



Office of the Auditor General / Bureau du vérificateur général

FOLLOW-UP TO THE 2005 AUDIT OF DRINKING WATER SERVICES

2010

**SUIVI DE LA VÉRIFICATION DE LA DIVISION DES SERVICES DE
GESTION DE L'EAU POTABLE DE 2005**

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EXECUTIVE SUMMARY

Introduction

The Follow-up to the 2005 Audit of Drinking Water Services was included in the Auditor General's Audit Plan.

The key findings of the original 2005 audit included:

- The Drinking Water Services Division complies with federal and provincial regulations governing the safe supply of drinking water to Ottawa residents. While no concerns over water safety were raised, the audit concludes that there is room for improvement in the following areas:
 - Although not required by legislation, the City should implement a proactive lead service replacement program;
 - The City should require all private water systems connected to the City's system to have written maintenance procedures;
 - The City's water loss program could be better coordinated;
 - Responsibility for water services is dispersed with only the City Manager having overall responsibility; and,
 - Better prioritization of meter and remote sensor repairs could generate additional annual revenues of approximately \$300,000.

Summary of the Level of Completion

1. The table below outlines our assessment of the level of completion of each recommendation as of December 2009.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	3, 4	2	8%
SUBSTANTIALLY COMPLETE	75 – 99	6, 19, 24	3	12%
COMPLETE	100	1, 2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	20	80%
TOTAL			25	100%

2. The table below outlines management's assessment of the level of completion of each recommendation as of Summer 2010 in response to the OAG's assessment. These assessments have not been audited.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	-	-	-
SUBSTANTIALLY COMPLETE	75 – 99	3, 19, 24	3	12%
COMPLETE	100	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	22	88%
TOTAL			25	100%

Conclusion

It was found that a significant amount of progress has been made with regards to implementation of work associated with the recommendations in the 2005 audit. It appears that City staff, management, and Council have each attempted to make progress in the areas identified in the audit.

Staff have shown that they are keeping up to date by monitoring changes in drinking water legislation and guidelines with regards to the parameter bromodichlormethane (BDCM). The Guideline Technical Document for Trihalomethanes (THMs) in Drinking water was modified to remove a separate guideline for BDCM because the maximum acceptable concentration for THMs is protective of the health effects of all THMs, including BDCM. It will be important for staff to continuously monitor changes in legislation and guidelines for other water quality parameters.

Progress has been made with regards to the setup of a temporary procedure that allows Drinking Water Services to receive invoices from Finance. This temporary solution should be refined to reduce staff hours spent requesting and waiting for information. Attempts should be made to have Hydro Ottawa forward two copies of invoices to the City, one to Finance and one directly to Drinking Water Services. At the very least, a policy should be put in place such that when a member of Finance staff receives an invoice for Drinking Water Services, a copy is immediately forwarded to the correct Drinking Water Services staff member.

Based on the documentation received and reviewed for this follow-up audit, there has been little progress with regards to the design and implementation of a water meter maintenance program. As the age of the meters increases their accuracy will decrease. This could cost the City lost revenue for water that is being used but not recorded. Part of the problem with meter maintenance is access. Access procedures

need to be put in place and by-laws enforced with a focus on service termination or fines for homeowners that refuse staff access.

The Automated Meter Reading project has been underway for some time. Staff have issued a Request for Qualifications (RFQ) which was reviewed by City staff in April of 2009. Once this technology is installed the meter reading frequency is scheduled to increase to once per month which will increase the amount of data collected for use by DWS, and decrease the number of estimated meter readings and bills. With this, there should be a drop off in customer service complaints with regards to incorrect bills.

A formal assessment of the ITX/IIMS has been completed and the City has identified SAP as a replacement to the ITX maintenance program. SAP and ESRI can be configured to support the many business requirements that staff have defined. This system will be operational in late 2010 and will focus on an infrastructure and work management system for watermains and sewers. This will lay the foundation for subsequent phases where information regarding additional assets will be added to the system.

Procedures have been created to reconcile water accounts with property tax accounts, reconcile water accounts with meters installed (ITX/IIMS), and to reconcile water accounts with building permits.

The 2005 audit recommended that the internally established collections target should be re-evaluated by Revenue and Collections Management. The year end process for setting the collections target has been reviewed and clearly set out. The collections target has been increased over the past few years. Continuous improvement has been shown; however, staff should consider avenues to cost effectively collect the remainder of the tenant lease receivables.

The City has made significant progress with regards to the implementation of a Cross Connection Control program. The City of Ottawa website provides the public with good background information regarding cross-connections and outlines the public consultation process that has been taking place. Similar by-laws enacted by other municipalities regarding cross-connects are also posted on the website. This will help the public to understand the potential wording and implications of any by-law that the City of Ottawa might enact and enforce.

The Drinking Water Quality Management System and Operational Plan are being implemented. The City has received accreditation from the Canadian General Standards Board and has received its Municipal Drinking Water Licence from the Ministry of the Environment. Although the work completed to date is significant, staff haven't begun to address the remainder of Recommendation 23 from the 2005 audit which recommends that Quality Management Systems for Solid Waste and Wastewater be implemented in addition to the Drinking Water Quality Management System.

