic (Oct 2005)
Internet Search Engines	www.google.ca kh.google.com cdn.mapquest.com	41.7%	25.9%
Advertising	ad.doubleclick.net adcounter.theglobeandmail.com adme.411.ca	29.3%	18.2%
Sports, Shopping & Entertainment	www.tsn.ca www.mls.ca	5.3%	3.3%
News and Media	OttawaSun.com CBC.ca	4.2%	2.6%
References	weatheroffice.ec.gc.ca www.Isuc.on.ca	2.4%	1.5%
Job Search	Workopolis.com	2.0%	1.3%
Information Technology	download.windowsupdate.com www.microsolft.com	1.6%	1.0%
City of Ottawa Application	Interfleet.ca Library.Ottawa.on.ca	1.2%	0.7%
Other	Includes "uncategorized"	12.2%	7.6%
Totals		**99.9%**	**62.1%**

6.3.1 Internet Policy Compliance Definition

Internet policy compliance refers to communications on the Internet using non-e-mail protocols consisting primarily of a web browser to the World Wide Web.

It is recognized that not all site visits recorded by Websense are intentional visits by a user. In fact, for every intentional visit (a user clicks on a link, or a user enters a URL in the address bar), the potential exists for a number of other unintentional site visits to be recorded by Websense. While this creates challenges for identifying the actual sites visited intentionally by a user, it is possible to use this data to categorize the usage of the Internet by users with some degree of accuracy.

The recording of site visits are also affected by other factors as follows:
- Time since last visit to site and system caching of pages from previous visits.
- Links to other pages such as advertisements, images, frames, and pop ups.
- Pages with dynamic content may also result in additional, unintentional hits based on automatic updates through polling or updates to web pages.
- User visits to sites are summarized within a 15-minute time period.
- Users that leave browsing windows open on sites that periodically reload automatically outside the 15-minute time period, will have multiple hits recorded.

However, even with some weaknesses, Websense is a common tool used in the industry for reporting Internet usage. If Websense is deemed to be not appropriate for reporting purposes, IT may wish to investigate alternate, more effective tools and methods available for this purpose.

Due to the large volume of data to review, the analysis used the site classifications assigned to the site visited by Websense (the content filtering tool in use by the City). These classifications are a number of high-level categories such as Information Technology, Sports, Business and Technology, Travel, Vehicles, Entertainment, etc. Utilizing these categories allowed rapid analysis of the data. For example, categories such as Entertainment and Sports are nearly always personal for most users (the exception was where users assigned to a sports-related job function). In addition, the category "Productivity PG: Advertisements" was eliminated from the analysis since this is almost entirely unintentional site visits.

Furthermore, the site visits were categorized as either "personal" or "business use" on a user's role or title within the City. For example, Websense classifies www.Microsoft.com as "Information Technology". For an employee with a position that is related to information technology, visits to sites categorized, as Information Technology will be tallied as a business use. If an employee's position does not appear to relate to Information Technology (e.g. a shipping clerk) then this visit would be classified as personal. In addition some sites are not categorized by Websense due to the type of content (categorized by Websense as Miscellaneous and therefore not useful to classify). In these cases, we reviewed the site description to determine the classification. Users were also given the benefit of the doubt when there was a question regarding personal use – these items were classified as "indeterminate."

Site visits were classified as follows:

- Business Use – based on position, the item appears to have been business use (for example, an employee with an IT-related position visiting an Information Technology web site would be classified as business)
- Personal Use – based on position, there is no reason for the user to have visited this category of site
- Indeterminate - based on position, it is not possible to assign the site visits to either business use or personal use

The classification was based on our evaluation of the actual URL that Websense generated for each user.

6.3.2 Random 50 – Internet Compliance

A sample of 50 random user accounts was scrutinized for the month of May 2005. The spread for this group ranged from 44,220 hits (or 2,106 hits per day for the highest user account) to no hits for the lowest user account.

The following results were reached from the analysis of the data on the random 50 users:
- 10 user accounts (20% of total) had no Internet use recorded
- 1 user account (2% of total) had only business use recorded Internet
- 19 user accounts (38% of total) had no business use recorded
- 20 user accounts (40% of total) had a mix of business and personal use
- Average personal use was 53%
- Average business use was 10%
- Average indeterminate use 17%
- Per ITS, users had no data 20%
- The top 10 user accounts accounted for over 80% of Internet activity

6.3.3 Top 50 – Internet Compliance

The Top 50 user accounts were scrutinized for the month of May 2005. The spread for this group differed greatly and ranged from 2,098,002 hits (or 99,905 hits per day for the highest user account) to 29,761 hits (or 1,417 hits per day for the lowest user account).

