



**AUDITOR GENERAL'S
REPORT
ACTION REQUIRED
With Confidential Attachment**

**Controls Over Telecommunication Expenses Need
Improvement**

Date:	June 10, 2014
To:	Audit Committee
From:	Auditor General
Wards:	All
Reason for Confidential Information:	This report is about litigation or potential litigation that affects the City or one of its agencies and corporations.
Reference Number:	

SUMMARY

The Auditor General's Audit Work Plan included a review of City telecommunication expenses and controls. This review was selected due to the significant amount of funds involved and the fact that the Auditor General's Office had not reviewed this area since 2005. In 2013, telecommunication costs for the City were \$19.2 million.

The objective of this review was to assess internal controls over the management of telecommunication contracts, payment of vendor invoices, telecommunication device inventory, and oversight of telecommunication expenses.

This report includes results reported through a public report enclosed as Appendix 1 and a confidential report attached as Attachment 1. The public report and the confidential attachment combined contain 20 recommendations that will result in reduced telecommunication costs and improved controls over telecommunication expenses, and the management of telecommunication contracts.

This report also includes one recommendation to City Agencies and Corporations. The recommendation relates to the need for City Agencies and Corporations to evaluate the feasibility of converting telephone landlines to Voice Over Internet Protocol (VOIP). Our review indicates significant savings can be achieved through the conversion of existing landlines to VOIP.

RECOMMENDATIONS

The Auditor General recommends that:

1. City Council request the Chief Information Officer to develop a process for reviewing contract compliance during the time the contract is awarded as well as during the contract period.
2. City Council request the General Manager, Transportation Services to review existing payment processes for traffic light circuits and evaluate the need to obtain a formal contract for traffic light circuits to include payment requirements, terms, conditions and service levels.
3. City Council request the City Manager to direct divisions to implement a process for ongoing review and monitoring of telecommunication costs including costs incurred by management employees responsible for approving billing invoices.
Costs incurred as a result of personal use should be reimbursed to the City.
4. City Council request the City Manager to direct divisions to review controls over access and use of group wireless devices. The inventory of group wireless devices should be reviewed and those not required should be cancelled.
5. City Council request the City Manager in consultation with the Chief Information Officer consider placing limitations and restrictions on long distance calls outside North America. In particular, long distance calling capability should be disabled on group devices.
6. City Council request the Chief Information Officer to implement a process for timely reporting of telecommunication expenses and related details to divisions. Wireless service providers should be directed to provide additional billing details to assist in divisional review and analysis of voice and data use charges.
7. City Council request the City Manager to direct divisions to ensure wireless device users purchase appropriate wireless voice and data travel packages before travelling outside Canada.
8. City Council request the City Manager to direct divisional management to ensure users understand wireless service plan usage limits. Appropriate changes to plans should be requested on a timely basis to avoid unnecessary costs.
9. City Council request the Chief Information Officer to review options for conference calling and evaluate whether cost savings could be achieved.
10. City Council request the Deputy City Manager and Chief Financial Officer to develop a process to periodically reconcile invoices paid from SAP with the invoices approved in the NetPlus telecommunication system.
11. City Council request the Deputy City Manager and Chief Financial Officer to review the existing process of manually updating invoice payment information from SAP to the NetPlus telecommunication system and evaluate whether the process can be automated.