A proactive lead services replacement program has been put in place. A public information campaign has been initiated that includes mass mailing to residents suspected of having lead services and a portion of the City's website describes the lead services replacement program. Council has instructed staff to provide provisions in the budget to replace the City's portion of lead water services by 2014.

Drinking Water Services has been identified as the group to lead and be responsible for all water loss reduction programs. The Water Loss Control 2008 Summary Report outlines the sources of water loss as well as the potential solutions for reducing losses and increasing the amount of water that is billed.

Acknowledgement

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

RÉSUMÉ

Introduction

Le Suivi de la vérification de la Division des services de gestion de l'eau potable de 2005 était prévu dans le Plan de vérification du Bureau du vérificateur général.

Les principales constatations de la vérification de 2005 sont les suivantes :

- La Division des services de gestion de l'eau potable se conforme aux règlements fédéraux et provinciaux qui régissent l'approvisionnement sécuritaire de l'eau potable aux résidents d'Ottawa. Bien qu'aucune préoccupation portant sur la qualité de l'eau potable n'ait été soulevée, le rapport de vérification révèle qu'on peut tout de même faire mieux dans les secteurs suivants :
 - la Ville devrait instaurer un programme proactif de remplacement des conduites de plomb, bien que ce ne soit pas exigé par la loi;
 - la Ville devrait exiger que tout réseau d'aqueduc privé raccordé au réseau municipal suive des procédures d'entretien écrites;
 - le programme de contrôle des pertes en eau de la Ville devrait être mieux coordonné;
 - la responsabilité des services de gestion de l'eau est actuellement dispersée et le directeur des services municipaux en détient la responsabilité globale;
 - une plus grande priorité aux réparations des compteurs d'eau et des dispositifs de relevé automatique pourrait générer des revenus supplémentaires annuels d'environ 300 000 \$.

Sommaire du degré d'achèvement

1. Le tableau ci-dessous présente notre évaluation du degré d'achèvement de chaque recommandation à l'automne 2009 :

CATÉGORIE	POURCENTAGE COMPLÉTÉ	RECOMMANDATIONS	NOMBRE DE RECOMMANDATIONS	POURCENTAGE DU TOTAL DES RECOMMANDATIONS
PEU OU PAS DE MESURES PRISES	0 – 24	-	-	-
ACTION AMORCÉE	25 – 49	-	-	-
COMPLÉTÉE EN PARTIE	50 – 74	3, 4	2	8 %
PRATIQUEMENT COMPLÉTÉE	75 – 99	6, 19, 24	3	12 %
COMPLÉTÉE	100	1, 2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	20	80 %
TOTAL			25	100 %

2. Le tableau ci-dessous présente l'évaluation de la direction concernant le degré de réalisation de chaque recommandation à l'été 2010 en réponse à l'évaluation du Bureau du vérificateur général. Ces évaluations n'ont pas fait l'objet d'une vérification.

CATÉGORIE	POURCENTAGE COMPLÉTÉ	RECOMMANDATIONS	NOMBRE DE RECOMMANDATIONS	POURCENTAGE DU TOTAL DES RECOMMANDATIONS
PEU OU PAS DE MESURES PRISES	0 – 24	-	-	-
ACTION AMORCÉE	25 – 49	-	-	-
COMPLÉTÉE EN PARTIE	50 – 74	-	-	-
PRATIQUEMENT COMPLÉTÉE	75 – 99	3, 19, 24	3	12 %
COMPLÉTÉE	100	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	22	88 %
TOTAL			25	100 %

Conclusion

On a constaté des progrès notables dans l'exécution des travaux liés aux recommandations contenues dans la vérification de 2005. Tout indique que le personnel, la direction et le Conseil municipal se sont efforcés de réaliser des progrès dans les secteurs ciblés par la vérification.

Le personnel a démontré qu'il se tient au fait de la situation en surveillant l'évolution des lois en matière d'eau potable et les directives relatives au paramètre bromodichlorométhane (BDCM). Les Recommandations pour la qualité de l'eau potable au Canada : document technique : Les trihalométhanes (THM) ont été modifiées de manière à éliminer la recommandation distincte pour le BDCM, car la concentration acceptable maximale de THM protège contre tous les effets sanitaires de l'ensemble des THM, y compris le BDCM. Il sera important pour le personnel de suivre constamment l'évolution des lois et des lignes directrices relatives à d'autres paramètres de qualité de l'eau.

Des progrès ont été accomplis quant à la mise en place d'une procédure provisoire qui permet aux Services de gestion de l'eau potable de recevoir des factures du Service des finances. Cette solution provisoire devrait être perfectionnée afin de diminuer le temps passé par le personnel à demander et à attendre de l'information. On devrait faire en sorte de demander à Hydro Ottawa d'envoyer deux exemplaires des factures à la Ville, une au Service des finances et l'autre aux Services de gestion de l'eau potable. À tout le moins, il faut mettre en place une politique prévoyant qu'aussitôt qu'un membre du personnel du Service des finances reçoit une facture des Services d'eau potable, une copie est immédiatement acheminée au membre du personnel des Services de gestion de l'eau potable concerné.