The following results were reached from the analysis of the data on the Top 50 users:
- 4 user accounts (8% of the total) had all business use recorded, these users were service accounts
- 25 user accounts (50% of the total) had no business use recorded, of these 12 had indeterminate use
- 21 user accounts (42% of the total) had mixed business and personal use. Of these 21 user accounts, 9 had greater than 75% personal use
- Average personal use was 66%
- Average business use was 14%
- Average indeterminate use 20%
- The top 20 users accounted for approximately 80% of Internet activity for this group

One user account in the Top 50 accounted for 44% of the total Internet hits reported for this group, which is dramatically higher that the next user's (at 4.2%). The primary source (98% of this user's activity) of this user's hits was to the Google e-mail site GMAIL.COM. This use violates the City's Policy and is also dangerous in that it is possible to bypass other controls

designed to protect the City network from malicious software. This user is an Ottawa Public Library staff and as such is bound by the Ottawa Public Library's Policy and not the City's Policy.

Internet Usage -The following key points regarding Internet usage can be drawn from the above results of these two sample groups:

The "80/20" rule can generally be applied to the use of the Internet by employees. That is, 80% of the use is generated by 20% of the employees. Both the top 20% of the users of the Internet and the overall City population generated substantially more personal use than business use. In general, large amounts of Internet use is personal. For the random sample, average personal use was 53% and for the Top 50 users it was 66%.

Based on the existing Policy, personal use of the Internet should be performed outside of business hours and the use of the Internet should not incur costs to the City. For our analysis, the time of day that the Internet usage occurred was not available in a suitable format, therefore we were unable to determine if this Internet usage was outside of business hours as permitted by the policy. Monitoring by IT is not done to determine compliance to this restriction.

The Responsible Use of the Internet Policy specifically allows personal use of this corporate resource. While it may be expected that some minimum level of incidental personal usage may occur, we would expect that the level of personal use of the Internet should be similar to the expectations of limited personal use of the telephone. The City's policy on e-mail use only permits incidental personal use of e-mail, similar to the expectation of limited telephone use. Given the high personal use of Internet we found, the City's Responsible Use of the Internet Policy should be revised to limit personal use of the Internet to incidental or occasional only.

6.3.4 Random 50 – E-mail Compliance

The following results were reached from the analysis of the data on the Random 50 e-mail users:
- An average of 16% of e-mails sent or received by the sample was personal – this equates to an average of 21 personal e-mails per person per week
- 10% of the users from the sample had 100% business use of e-mail only
- 78% of the users from the sample had mixed business and personal use of e-mail
- 12% of the users from the sample had mixed business and indeterminate use of e-mail
- 10% of users had more than 50% personal use of e-mail
- 32% of the e-mail sample group (5 day work week) sent or received 5 or more personal e-mails per day
- The top 5 users of personal e-mail sent and received between 15 to 20 personal e-mails per day
- The top 17 users from the sample group generated 80% of all e-mail traffic
- All users had business e-mail traffic

From the above analysis we can conclude that e-mail usage by some employees consists of large amounts of personal e-mails. This usage is in violation of the City's Responsible Computing Policy.

6.3.5 Top 50 – E-mail Compliance

An analysis of the top 50 e-mail users could not be performed, as Information Technology Services was unable to generate an accurate report from this data. The report for the top 50 e-mail users had large blocks of records that were duplicates with only a slight variation in time between entries and could not be used for purposes of our audit. The deficiency in the data could not be explained by Information Technology Services. Since the accuracy of the data was suspect, the report was not used.

We would expect that an organization such as the City of Ottawa would have proven tools to accurately and quickly provide reports such as top e-mail users, random users, sent e-mails, received e-mails, and other e-mail metrics to be used to analyze e-mail usage. Alternative methods to track and monitor high e-mail users should be obtained.

In order for managers to monitor staff to ensure that they are using Internet and e-mail appropriately, managers need to be provided with reports of Internet and e-mail usage. Information Technology Services is responsible for monitoring and controling the use of the Internet and e-mail. This should include a process for reporting high volume or unusual usage patterns to managers so that they may evaluate if appropriate usage has occurred.