12. City Council request the Chief Information Officer to implement a process ensuring vendor invoices agree with amounts provided in vendor contracts before payments are approved.
13. City Council request the Chief Information Officer to perform a detailed review of 2013 and any prior period invoices for telecommunication service providers. Respective wireless vendors should be contacted regarding refund of any overpayments identified.
14. City Council request the Chief Information Officer to implement measures to ensure extra work order invoices are validated with price quotes where appropriate and accompanied by work completion reports before payment.
15. City Council request the City Manager to direct divisions to review their respective inventory of telecommunication devices to ensure that it reflects the current status of such devices. Inventories should be adjusted where appropriate and reviews should be performed on a periodic basis.
16. City Council request the City Manager to develop exception reporting criteria to assist in evaluating unnecessary telecommunication costs. Criteria identified should include devices and services with no activity, suspended phones beyond a specified period and phones no longer in use. Devices and services no longer required should be cancelled.
17. City Council request the Chief Information Officer to develop a process requiring formal written documentation for granting access to the NetPlus telecommunication system. Periodic review of NetPlus system user access should be conducted to ensure continued access aligns with job duties.
18. City Council request the Chief Executive Officers of City Agencies and Corporations review the issues and recommendations included in this report and consider the relevance to their respective organizations. Particular emphasis should be placed on evaluating the cost benefit of converting landlines to Voice Over Internet Protocol (VOIP).
19. City Council adopt the confidential recommendations in the Confidential Attachment.
20. City Council not authorize the public release of the information contained in the Confidential Attachment as it relates to litigation or potential litigation that affects the City or its agencies and corporations.

FINANCIAL IMPACT

The implementation of recommendations included in this report will result in reducing telecommunication costs. The extent of these savings cannot be determined at this time.

COMMENTS

In 2013 City telecommunication costs were \$19.2 million. This report identifies areas where the management of telecommunication services can be further strengthened and opportunities for further cost savings to be realized. Key issues identified in this review relate to the following:

- Contract terms and conditions
- Contract management and compliance
- Monitoring of telecommunication expenses
- Payment of telecommunication invoices
- Inventory management and controls
- User access control to the inventory and billing application.

The Auditor General's report entitled "Controls Over Telecommunication Expenses Need Improvement" is attached as Appendix 1. Management's response to each of the recommendations contained in the report is attached as Appendix 2.

This report also includes a confidential attachment relating to our review of certain telecommunication contracts. The attachment is enclosed as Confidential Attachment 1.

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SIGNATURE

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13-ITD-01

ATTACHMENTS

Attachment 1 – Confidential Information:

Controls Over Telecommunication Expenses Need Improvement

Appendix 1: Controls Over Telecommunication Expenses Need Improvement

Appendix 2: Management's Response to the Auditor General's Report Controls Over Telecommunication Expenses Need Improvement

AUDITOR GENERAL'S REPORT

**CONTROLS OVER
TELECOMMUNICATION EXPENSES
NEED IMPROVEMENT**

March 28, 2014

Jeffrey Griffiths, CPA, CA, CFE
Auditor General



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EXECUTIVE SUMMARY

Telecommunication Services review included in 2013 Work Plan

The Auditor General's 2013 Audit Work Plan included a review of City telecommunication expenses and controls. The objective of this review was to assess internal controls over the management of telecommunication service contracts, payment of invoices and monitoring of telecommunication expenses by divisions.

This review was selected due to the significant amount of funds involved and the fact that the Auditor General has not reviewed this area since 2005.

Total costs for telecommunication services for 2013 were \$19.2 million

2013 City telecommunication costs were \$19.2 million. These costs include the following:

- Voice Over Internet Protocol (VOIP) and telephone landlines (\$4.4 million)
- Wireless devices and services, e.g., BlackBerry's (\$6.5 million)
- Internet and data services (\$5.7 million)
- Traffic light circuits (\$2.6 million)

Over the past number of years, use of wireless phone services has increased significantly. In 2004, there were 10,600 wireless devices. In 2013, the number had increased to 15,300 or 44 per cent. Landline phones on the other hand reduced from 27,000 lines in 2004 to 24,000 landline and VOIP phones in 2013 or 11 per cent.

Overall costs for telecommunication services declined by \$3 million in 2013 when compared with 2011

As a result of the City's decision to move from landline phones to Voice Over Internet Protocol (VOIP) phones and a reduction in the number of phone lines, there has been a gradual reduction in telecommunication costs during the past few years. Overall telecommunication costs have declined by \$3 million or 14 per cent to \$19.2 million in 2013 when compared with \$22.2 million in 2011.

This report identifies areas where the management of telecommunication services can be further strengthened and opportunities for further cost savings to be realized.