D'après la documentation reçue et examinée pour la présente vérification de suivi, on n'a enregistré que peu de progrès en ce qui concerne la conception et la mise en œuvre d'un programme d'entretien des compteurs d'eau. L'exactitude des relevés décroît avec l'âge des compteurs, ce qui pourrait occasionner à la Ville des pertes de revenus découlant de volumes d'eau consommés mais non enregistrés. Une partie du problème de l'entretien des compteurs est liée à l'accès. Il faut mettre en place des procédures d'accès et imposer des règlements qui prévoient l'interruption de service ou l'application d'amendes aux propriétaires qui refusent l'accès de leur résidence au personnel.

Le projet de relevé automatique des compteurs d'eau est en cours depuis quelque temps. Le personnel a émis une demande de soumission qui a été passée en revue par le personnel municipal en avril 2009. Une fois cette technologie installée, il est prévu que la fréquence de relevé des compteurs augmentera à une fois par mois, ce qui accroîtra la quantité de données recueillies pour le compte des Services de gestion de l'eau potable et diminuera le nombre estimé de relevés de compteur et de factures. Cela devrait entraîner une diminution du nombre de plaintes au Service à la clientèle concernant des erreurs de facturation.

Une évaluation officielle du système ITX/IIMS a été réalisée, et la Ville a identifié SAP comme remplacement du programme d'entretien ITX. SAP et ESRI peuvent être configurés en fonction de nombreux environnements d'affaires définis par le personnel. Ce système sera opérationnel vers la fin de 2010 et se concentrera sur un système de gestion des infrastructures et des travaux concernant les conduites principales et les égouts. On jettera ainsi les fondements des phases subséquentes où l'information relative à d'autres infrastructures sera ajoutée au système.

Des procédures de conciliation des comptes d'eau avec les taxes foncières, des comptes d'eau avec les compteurs installés (ITX/IIMS), et des comptes d'eau avec les permis de construction ont été instaurées.

La vérification de 2005 a recommandé que l'objectif de recouvrement fixé en interne soit réévalué par la direction de Recettes et de Recouvrement. Le procédé de fin d'année qui fixe l'objectif de recouvrement a été passé en revue et présenté clairement. La cible de recouvrement a été augmentée ces dernières années. Une amélioration continue a été démontrée; toutefois, le personnel devrait étudier des possibilités permettant de recouvrer de manière économique le reste des sommes à recevoir des baux des locataires.

La Ville a fait des progrès notables pour ce qui est de la mise en œuvre d'un programme de contrôle des jonctions fautives. Le site Web de la Ville d'Ottawa fournit au public de l'information de fond utile relativement aux jonctions fautives et décrit le processus de consultation publique qui a eu lieu. Des règlements semblables concernant les jonctions fautives décrétés par d'autres municipalités sont également publiés sur le site Web, ce qui aidera le public à comprendre la

formulation et les répercussions possibles de tout règlement éventuel décrété ou imposé par la Ville d'Ottawa.

Le système de gestion de la qualité de l'eau potable et le Plan opérationnel sont mis en application. La Ville a reçu l'attestation officielle de l'Office des normes générales du Canada et a reçu son permis municipal d'eau potable du ministère de l'Environnement. Bien que les travaux terminés jusqu'ici soient notables, le personnel n'a pas commencé à aborder le reste de la recommandation n° 23 de la vérification de 2005 qui propose que les systèmes de gestion de la qualité des déchets solides et des eaux usées soient mis en application en plus du système de gestion de la qualité de l'eau potable.

Un programme proactif de remplacement des conduites en plomb a été mis en place. On a lancé une campagne d'information publique qui comprend des envois postaux groupés aux citoyens susceptibles d'avoir des conduites en plomb, et une partie du site Web de la Ville décrit le programme de remplacement des conduites en plomb. Le Conseil a donné au personnel la consigne de prévoir des provisions dans le budget permettant de remplacer les conduites en plomb de la Ville d'ici 2014.

Les Services de gestion de l'eau potable ont été identifiés comme le groupe responsable et directeur de tous les programmes de réduction des pertes en eau. La Stratégie de contrôle des pertes en eau en 2008 décrit les sources de ces pertes de même que les solutions possibles pour les réduire et pour accroître le volume d'eau facturé.

Remerciements

Nous tenons à remercier la direction pour la coopération et l'assistance accordées à l'équipe de vérification.

1 INTRODUCTION

The Follow-up to the 2005 Audit of Drinking Water Services was included in the Auditor General's Audit Plan.