6.3.6 Policy Compliance – Internet and e-mail Usage

Recommendation 18

That Information Technology Services:
- **Monitor and control the use of the Internet and e-mail usage by City employees;**
- **Develop appropriate recording tools that provide reliable reporting of e-mail usage;**
- **Implement a process to provide managers with reports of their staff's Internet and e-mail usage so that management can evaluate if appropriate usage of e-mail and Internet is occurring; and**
- **Revise the Responsible Computing Policy to limit use of the Internet to mainly business purposes and limit personal usage to incidental or occasional only.**

Management Response

Management agrees with these recommendations.

IT Services uses Websense to monitor and control the use of the Internet at a macro or system level. Prior to the audit, IT Services launched an extensive project to enhance the rigour of the Websense implementation, scheduled for completion in Q1 2006. An extensive range of additional Websense filtering features is now in place that enhances the monitoring of Internet usage and blocking of websites that are not consistent with the Code of Conduct and Responsible Computing Policy. Monthly reviews of Websense reports by IT Services will continue, and changes to categories, website blocking, and follow-up investigations will continue.

In 2006 IT Services will enhance Internet monitoring using existing Websense reporting tools. A detailed analysis of a minimum of 50 Internet accounts will be conducted on a semi-annual basis for compliance with the Responsible Computing Policy. Instances of non-compliance will be investigated in conjunction with managers and the Labour

Relations unit within Employee Services Branch. It is projected that this level of review and follow-up will generate the equivalent of 1.5 FTEs (2,700 hours) of staff effort to implement.

IT Services/Labour Relations will be contacting the respective managers of the 50 random and 50 top users generated throughout the audit. IT Services in consultation with Labour Relations will provide the Internet log report along with guidelines on how to interpret the data set and how to approach employees with any concerns that might be presented on their Internet usage.

IT Services will continue to produce management reports and metrics using Promodag, and will investigate additional monitoring tools and reporting capabilities that would enable monitoring of individual e-mail accounts. Evidence of non-compliance with the Responsible Computing Policy will be investigated in conjunction with managers and Labour Relations. At this time, the additional effort to review and follow-up is not known pending identification and selection of new tools. A budget pressure would be identified for 2007 to acquire and implement additional monitoring and reporting tools.

The revised Responsible Computing Policy clearly states that the Internet and e-mail are provided for "legitimate business use in the course of assigned duties and only incidentally for personal use", and that disciplinary action, including dismissal, are consequences of non-compliance. The Responsible Computing Policy will be reviewed to ensure that it applies equally to both Internet usage and e-mail usage, and reflects our current practices.

Overall Management Comments

Information Technology Services (ITS) concurs with many of the recommendations proposed by the Auditor General. Where management does not agree with the findings and/or recommendations proposed by the Auditor General, an explanation is provided to substantiate this position. In all cases, this is the result of further research or consultation with vendor suppliers, security experts, and industry best practices.

In cases where management has already commenced an action, a status update has been provided. Where no action has been taken, the proposed timeline and any budgetary implications and expected outcomes have been identified.

The Information Security Strategy (presented to City Council in 2003) described a "risk-management approach" to IT Security to ensure the confidentiality, integrity and availability of City of Ottawa information and IT assets throughout all stages of their lifecycle. At that time, the Strategy was described by the Gartner Group as "far advanced in comparison with other government agencies, and that roles and responsibilities for IM/IT Security are well defined". It is within this context that the following Management Comments address the audit Executive Summary and Findings in more detail.

The City's network is a heterogeneous group of devices that is separated by security controls that enable the City to isolate segments of the network to prevent a security incident from impacting all systems on the network. The effectiveness of this approach is illustrated by examples from the past few years of worm outbreaks that affected businesses throughout the world.

There is also an important distinction to be noted between current practices used by IT Services to monitor and track Internet and e-mail usage, versus the enhanced monitoring proposed by the audit recommendations. IT Services monitors Internet and e-Mail usage and compliance with City policies at a macro level using existing staff resources and best-of-breed software tools. The audit recommendations propose policy changes and enhanced monitoring to an individual level.

At the time of the audit, the Ottawa Public Library is exempt from the City's Responsible Use of the Internet Policy for reasons of intellectual freedom, although OPL staff is network users. Many of the findings and recommendations, particularly related to compliance with City policies, reflect this exemption.

Nevertheless, the increase in frequency and sophistication of both internal and external threats requires continual improvement, attention and investment in order to stay ahead of existing and new threats and vulnerabilities. At this time, the City of Ottawa's IT security posture is further advanced than other Canadian municipalities and many public and private sector organizations.