The concerns raised in this report are similar to those raised in 2005 report on telecommunication expenses

Controls were not updated periodically

Process needed to identify and remedy contract non-compliance on a timely basis

Telecommunication expenses are not adequately monitored by City divisions

The issues identified in this report are not new. The Auditor General's 2005 report entitled "Telecommunication Services Review" identified similar concerns. With new developments in business processes and technology, review of management controls and practices should be an ongoing exercise.

Key issues identified in this review relate to the following:

- Contract terms and conditions
- Contract management and compliance
- Monitoring of telecommunication expenses
- Payment of telecommunication invoices
- Inventory management and controls
- User access control to the inventory and billing application.

1. Contract Terms and Conditions

This matter is being reported to Committee in a confidential report.

2. Improvements needed in contract management and compliance

Management needs to develop a formal process to identify and remedy issues of contract non-compliance on a timely basis. Our review identified the following issues:

- Inadequate insurance guarantees provided by vendors
- Vendor service level performance monitoring requires strengthening
- Formal contracts for traffic circuits do not exist

3. Significant savings available through improved monitoring of telecommunication expenses

Telecommunication expenses are not reported to divisions on a timely basis or adequately monitored by City divisions. As a result, inappropriate usage occurs and the need for changes in monthly service plans is not identified in a timely manner.

Our review of telecommunication expenses for selected wireless and landline phones identified issues related to:

- personal use of wireless phones
- personal long distance calls not consistently tracked by divisions and reimbursed to the City
- shared use of wireless phones not adequately controlled
- failure to use travel plans results in excessive costs
- savings available through the use of conference-calling technology

4. Telecommunication services payment processing

Monitoring of telecommunication services payment invoices need strengthening

Monitoring of telecommunication services payment invoices need strengthening. Issues noted during the review of selected invoices are as below:

- Duplicate invoices in the amount of \$83,000 paid due to inadequate reconciliation between the SAP financial information system and the NetPlus telecommunication management information system.
- Lack of adequate exception reporting resulting in overpayments. Our limited review identified approximately \$25,000 in overpayments.
- Lack of formal procedures for processing payments for extra work orders. We identified extra work orders in the amount of \$76,400 paid without job completion reports.

5. Periodic Review of Wireless and Landline Phones would result in significant savings

Management should review the need for 1,800 wireless devices with no voice activity at an annual carrying cost of \$400,000

City divisions do not ensure a current inventory of telecommunication devices and services is maintained. The lack of divisional review of telecommunication inventory and services increases the risk of overpayments.

We identified 1,800 wireless devices having no voice activity for an extended period of time at an annual carrying cost of \$400,000. Management advised that "many of these devices may be used primarily for data services but it is possible that some are simply not in use and are no longer required." In addition, 450 wireless devices were suspended for various reasons and were beyond their respective contract expiry dates. Cancelling these phones would save approximately \$90,000.

For landlines and VOIP phones, we selected two divisions and noted 27 out of 180 lines or 15 per cent were not needed by the divisions. Management has subsequently advised that these lines will be cancelled.

A five per cent reduction in the number of phone lines would save the City up to \$100,000 annually

Overall, the City has 24,000 phone lines. A review resulting in five per cent reduction in the number of phone lines would save the City in the range of \$75,000 to \$100,000 annually

6. User Access Control to Inventory and Billing System

Lack of a formal process to grant or update access to the telecommunication management system

Telecommunication inventory and payments are centrally maintained and processed through the NetPlus telecommunication management information system. Our review of system access and monitoring processes indicates that management does not have a formal process to grant or update access to the system.

In some cases, access is granted on the basis of an informal telephone call from the division. In addition, user access is not periodically reviewed with City divisions. Lack of adequate access controls increases the risk of unauthorized system access.

7. Cost saving opportunities exist for City Agencies and Corporations

City agencies and corporations can save significant telecommunication costs by converting landline phones to VOIP.

We contacted a number of City agencies and corporations to determine whether additional financial benefits were available through pooling City telecommunication contracts or if there are other contracts with agencies and corporations with more competitive pricing.