The key findings of the original 2005 audit included:

- The Drinking Water Services Division complies with federal and provincial regulations governing the safe supply of drinking water to Ottawa residents. While no concerns over water safety were raised, the audit concludes that there is room for improvement in the following areas:
 - Although not required by legislation, the City should implement a proactive lead service replacement program;
 - The City should require all private water systems connected to the City's system to have written maintenance procedures;
 - The City's water loss program could be better coordinated;
 - Responsibility for water services is dispersed with only the City Manager having overall responsibility; and,
 - Better prioritization of meter and remote sensor repairs could generate additional annual revenues of approximately \$300,000.

2 KEY FINDINGS OF THE ORIGINAL 2005 AUDIT OF DRINKING WATER SERVICES

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

3 STATUS OF IMPLEMENTATION OF 2005 AUDIT RECOMMENDATIONS

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 1 as of June 2009

Implementation of this recommendation is 100% complete. BDCM (bromodichloromethane) is no longer considered as a stand-alone parameter for THMs (trihalomethane), but is incorporated into the overall THM guideline (based on new science research and a review by expert panel that have concluded that BDCM is not a cancer risk).

The City of Ottawa is currently reviewing its project scope to upgrade the water treatment process at Carp well system. Seeing as the legislative requirement has been removed for BDCM, the City will reconsider the purpose of this project and whether it will move ahead or not. We expect a technical memo by the end of the year and will make recommendations/changes to the capital required for this project, as required.

Management: % complete ***100%***

OAG's Follow-up Audit Findings regarding Recommendation 1 as of December 2009

The actions required for this recommendation are essentially complete. Although no changes to the Carp Communal Well System have been made, staff have kept up to date on the developments in legislation with regards to BDCM. The Guideline Technical Document for Trihalomethanes in Drinking Water prepared by Health Canada in May 2006 gave the previous guideline for BDCM in drinking water. An addendum to this guideline was published in April 2009 and states that "Effective April 2009, the guideline statement for trihalomethanes in drinking water is modified to remove the separate guideline for BDCM, recognizing that the maximum acceptable concentration for trihalomethanes is protective of the health effects of all THMs, including BDCM."

Although the guideline for BDCM has been removed, it will be important for City staff to continuously monitor for any other changes in legislation. Attempts should also be made to discover new technology that can help minimize THMs that result from the disinfection process. Staff should maintain concentrations as low as possible without compromising the positive effects of disinfection.

OAG: % complete ***100%***

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 2 as of June 2009

Implementation of this recommendation is 100% complete. An interim solution is in place in order to obtain the information that is required to cost-effectively process hydro invoices. The City/Finance are continuing to work with Hydro Ottawa to enable the implementation of a long-term solution.

Invoicing procedures are as follows:

- The invoices are being paid by Accounts Payable.
- Hydro Spreadsheet is updated from information in SAP.
- Another spreadsheet is prepared with the document numbers and some details on all the invoices in order to obtain copies of the actual invoice. Request is forwarded to Accounts Payable via email.
- Accounts Payable forward copies of invoices. Copies of the invoices are forwarded to Dion Green along with a copy for our files.

Management: % complete

100%

OAG's Follow-up Audit Findings regarding Recommendation 2 as of December 2009

The actions required for this recommendation are complete. This process allows DWS to obtain the necessary information with regards to Hydro consumption such that it can be used to make educated business decisions. Although this temporary solution is currently meeting the needs of DWS the permanent solution should be more refined and require fewer steps in obtaining the invoices. Attempts should be made to have Hydro Ottawa submit two invoices, one directly to DWS and one to Accounts Payable. Accounts Payable should draft a policy that requires the staff member that receives the invoice to immediately send a copy to DWS.

OAG: % complete

100%

2005 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.

2005 Management Response

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

Management Representation of the Status of Implementation of Recommendation 3 as of June 2009

The corporation is starting its implementation of the recent organizational realignment, and the Environmental Services department is initiating its own reorganization process. Phase III of the Shared Services Review is underway. A Steering Committee of the shared services Directors will guide implementation of new SLAs, funding models and reporting frameworks. Completion is anticipated by Q1 2010. The Operational Plan is a key service delivery document for Drinking Water Services involving the Environmental Services department's main partners, Planning and Growth Management and Infrastructure Services. The Plan provides for infrastructure, rehabilitation and the provision of management reviews, completed regularly as part of the operating Top Management review processes. More work will be done on inter-departmental relationships subject to outcomes of the corporate shared services review.

Management: % complete *0%*

OAG's Follow-up Audit Findings regarding Recommendation 3 as of December 2009

The actions required for implementation of the work suggested in this recommendation are partially complete. The implementation of the organizational realignment for the corporation has begun and the Environmental Services Department has initiated its own reorganization. The Shared Services Review is also underway.

OAG: % complete *65%*

Management Representation of Status of Implementation of Recommendation 3 as of Summer 2010

Management agrees with the OAG's follow-up audit finding as of December 2009. Further progress has now been made with respect to the implementation of this recommendation.

The Environmental Services Department is in the process of concluding its own strategic realignment, and during the implementation phase, the Department will be engaging its key service delivery partners by updating or creating Service Level Agreements.

With plans for the implementation phase in place, management considers implementation of this recommendation to be substantially complete.