To implement the recommendations contained within the report requires 5.5 FTEs, including $1.1M of additional base funding, and $1.4M of one-time capital. Further investment in IT security as recommended by the Auditor General would enhance the City's IT security position.

Internet Usage

Internet access is provided to authorized network users for business purposes, however similar to personal use of e-mail and telephone service, there is an expectation that some personal usage will occur. This is consistent with the majority of public and private sector organizations. A recent survey of 25 Canadian municipalities confirmed that more than 80% provided universal access to their staff, and of these organizations, 88% allow personal use.

A review of other surveys and published best practices also provides strong evidence that the majority of organizations (75%) approach the issue of Internet usage by employees through a four-pronged strategy. This has grown from 65% in 2003, and less than 50% in 2001.

Firstly, a policy that defines expectations, what's acceptable/what's not, and what are the consequences for non-compliance. Over 80% of organizations have some form of "acceptable use" policy that defines what the employee can or can't do.

Secondly, education is provided on the policy, the organization's expectations and the consequences of non-compliance. This is essential to avoid vicarious liability – courts look more favourably on organizations that have a policy and regularly educate their employees.

Thirdly, monitoring to ensure compliance with the policy and effectiveness of the education program, and provide feedback for the evolution of the policy. In Canada, while the majority of municipalities monitor usage at a macro level, generally less than 10% of municipalities monitor for personal use vs. business use. This is due to limitations of adequate software tools to make this cost effective. An alternative that is used is a strong emphasis is placed on blocking web sites that are deemed to be inappropriate.

Finally, enforcement is necessary to address non-compliance and deter/discourage inappropriate behaviour.

This is consistent with the approach adopted by the City of Ottawa. The Responsible Computing Policy and accompanying Responsible Use of the Internet Policy provides the City with tools to manage Internet usage, by limiting personal usage to incidental use only, and clearly defining the City's expectations in terms of what the City considers acceptable and appropriate or inappropriate use.

Specific restrictions include sites which are clearly inappropriate for business functions of the City, those that are potentially socially or morally offensive and do not support the operating principles and practices of the City, those that have a strong potential to impact network bandwidth capacity, or those with a strong potential to cause a network security breach. It is very clear that disciplinary actions, including dismissal, are consequences of non-compliance with the Policy.

The network users are regularly reminded of the Policy and their responsibilities every time they log into the City network and/or the Internet. Monthly articles through City Briefs, Management Bulletins and/or flash e-mails are major elements of ongoing user education.

IT Services monitors Internet usage at various levels. Internet traffic is monitored throughout the day to ensure usage falls within generally acceptable parameters (i.e. available network capacity never falls below minimum availability). Unusual traffic patterns are also identified. Websites that are not in compliance with the Policy are blocked. Attempts to access blocked websites are tracked, and on request and investigation by IT Services, may be unblocked if it can be demonstrated access is required for business purposes. The Chief Information Officer meets regularly with IT to review summary Websense reports on Internet usage (permitted sites), attempts to access blocked sites, and requests to un-block sites. Actions taken as a result of this review could include: changes to Websense blocking parameters, additional monitoring or investigation of unusual activity that would indicate non-compliance with City policies.

Presently, it is not the mandate of IT Services to monitor individual employee usage of the Internet. Monitoring of staff activity is the responsibility of managers and supervisors. While current Websense reporting tools accurately track Internet "hits", it is a manual labour intensive process to review detail reports to remove automatically generated "hits" (advertising, web counters, etc.) from legitimate websites. It is also difficult to determine with reasonable certainty whether a legitimate website is being used for business or personal use. This is particularly problematic given the diverse lines of business and job functions of City staff. What would be considered "personal" for most staff could be "business" for others. Examples might include ebay.com or MLS.com – both are used by City staff involved in procurement activity and property valuations.

Where there is evidence of non-compliance with the policy, an investigation is launched to determine whether there has in fact been a breach of policy. In some cases, the investigation is informal and related to unusual levels of Internet activity that can be readily explained or don't indicate abuse. In other cases, IT Security may be approached by a Manager/Labour Relations to investigate potential abuse by an employee.   Through 2002-2005, IT Services investigated 30 instances of inappropriate use of the City's Internet/e-mail services on behalf of managers.