Substantial savings are available to City agencies and corporations through conversion to VOIP phones. Available cost savings are dependent on the number of phone lines converted to VOIP.

The City saves approximately \$20 per line per month. A City agency or corporation with 5,000 land lines converted to VOIP could potentially save \$1.2 million a year.

Conclusion

Report recommendations will improve controls in the management of telecommunication contracts and expenses

This report identifies a number of opportunities to improve the management of telecommunication services. Implementation of the recommendations contained in this report and the recommendations in the confidential attachment will improve controls over the administration of telecommunication expenses, payments and management of telecommunication contracts.

Our report includes one recommendation to City Agencies and Corporations. The recommendation relates to a requirement that City Agencies and Corporations evaluate the feasibility of converting landlines to Voice Over Internet Protocol (VOIP). Based on our review we believe significant savings can be achieved through the conversion of existing landlines to VOIP. At the moment the total anticipated savings cannot be quantified.

BACKGROUND

IT Division is responsible for managing telecommunication services across the City

The City Information & Technology (I&T) Division is responsible for managing telecommunication service contracts and delivering solutions to support City operations.

The I&T Division Technology Infrastructure Services Unit provides telecommunication services support to City divisions. The Unit is responsible for managing City information technology networks including internet, telephone and wireless communications and manages information technology devices across the City.

2013 telecommunication costs were \$19.2 million

2013 City telecommunication costs were \$19.2 million. These costs include the following:

- Voice Over Internet Protocol (VOIP) and telephone landlines (\$4.4 million)
- Wireless devices and services (\$6.5 million)
- Internet and data services (\$5.7 million)
- Traffic light circuits (\$2.6 million)

Over the past number of years, use of wireless phone services has increased significantly. In 2004, there were 10,600 wireless devices. In 2013, the number had increased to 15,300 or 44 per cent. Landline phones on the other hand reduced from 27,000 lines in 2004 to 24,000 landline and VOIP phones in 2013 or 11 per cent.

Overall costs for telecommunication services declined by \$3 million in 2013 when compared with 2011

As a result of the City's decision to move from landlines to Voice Over Internet Protocol (VOIP) phones and a consequent reduction in the number of phone lines, there has been a gradual reduction in telecommunication costs during the past few years. Overall telecommunication costs have declined by \$3 million or 14 per cent to \$19.2 million in 2013 when compared with \$22.2 million in 2011.

The City NetPlus telecommunications management information system processes and tracks orders, manages device inventory, rate plans and services and generates periodic reports for management review. The system is also used to review and process invoices before final payment.

As of September 30, 2013, the NetPlus system maintained information related to 15,300 wireless devices including phones, tablets and pagers and 24,000 landline and Voice Over Internet Protocol (VOIP) lines.

AUDIT OBJECTIVES, SCOPE AND METHODOLOGY

Telecommunication expenses and controls review included in audit work plan

The Auditor General's 2013 Audit Work Plan included a review of City telecommunication expenses and controls.

This review was selected due to the significant amount of funds involved and the fact that the Auditor General's Office had not reviewed this area since 2005.

Audit objectives and scope

The objective of this review was to assess internal controls over the management of telecommunication contracts, payment of vendor invoices, telecommunication inventory management and management oversight and monitoring of telecommunication expenses.

The review period included telecommunication services and expenses processed from January 2011 to September 2013.

Audit Methodology

We reviewed management controls over telecommunication services provided to City staff. Our audit methodology included:

- Review of policies and procedures related to telecommunication services within the City
- Review of contract management procedures including telecommunication contract service level measures
- Review of telecommunication payments and related processes

- Review of telecommunication device inventory controls
- Analysis of NetPlus telecommunication management information system data, controls and other applications
- Review of previous audit reports and recommendations
- Interviews with I&T Division and other division staff
- Review of audit reports issued by other jurisdictions
- Benchmarking with other City Agencies and Corporations

Audit conducted in accordance with generally accepted government auditing standards

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT RESULTS

A. CONTRACT TERMS AND CONDITIONS

This matter is being reported to Audit Committee in Confidential Attachment 1.