Management: % complete *90%*

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 4 as of June 2009

Implementation of this recommendation is 100% complete. The City is in the process of replacing remote receivers as part of the Automated Meter Reader initiative.

Management: % complete

100%

OAG's Follow-up Audit Findings regarding Recommendation 4 as of December 2009

The implementation of this recommendation is partially complete. The documentation received for review for this follow-up audit does not speak to a maintenance program that has or is planned on being initiated. A memo that describes the implementation of an Automated Meter Reading (AMR) system across the City of Ottawa for the purpose of reading water meters through radio frequency transmission technology was received for review. This memo describes the information and technological requirements as well as the progress of the project. A Request for Qualifications (RFQ) has been reviewed by City staff in April 2009. Further information as to the status of the project or a timeline for implementation of the Automated Meter Reading technology is not given.

The City must ensure that a maintenance plan for the equipment, installed as a result of the AMR project, is set out and followed. The malfunction of equipment could result in an increase of unmetered/unbilled water and thereby a decrease in revenue.

OAG: % complete

65%

Management Representation of Status of Implementation of Recommendation 4 as of Summer 2010

Management disagrees with the OAG's follow-up audit finding that implementation of this recommendation is not complete.

The City is in final negotiations with the selected vendor for the provision of an Advanced Metering Infrastructure (AMI) system. The system will replace the remote reading devices with radio-enabled transmitters that will permit more frequent and regular reading of the water meters. Replacing the obsolete remote reading devices will eliminate bills based on estimated consumption, increase customer satisfaction and improve customer service.

It is anticipated that the two-year installation of the AMI system will begin in Q4 2010. Performance of the radio transmitters will be closely monitored during and following their roll-out to determine maintenance needs; the availability of spare units will facilitate any required replacement.

Accountability for maintenance of the new reading devices and meters will then rest entirely within Environmental Services. System performance will be continually monitored by Environmental Services using tools supplied by the AMI vendor. Through collaboration with the Revenue Branch, maintenance will be focused on high-priority revenue generators.

Management considers implementation of this recommendation to be complete.

Management: % complete **100%**

2005 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.

2005 Management Response

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

Management Representation of the Status of Implementation of Recommendation 5 as of June 2009

Implementation of this recommendation is 100% complete. Formal procedures are in place and documented.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 5 as of December 2009

The City provided form letters that are used to notify the customer that access is required, with follow-up notifications indicating that the service could be suspended if no contact is made with the City.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 6 as of June 2009

Implementation of this recommendation is 100% complete. Council approved the AMR project. Meter reading frequency will be increased to once a month when project is implemented. Cost analysis of maintaining/improving the level of meter reading frequency is being evaluated until AMR is deployed. Subject to Council approval of the 4 year capital budget, an RFP will be issued to begin the development of the new technology. Interim measures will be put in place to address the issues during the development phase.

Management: % complete 100%

OAG's Follow-up Audit Findings regarding Recommendation 6 as of December 2009

The work pertaining to this recommendation is substantially complete. An RFQ has been reviewed by City staff in April 2009. Further information as to the status of the project or a timeline for implementation of the Automated Meter Reading technology was not given. Once this technology is installed, the meter reading frequency will increase to once per month which will increase the amount of data collected and eliminate the necessity of estimated meter readings and bills. This should decrease the amount of customer service complaints with regards to incorrect bills that are handled by staff.

OAG: % complete 75%

Management Representation of Status of Implementation of Recommendation 6 as of Summer 2010

Management agrees with the OAG's follow-up audit finding as of December 2009. Further progress has been made with respect to the implementation of this recommendation.

The City is in final negotiations with the selected vendor for the provision of an Advanced Metering Infrastructure (AMI) system. It is anticipated that the two-year installation of the AMI system will begin in Q4 2010. The system has been designed to provide hourly readings of the water meters, eliminating the need for estimated readings for billing purposes.

Management considers implementation of this recommendation to be complete.

Management: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 7 as of June 2009

The assessment phase is complete and Aquacis meets all operational requirements. The scheduled IT conversion in 2009-2010 will cover any system changes required following any recommendation from the ongoing Water & Wastewater Rate Study.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 7 as of December 2009

The work associated with this recommendation is complete. An assessment of the Aquacis system has been completed and it was found to meet all of the current operational requirements for the City. A report outlining the process for modifications to the system, as well as the types of changes made has been reviewed for this follow-up audit. A complete list of changes and when they were made has also been provided. The scheduled IT conversion in 2009-2010 will incorporate any changes required following any recommendations from the Water and Wastewater Rate Study and should also forecast any changes that will be necessary in the future.

*OAG: % complete**100%***2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 8 as of June 2009

Implementation of this recommendation is 100% complete. The City has identified SAP as the replacement to the ITX maintenance program.

*Management: % complete**100%***OAG's Follow-up Audit Findings regarding Recommendation 8 as of December 2009**

The work associated with this recommendation is complete. In an email to staff dated October 21, 2009 the Deputy City Manager discusses the progress of the new Integrated Infrastructure Management System. Up to this point, staff have defined many business requirements and mapped out how the integration of SAP and ESRI can be configured to support those requirements. This system will be operational in late 2010 and will focus on an infrastructure and work management system for watermains and sewers. This will lay the foundation for subsequent phases where information regarding additional assets will be added to the system.