Information Technology reviewed the Auditor's findings that the average personal use of the Internet for a random sample of 50 user accounts is 53%. Based on generally accepted sampling techniques, management

believes that a larger sample size (e.g., 365-370) would be appropriate for a population of 9,000 users to achieve a 95% confidence level, particularly if the results are to be used to substantiate significant policy changes.

Management also notes that a significant percentage (40%) of total Internet usage is in fact "noise" - sites that are not generated by a user's input (mouse click), but may be generated unintentionally. This included web counters, advertising, pop-ups, and image servers.

It is not possible to determine from the top 100 sites whether they are visited for personal or business purposes. However, it is evident that only a few categories (e.g., Sports, Shopping and Entertainment) are most likely for personal use. Other categories such as News and Media could be a mix of personal/business. Other categories are clearly business-related (e.g., Job Search: workopolis.com).

Management is also concerned that certain sites (e.g., Microsoft.com) would be considered business use for IT staff but personal for other staff. There are at least four instances where visits to Microsoft.com could be considered legitimate business.
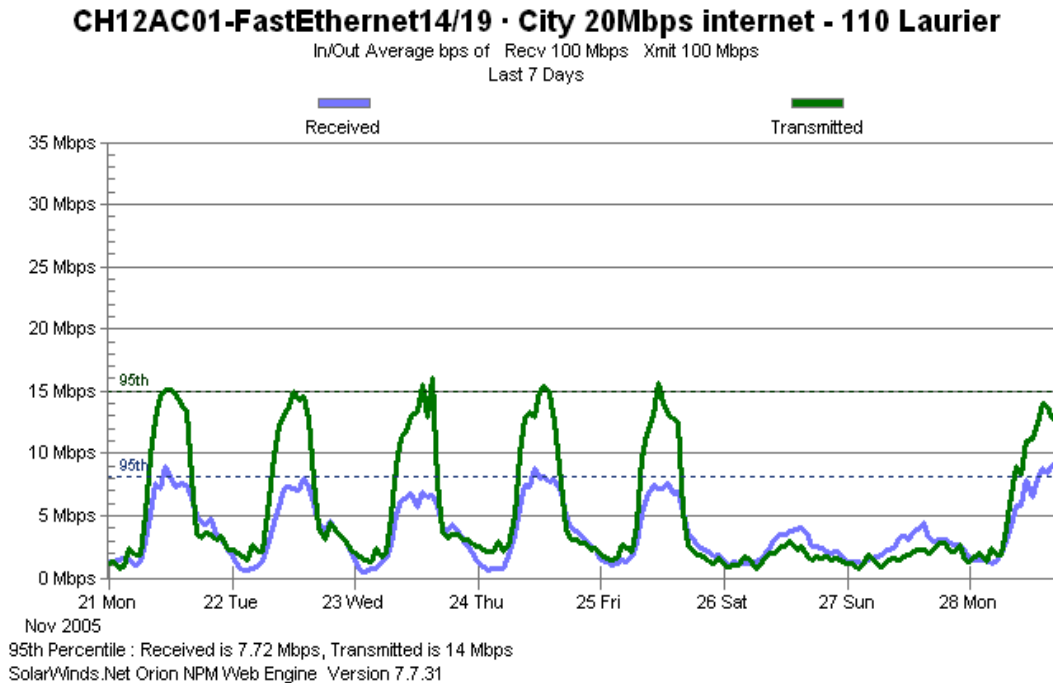
1. Selecting the Help command in Microsoft Word, for example, enables the user to connect to Microsoft.com for technical resources or further information on Word.
2. Laptop users are periodically prompted to download and install security updates that require connection to Microsoft.com.
3. Windows Media Player (required for webcasting/video-on-demand) often generates an Internet visit to Microsoft.com that notifies users that updates are available.
4. Microsoft.com is a major source of images and clip-art used by City staff for presentations, preparation of materials for the public.

Nevertheless IT Services reviewed detailed usage reports for a subset of 16 users from the 50 random users. The 16 users were determined by grouping the random 50 by Department/Branch, and by selecting the largest three groups/Branches. Management assessed their Internet usage following a methodology similar to that used by the Auditor. Management determined that based on the 16 users, the percentage of personal use was 56%, slightly higher than the audit findings.

On more detailed examination, it was found that one user had unusually high usage relative to the others, of which 94% was categorized as personal usage. This was determined to be a significant amount of streaming video. By eliminating this user from the sample, the percentage of average personal use dropped to 11%.