B. TELECOMMUNICATIONS CONTRACT MANAGEMENT AND COMPLIANCE MONITORING NEED STRENGTHENING

A process to regularly monitor contract compliance is needed

Management needs to develop a process to regularly monitor telecommunications contract compliance to ensure the City is receiving products and services provided under the agreement.

The process should be documented and describe procedures to identify and remedy contract non-compliance on a timely basis. Our audit identified the following issues related to contract non-compliance.

Inadequate Insurance Guarantees Accepted from the Vendor

Insurance guarantees are included in contracts to provide protection against public liability claims and property damage. It is important that these guarantees are obtained as stated in the contract to provide required coverage for the City.

Selected insurance guarantees were substantially less than contract specifications

Our review of selected insurance guarantees identified coverage substantially less than provided under the contract. For example, we noted the following:

- A contract required general liability insurance of \$8 million and only \$1.5 million was provided
- A contract required \$4 million in professional liability insurance and only \$500,000 was provided

Insurance guarantees required under the contract were obtained after the above instances were communicated to management during our review.

Vendor Service Level Performance Monitoring Requires Strengthening

The existing process for monitoring vendor service does not effectively address all remedies when performance falls below agreed upon service levels. A formal documented process is required for ongoing monitoring of service level performance.

Our audit included a limited review of certain services provided under telecommunication contracts including network repair and service availability.

An amount of \$7,000 not claimed from vendors for non-compliance with contract service level performance requirements

Our review of 2013 data for selected performance levels identified \$7,000 that should have been claimed from vendors for non-compliance with network repair and service availability required under the contract.

Contract performance targets should be reviewed and financial losses recovered where vendor performance falls short of agreed upon service levels.

Traffic Light Circuits Without Formal Contract

No contract for 900 traffic light circuits paid for by the City at an annual cost of \$2.6 million

In 2013, \$2.6 million was paid for 900 traffic light circuits at various locations across the City. No contract exists for providing this service. Therefore payment requirements, terms, conditions and service levels are not specified.

City payments to the vendor are based solely on vendor invoices each month. As no contract exists, payments cannot be reconciled to amounts specified in a contract. In the absence of a contract, vendor rate increases are paid in accordance with vendor invoices.

Recommendations:

- 1. City Council request the Chief Information Officer to develop a process for reviewing contract compliance during the time the contract is awarded as well as during the contract period.**
- 2. City Council request the General Manager, Transportation Services to review existing payment processes for traffic light circuits and evaluate the need to obtain a formal contract for traffic light circuits to include payment requirements, terms, conditions and service levels.**

C. IMPROVEMENTS IN MONITORING TELECOMMUNICATION EXPENSES REQUIRED

Significant improvement in controls needed in divisional oversight and reporting of telecommunication costs

City information technology policies and procedures require divisions to perform a review of telecommunication costs including the cost of personal usage incurred by users. The policy requires that employee personal use costs be reimbursed to the City.

We reviewed a sample of City expenses incurred on wireless devices and landline phones for data usage and long distance charges. Our review identified significant improvement in controls is needed in divisional oversight and reporting of telecommunication costs and phone/data plan selection and monitoring.

Investigation of potential fraud and abuse currently underway

In addition, certain phone usage identified during our review is currently under investigation for potential fraud and abuse.

Our review indicates that divisions do not adequately review and validate telecommunication expenses on a regular basis. Improvements are required in the areas identified below.

Wireless Devices

Personal use as high as \$7,500 per device

Personal long distance, voice and data roaming charges on eight selected devices amounted to \$19,000 during the period from January 2011 through September 2013. Personal use charges on certain devices was as a high as \$7,500 during this period.

Some phones were shared among groups of users. We noted charges for calls costing up to \$2,000 to international destinations including a Caribbean country. As these devices were shared among a group of users, management could not track specific users for personal calls made on group devices.

2,600 wireless devices with annual cost of \$900,000 are either shared or not allocated to a specific user

The City has approximately 2,600 wireless devices that are either shared or not allocated to a specific user. The annual cost for these phones is approximately \$900,000.