*OAG: % complete**100%***2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 9 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 9 as of December 2009

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 10 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 10 as of December 2009

The City has developed an Open Water Meter By-pass - Process Resolution and Procedure, which addresses the requirements of this recommendation.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 11 as of June 2009

The Building Permits tracking system is in the process of being scoped with programming to start in Q3 2009. Deployment is expected in Q4 2009.

Management: % complete 75%

OAG's Follow-up Audit Findings regarding Recommendation 11 as of December 2009

Work associated with the implementation of this recommendation is complete. Procedures to reconcile water accounts with property tax accounts, reconcile water accounts meters installed (ITX/IIMS), and reconcile water accounts with building permits have been created.

OAG: % complete 100%

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 12 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete 100%

OAG's Follow-up Audit Findings regarding Recommendation 12 as of December 2009

The City has developed procedures for recording of water meters installed by the City and developers, and for new account activation.

OAG: % complete 100%

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 13 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete

100%

OAG's Follow-up Audit Findings regarding Recommendation 13 as of December 2009

The City's specifications for water meters are included in the City's Water Specifications Guidelines. The City has developed methodologies and procedures for recording and communicating customer information, including procedures for transfer of information between Customer Accounts and Meter Maintenance.

OAG: % complete

100%

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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 14 as of June 2009

Implementation of this recommendation is 100% complete. The City is currently reviewing the feasibility of bulk water stations and will provide a report and possible recommendations by Q1, 2010.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 14 as of December 2009

The City determined that the cost of bulk stations did not provide sufficient benefit. The City indicated that several improvements have, however, been made to the current system, but no information was provided.

OAG: % complete **100%**

2005 Recommendation 15

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

2005 Management Response

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

Management Representation of the Status of Implementation of Recommendation 15 as of June 2009

Implementation of this recommendation is 100% complete. The target is reviewed and set annually, during our year end exercise. In 2005/2006, the rate was set at 95%, which is in line with other receivables managed by Revenue.

As part of the year end process, receivables are analysed and separated by owner versus tenant lease (TL). Owner accounts have no risk whatsoever as the balance can be transferred to the tax roll and collected in the same manner as taxes. Therefore, there is no loss or risk. As for tenant lease accounts, these are the greatest risk accounts and the ones that are worked very diligently and closely by staff. The receivables at year end are analyzed to measure the percentage overdue past 60 days against the total receivables at year end.

For 2008, total tenant lease receivables over 60 days were approx. \$70,000. This represents less than one percent of the total receivables at year end. The collection target for the following year, 2009, was set at 99%.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 15 as of December 2009

The work associated with implementation of this recommendation is complete. The year end process has been reviewed and clearly set out. The collections target has been increased over the past few years. Continuous improvement has been shown; however, staff should consider avenues to cost effectively collect the remainder of the tenant lease receivables.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 16 as of June 2009

Implementation of this recommendation is 100% complete. Drinking Water Services is using WaterTrax for our water quality database and is used for formally reporting to the MOE and Council per regulations.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 16 as of December 2009

Work associated with the implementation of this recommendation is complete. The WaterTrax Water Quality monitoring software is being used by the City which has the capacity to store all of the Water Quality data and the functionality to analyze the trends for tested parameters.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 17 as of June 2009

Implementation of this recommendation is 100% complete. We are in the process of completing the public consultation phase and expect to report back in Q2 2010.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 17 as of December 2009

The work associated with the implementation of this recommendation is complete. Through reviewing information posted on the City of Ottawa website it is evident that the City has made significant progress with regards to this recommendation. The website provides the public with good background information regarding cross-connections and outlines the public consultation process. Similar by-laws enacted by other municipalities regarding cross-connects are also posted on the website. This will help the public to understand the potential wording and implications of any by-law that the City of Ottawa might enact and enforce.

OAG: % complete **100%**

2005 Recommendation 18

The City should implement a proactive lead services replacement program.

2005 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.

Management Representation of the Status of Implementation of Recommendation 18 as of June 2009

Implementation of this recommendation is 100% complete. On January 23, 2008, Council adopted an annual capital program dedicated to the proactive lead services replacement and a public information outreach program.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 18 as of December 2009

The work regarding the implementation of this recommendation is complete. A proactive lead services replacement program has been put in place. A public information campaign has been initiated that includes mass mailing to residents suspected of having lead services and a portion of the City's website describes the lead services replacement program. Council has instructed staff to provide provisions in the budget to replace the City's portion of lead water services by 2014.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 19 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 19 as of December 2009

The work associated with the implementation of this recommendation is substantially complete. Through reviewing information posted on the City of Ottawa website it is evident that the City has made significant progress with regards to this recommendation. The website provides the public with good background information regarding cross-connections and outlines the public consultation process. Similar by-laws enacted by other municipalities regarding cross-connections are also posted on the website. This will help the public to understand the potential wording and implications of any by-law that the City of Ottawa might enact and enforce. No draft City of Ottawa by-law was provided for this follow-up audit.