Analysis of daily Internet traffic reports shows that Internet use generally peaks during the period of 11am – 2pm, suggesting that personal usage is likely occurring during lunch breaks. This is substantiated to some extent by the above analysis of 16 users, which showed personal use (e.g. on-line banking) occurring outside normal working hours.

CH12AC01-FastEthernet14/19 · City 20Mbps internet - 110 Laurier

In/Out Average bps of Recv 100 Mbps Xmit 100 Mbps
Last 7 Days

Received   Transmitted

95th Percentile : Received is 7.72 Mbps, Transmitted is 14 Mbps
SolarWinds.Net Orion NPM Web Engine Version 7.7.31

E-Mail Usage–General Management Comments

Information Technology Services uses a product called Promodag to generate various e-mail related metrics. The Promodag system is designed to generate reports that measure the usage of the electronic messaging system and help analyze traffic patterns. Promodag is not able to produce the type of reports requested by the Auditor to monitor staff email usage for content and compliance with City policies.

Promodag reports generated monthly include:
- Usage of Distribution Lists
- Breakdown of mailboxes by size
- Daily average of messages transmitted
- Message delivery times
- Size of message breakdowns
- Internal and external traffic volumes, sent and received, by numbers of messages and size

The system also generates mailbox traffic reports using key parameters. For example:
- All mailboxes with 500+ external messages sent in a given month.
- All mailboxes with 500+ external messages received in a given month.

Promodag is limited in its ability to provide detailed audit reports for individual mailboxes showing details such as subject line, time received / sent, etc. on a per e-mail basis. Custom reports can be produced but require the expertise of a SQL database specialist.

Using automated tools to monitor staff e-mails is not a common organizational practice. However, with the growing concern regarding leakage of confidential information and compliance with regulatory policies such

as Sarbanes-Oxley (particularly in the United States), technology is evolving to provide organizations with better tools to monitor e-mail content. However, the focus is on preventing accidental or intentional leakage of confidential information to unauthorized recipients.

Policy Compliance - General Management Comments

IT Services has not reviewed the specific instances of non-compliance noted during the course of the audit, but concurs with the audit findings in general.

IT Services is aware of specific instances where some degree of non-compliance has been identified, and as noted above, have been involved with investigations of non-compliance with Managers and Employee Services (Labour Relations).

It is important to understand Ottawa Public Library staff was exempt from the Responsible Use of the Internet policy at the time of the audit. These users would in fact be compliant with OPL policy, but non-compliant with the City Policy. In particular, ITS monitoring of the Internet identified non-compliance with the City Policy that upon further investigation was a result of Library users who are not subject to the same degree of filtering as other City staff (e.g., non-City e-mail accounts and systems, web chat).

IT Services monitors and tracks Internet usage at a macro level, but has not monitored individual employees unless requested as part of an investigation into alleged abuse of the Policy. Monitoring individual employee usage is a labour-intensive activity. The City relies primarily on Websense to ensure users remain in compliance with the Policies by blocking web sites that would result in non-compliance. As noted by the audit findings, Websense has generally been effective in blocking websites that are not permitted by Policy or have a negative impact on productivity. As previously noted, in 2005, prior to the audit, IT Services launched an extensive project to enhance the rigour of the Websense implementation, and an extensive range of additional Websense filtering features is now in place.

In some instances, lack of compliance would be evident from users visiting websites that are incorrectly categorized by Websense and therefore are not blocked. As these are identified, IT Services re-categorizes these sites to prevent future access (e.g., Personal and Dating).

Conversely, web sites that are not permitted (and therefore blocked) may be un-blocked for certain staff on request, following investigation by IT Services to confirm that they are required for business purposes (e.g., eBay.com, MLS.com).

Shared accounts and sharing of account passwords are prohibited by Policy, but on an exception basis, shared accounts are permitted to enable staff to administratively support City applications, systems and business requirements. However, IT Security reviews all requirements for shared accounts and maintains records on these accounts.

7.0 Conclusion

This audit reviewed the adequacy, effectiveness and reliability of security measures and controls in place over the usage of the Internet and e-mail and assessed whether Internet and e-mail usage is compliant with City policies. While security controls currently implemented were found to be generally effective and reliable, there were gaps in the adequacy of the controls. The audit also reviewed the compliance of usage of the Internet and e-mail to the current policy statements and found that there is considerable personal use of these tools. The Responsible Use of the Internet Policy and the Responsible Computing Policy should be revised to limit the use of the Internet to mainly business purposes and limit personal usage to incidental or occasional only. A program to monitor and control Internet and e-mail usage should also be established.