We understand the need for shared devices for business purposes. However, management should review the continued need for these devices and adequate controls should be in place to ensure they are used for a proper business purpose.

Group phones increase the risk of misuse and abuse and are difficult to track to a specific user.

Landline and Voice Over Internet Protocol (VOIP) Phones

As is the case with wireless devices, divisional review of landline usage and related costs is also not consistently occurring. Our review identified long distance calls that appear to be non-business related.

For example, we noted various international long distance phone calls to travel destinations and to countries which the City would not likely have business relations.

Personal use charges identified in our review were not reimbursed to the City

Personal use charges identified in our review were not reimbursed to the City and are currently under review. In certain cases either disciplinary action has occurred or users have agreed to reimburse the City.

While there may be appropriate business reasons for incidental personal use, our review indicates periodic verification and examination of telecommunication expenses is warranted. Unless divisions perform a detailed review of telecommunication usage and charges, the City has no process to determine whether phone use is for a valid business purpose.

Divisional practices for distribution and review of telecommunication expense reports are inconsistent

Divisional practices for distribution and review of telecommunication expense reports are inconsistent. Certain divisions perform only a high level budget to actual expense review rather than a detailed usage review.

Other divisions focus only on long distance call records only, and as a result fail to identify charges relating to data and texting.

In still other instances, wireless phone usage and costs relating to management employees responsible for approving billing invoices are not reviewed independently.

Reporting Delays and Insufficient Information in Telecommunication Reports

Delays in the distribution of telecommunication expense reports of four to five months

Telecommunication expense reports are not distributed in a timely manner. Our review of 2013 quarterly report distribution indicates an average delay of four to five months in distributing reports from the previous quarter. The delay results in a lack of timely review by divisional management.

The City's ability to exercise adequate control over wireless telephone charges is also a result of inadequate vendor billing data. For example, lump sum data roaming charges are provided for the entire billing period rather than by specific date and location making it extremely difficult to track specific use during personal or business trips.

Recommendations:

- 3. City Council request the City Manager to direct divisions to implement a process for ongoing review and monitoring of telecommunication costs including costs incurred by management employees responsible for approving billing invoices.**

Costs incurred as a result of personal use should be reimbursed to the City.

- 4. City Council request the City Manager to direct divisions to review controls over access and use of group wireless devices. The inventory of group wireless devices should be reviewed and those not required should be cancelled.**
- 5. City Council request the City Manager in consultation with the Chief Information Officer consider placing limitations and restrictions on long distance calls outside North America. In particular, long distance calling capability should be disabled on group devices.**
- 6. City Council request the Chief Information Officer to implement a process for timely reporting of telecommunication expenses and related details to divisions. Wireless service providers should be directed to provide additional billing details to assist in divisional review and analysis of voice and data use charges.**

Telecommunication Plan Selection and Monitoring

Significant voice, text messaging and data service costs exceeded the monthly service plan

Our review of selected devices identified significant voice, text messaging and data service costs exceeding monthly service plans. An appropriate wireless plan and travel package selected prior to traveling outside Canada would have resulted in significant cost savings. Examples noted during our review are as briefly described below.

Wireless Devices

Five wireless phones incurred \$11,500 while users travelled outside Canada

Five wireless devices had data and long distance roaming charges amounting to \$11,500 incurred while users were traveling outside Canada during the period January 2011 to September 2013. An appropriate travel package purchased prior to travel could have saved up to \$8,600 or 75 percent of these charges.

Four BlackBerry phones had text messaging of \$7,500

Four BlackBerry devices had text messaging charges totaling \$7,500 from January 2011 to September 2013. In some cases ranging over \$2,000 per phone.

\$14,000 in text messaging could be saved through proper plan selection

An available package costing \$10 a month for unlimited text messaging could have saved over \$7,000 or 90 per cent of costs incurred for the four devices identified. Our analysis indicates savings of approximately \$14,000 in text messaging charges through proper plan selection.