OAG: % complete **75%**

Management Representation of Status of Implementation of Recommendation 19 as of Summer 2010

Management agrees with the OAG's follow-up audit finding.

Having concluded the public consultation phase of the Cross Connection Control Program, staff will be bringing a By-law to Council for approval in 2011 for a Cross Connection Control Program that will fully address this recommendation.

Management: % complete *75%*

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 20 as of June 2009

Implementation of this recommendation is 100% complete. DWS have reviewed these procedures in conjunction with the development of a Quality Management System per Ministry of Environment regulations. In addition, an IT project has been initiated that will enhance verification by deploying handheld devices and bar code technology to field staff for water sample collection and testing. IT expects to have a solution deployed by the end of April 2009.

Management: % complete *100%*

OAG's Follow-up Audit Findings regarding Recommendation 20 as of December 2009

OAG: % complete *100%*

2005 Recommendation 21

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

2005 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.

Management Representation of the Status of Implementation of Recommendation 21 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 21 as of December 2009

The work associated with the implementation of this recommendation is complete. Drinking Water Services has been identified as the group to lead and be responsible for all water loss reduction programs. The Water Loss Control 2008 Summary Report was reviewed for this follow-up audit. This report outlines the sources of water loss as well as the potential solutions for reducing losses and increasing the amount of water that is billed.

OAG: % complete **100%**

2005 Recommendation 22

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

2005 Management Response

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

Management Representation of the Status of Implementation of Recommendation 22 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 22 as of December 2009

The work associated with this recommendation has been completed. The Water Loss Control 2008 Summary Report that was discussed in the assessment of Recommendation 21 was also reviewed for this recommendation. This report outlines the sources of water loss as well as the potential solutions for reducing losses and increasing the amount of water that is billed.

OAG: % complete **100%**

2005 Recommendation 23

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

2005 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.

Management Representation of the Status of Implementation of Recommendation 23 as of June 2009

Implementation of this recommendation is 100% complete. The City of Ottawa received its accreditation as an Operating Authority by a third party auditor being the Canadian General Standards Board (CGSB). This third party accreditation is formal recognition that the City has met and developed a Drinking Water Quality Management System as prescribed by regulations under the Safe Drinking Water Act. It should be noted that the City of Ottawa applied for a Limited Scope (entire DWQMS) accreditation, which means that the third party accreditation would only involve a desktop review of the system procedures. The City has 12 months from April 29, 2009 to apply for a Full Scope Accreditation, which will involve a desktop review of the Operational Plan along with a non-site verification audit to confirm the implementation of the Plan.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 23 as of December 2009

The work associated with the implementation of this recommendation is complete. The Drinking Water Quality Management System was developed and has received accreditation from the Canadian General Standards Board. The City of Ottawa is listed on the Ministry of Environment, Drinking Water Ontario website as to having received its Municipal Drinking Water Licence. Quality Management Systems for Solid Waste and Wastewater have not yet been implemented and no evidence of such work has been provided.

OAG: % complete **100%**

2005 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.

2005 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.

Management Representation of the Status of Implementation of Recommendation 24 as of June 2009

With Council's endorsement of the Operational Plan/Drinking Water Quality Management System, accountability has been established and the relationships between Council, corporate and top management have been very well defined. This Plan has been endorsed by Council and accredited by the CGSB. As the Corporation begins implementing the results of the recent organizational realignment, the Environmental Services department is involved in its own strategic alignment review. The results of this review will be taken into consideration when finalizing the department's organizational structure. This review, which is part of ESD on-going refinements and continuous improvement, is not expected to significantly alter the accountabilities established by the Operational Plan. The Consultants review and report has been completed, with implementation to commence in the fall of 2009.

Management: % complete

None Provided

OAG's Follow-up Audit Findings regarding Recommendation 24 as of December 2009

Work associated with the implementation of this recommendation is substantially complete. The Operational Plan and Drinking Water Quality Management System have been implemented and accredited by the Canadian General Standards Board. The reorganization of the Environmental Services department is currently underway which will finalize the department's organizational structure.

OAG: % complete

90%

Management Representation of Status of Implementation of Recommendation 24 as of Summer 2010

Management agrees with the OAG's follow-up audit finding as of December 2009.

Roles, responsibilities and accountabilities for management of the system have been clearly defined in the Operational Plan and Drinking Water Quality Management

System; which has been endorsed by Council, accredited by an external third party and is now implemented.

Should the department's Strategic Alignment Initiative identify opportunities for organizational improvement, they will be incorporated as revisions to the service area's Operational Plan.

Management: % complete *90%*

2005 Recommendation 25

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

2005 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.

Management Representation of the Status of Implementation of Recommendation 25 as of June 2009

Implementation of this recommendation is 100% complete.

Management: % complete *100%*

OAG's Follow-up Audit Findings regarding Recommendation 25 as of December 2009

Work associated with the implementation of this recommendation is complete. In a memo to the Mayor and Members of Council the City Treasurer outlines the allocation of costs and identifies the costs for the different elements. The current policy is to ensure that the total costs of water and sewer services are covered by user fees and not subsidized through the tax bill.

OAG: % complete *100%*

4 SUMMARY OF THE LEVEL OF COMPLETION

1. The table below outlines our assessment of the level of completion of each recommendation as of December 2009.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	3, 4	2	8%
SUBSTANTIALLY COMPLETE	75 – 99	6, 19, 24	3	12%
COMPLETE	100	1, 2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	20	80%
TOTAL			25	100%

2. The table below outlines management's assessment of the level of completion of each recommendation as of Summer 2010 in response to the OAG's assessment. These assessments have not been audited.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	-	-	-
SUBSTANTIALLY COMPLETE	75 – 99	3, 19, 24	3	12%
COMPLETE	100	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25	22	88%
TOTAL			25	100%

5 CONCLUSION

It was found that a significant amount of progress has been made with regards to implementation of work associated with the recommendations in the 2005 audit. It appears that City staff, management, and Council have each attempted to make progress in the areas identified in the audit.

Staff have shown that they are keeping up to date by monitoring changes in drinking water legislation and guidelines with regards to the parameter bromodichlormethane (BDCM). The Guideline Technical Document for Trihalomethanes (THMs) in Drinking water was modified to remove a separate guideline for BDCM because the maximum acceptable concentration for THMs is protective of the health effects of all THMs, including BDCM. It will be important

for staff to continuously monitor changes in legislation and guidelines for other water quality parameters.

Progress has been made with regards to the setup of a temporary procedure that allows Drinking Water Services to receive invoices from Finance. This temporary solution should be refined to reduce staff hours spent requesting and waiting for information. Attempts should be made to have Hydro Ottawa forward two copies of invoices to the City, one to Finance and one directly to Drinking Water Services. At the very least, a policy should be put in place such that when a member of Finance staff receives an invoice for Drinking Water Services, a copy is immediately forwarded to the correct Drinking Water Services staff member.

Based on the documentation received and reviewed for this follow-up audit, there has been little progress with regards to the design and implementation of a water meter maintenance program. As the age of the meters increases their accuracy will decrease. This could cost the City lost revenue for water that is being used but not recorded. Part of the problem with meter maintenance is access. Access procedures need to be put in place and by-laws enforced with a focus on service termination or fines for homeowners that refuse staff access.

The Automated Meter Reading project has been underway for some time. Staff have issued a Request for Qualifications (RFQ) which was reviewed by City staff in April of 2009. Once this technology is installed the meter reading frequency is scheduled to increase to once per month which will increase the amount of data collected for use by DWS, and decrease the number of estimated meter readings and bills. With this, there should be a drop off in customer service complaints with regards to incorrect bills.

A formal assessment of the ITX/IIMS has been completed and the City has identified SAP as a replacement to the ITX maintenance program. SAP and ESRI can be configured to support the many business requirements that staff have defined. This system will be operational in late 2010 and will focus on an infrastructure and work management system for watermains and sewers. This will lay the foundation for subsequent phases where information regarding additional assets will be added to the system.

Procedures have been created to reconcile water accounts with property tax accounts, reconcile water accounts with meters installed (ITX/IIMS), and to reconcile water accounts with building permits.

The 2005 audit recommended that the internally established collections target should be re-evaluated by Revenue and Collections Management. The year end process for setting the collections target has been reviewed and clearly set out. The collections target has been increased over the past few years. Continuous improvement has been shown; however, staff should consider avenues to cost effectively collect the remainder of the tenant lease receivables.

The City has made significant progress with regards to the implementation of a Cross Connection Control program. The City of Ottawa website provides the public with good background information regarding cross-connections and outlines the public consultation process that has been taking place. Similar by-laws enacted by other municipalities regarding cross-connections are also posted on the website. This will help the public to understand the potential wording and implications of any by-law that the City of Ottawa might enact and enforce.

The Drinking Water Quality Management System and Operational Plan are being implemented. The City has received accreditation from the Canadian General Standards Board and has received its Municipal Drinking Water Licence from the Ministry of the Environment. Although the work completed to date is significant, staff haven't begun to address the remainder of Recommendation 23 from the 2005 audit which recommends that Quality Management Systems for Solid Waste and Wastewater be implemented in addition to the Drinking Water Quality Management System.

A proactive lead services replacement program has been put in place. A public information campaign has been initiated that includes mass mailing to residents suspected of having lead services and a portion of the City's website describes the lead services replacement program. Council has instructed staff to provide provisions in the budget to replace the City's portion of lead water services by 2014.

Drinking Water Services has been identified as the group to lead and be responsible for all water loss reduction programs. The Water Loss Control 2008 Summary Report outlines the sources of water loss as well as the potential solutions for reducing losses and increasing the amount of water that is billed.

6 ACKNOWLEDGEMENT

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