A significant amount of these costs were charged while users continued to incur charges without knowing and comparing actual usage with usage allowed in their specific service plan.

Users and divisional management should have a complete understanding of telecommunication services and wireless plan details. Further, users and divisional management should review subsequent usage to ensure plans in effect are cost effective and recommend any changes on a timely basis.

Landline and Voice Over Internet Protocol (VOIP) Phones

Conference calling costs of \$40,000 can be reduced by evaluating alternate choices

The City incurs over \$40,000 in conference call expenses annually. These charges can be reduced by evaluating alternate conference calling plans and options such as Skype and WebEx.

Recommendations:

- 7. City Council request the City Manager to direct divisions to ensure wireless device users purchase appropriate wireless voice and data travel packages before travelling outside Canada.**
- 8. City Council request the City Manager to direct divisional management to ensure users understand wireless service plan usage limits. Appropriate changes to plans should be requested on a timely basis to avoid unnecessary costs.**
- 9. City Council request the Chief Information Officer to review options for conference calling and evaluate whether cost savings could be achieved.**

D. TELECOMMUNICATION INVOICE REVIEW AND PAYMENT NEED IMPROVEMENT

Process for verifying and approving telecommunication invoices requires strengthening

The process for verifying and approving telecommunication invoices requires improvement. The I&T Division uses NetPlus, an off the shelf system to manage telecommunication inventory and process vendor invoices.

Our review of selected invoices identified various control weaknesses including:

- a) Process inadequacies and a lack of reconciliation between SAP and NetPlus resulting in duplicate payments made on the same invoice
- b) Inadequate review and validation of vendor invoices with amounts specified in the telecommunications contract
- c) Overpayment of wireless invoices due to lack of adequate exception reporting which would assist in detecting billing anomalies
- d) Lack of formal written procedures for processing payments for telecommunication service work orders

The NetPlus telecommunication management information system maintained by the I&T Division is not integrated with the City SAP financial information system. As a result, manual updates for invoice payments from SAP are required in NetPlus to manage invoices and payments. When appropriate updates are not made to NetPlus and the two systems are not reconciled, duplicate payments may result.

Duplicate payments of \$83,000

In 2011, duplicate payments amounting to \$83,000 were made because manual updates to the NetPlus system were not made. The lack of reconciliation between the two systems prevented the detection of overpayment by the City. The City later received a credit for the appropriate amount.

The City should review invoice payment processes and evaluate options for automation and reconciliation between NetPlus and SAP.

Recommendation:

- 10. City Council request the Deputy City Manager and Chief Financial Officer to develop a process to periodically reconcile invoices paid from SAP with the invoices approved in the NetPlus telecommunication system.**
- 11. City Council request the Deputy City Manager and Chief Financial Officer to review the existing process of manually updating invoice payment information from SAP to the NetPlus telecommunication system and evaluate whether the process can be automated.**

In an 18 month period City overbilled \$100 per month by internet service provider

The original contract with the internet service provider included a monthly billing rate of \$3,955. During an 18 month period between 2012 and 2013 the monthly rate for internet billing was \$4,055 or an overbilling of \$100 each month. Each invoice was approved by management for payment.

A lack of adequate validation of the invoiced amount with the contract amount resulted in overpayment of \$1,800 during 2012 and 2013. Management advised that the payment has been adjusted by the vendor.

Management should compare invoice amounts with those reflected in vendor contracts.

Recommendation:

- 12. City Council request the Chief Information Officer to implement a process ensuring vendor invoices agree with amounts provided in vendor contracts before payments are approved.**

Lack of Exception Reporting Results in Overpayments

The City has three wireless service vendors. We noted that vendor invoices are not adequately reviewed.

Overpayments of approximately \$20,500 when rate plans not changed upon device upgrade

For one vendor, we noted that rate plans were not changed in a timely manner with the upgrade of new devices. Our limited review of billing information indicated potential overpayments of \$20,500. Device upgrade invoices should be reviewed from this vendor and exception reports should be developed to detect overbillings on a timely basis.

\$2,200 overpayment due to lack of review and follow-up on billing invoices

In another case, the City pays vendor invoices based on the total amount submitted by the vendor. Our review of two months of invoices for this vendor identified an overpayment of \$2,200. Overpayments were a result of lack of sufficient vendor billing information and inadequate review and follow-up on billing errors.

Overpayments for 2013 or any prior periods from these two vendors cannot be determined until a complete analysis of billing invoices is performed.

Duplicate Payment of Wireless Services

Occasionally, wireless service is transferred from one provider to another. These transfers require users to deactivate billing from the previous service provider in a timely manner.

Overpayment of \$1,400 for seven devices not deactivated in a timely manner

We noted an instance where billings were not deactivated from a former service provider. As a result, payments were made to both service providers for an extended period of time. In several instances the period exceeded six months at a rate of approximately \$500 per phone. Overpayments for seven wireless devices included in our sample amounted to approximately \$1,400.

Management advised that these payments cannot be claimed as services were active with both service providers.

The City does not have adequate reporting processes to identify billing anomalies, such as over payments and duplicate charges on a timely basis.

Recommendation:

- 13. City Council request the Chief Information Officer to perform a detailed review of 2013 and any prior period invoices for telecommunication service providers. Respective wireless vendors should be contacted regarding refund of any overpayments identified.**

Lack of Formal Procedures for Processing Payments for Extra Work Orders

Extra Work order management requires strengthening

The City pays approximately \$2 million in charges relating to extra work for network services. Extra work projects include additional network circuit installation and other projects not included in vendor contracts.

Extra work order projects below \$5,000 are categorized as small jobs and are initiated through work orders with no price quotes. Extra work order projects over \$5,000 are considered large jobs. These extra work order projects require price quotes by the vendor before they are initiated. All extra work order projects whether small or large, require a work completion report before final payment.

One project amounting to \$22,000 did not have a price quote

We selected seven extra work orders amounting to \$79,500 for review and noted one large project amounting to \$22,000 that did not have a price quote. Additionally, six jobs totaling \$76,400 were paid without a work completion report.

Six projects totaling \$76,400 were paid without a work completion report

These extra work order projects are assigned to the existing network service provider. Payment of extra work order projects without price quotes and completion reports could result in overpayment for service provided and payment in full for incomplete work.

Recommendation:

- 14. City Council request the Chief Information Officer to implement measures to ensure extra work order invoices are validated with price quotes where appropriate and accompanied by work completion reports before payment.**

E. INADEQUATE CONTROLS OVER TELECOMMUNICATION INVENTORY

Divisions do not ensure a current inventory of telecommunication devices and services is maintained

City telephone policy requires divisional telephone coordinators ensure wireless devices and landlines are identified and a current inventory of devices and services is maintained. Inventory variances are required to be communicated to the City I&T Division on a timely basis.

In addition, changes in telecommunication services including phone lines no longer required should also be communicated to the City I&T Division.

We noted that divisions do not take adequate measures to ensure a current inventory of telecommunication devices and services is maintained.

Our analysis of telecommunication inventory identified the following:

1,800 wireless devices with annual cost of \$400,000 had no activity for an extended period of time

- Approximately 1,800 wireless devices had no voice activity for an extended period of time. In some instances, devices were inactive for over six months during 2013. The annual carrying cost for these devices was approximately \$400,000. Divisional review and cancellation of inactive devices will save unnecessary phone costs.

450 suspended devices were beyond the contract expiry date and could be cancelled with no penalty

- Wireless devices are suspended for various reasons. For example, when an employee vacates a position and plan cancellation is not cost effective prior to the contract expiration date or in the event a phone is lost or stolen.

cancelling these devices would save \$90,000

We identified over 450 suspended devices. These devices were beyond the contract completion date and were eligible for cancellation with no penalty. Based on our review, it appears that a number of devices remained in a suspended state from 12 to 18 months. Divisions need to review these devices and cancel those no longer required. An estimated savings of \$90,000 would be realized from cancelling these devices.

A City-wide review could identify unnecessary phones

For landlines, we selected two divisions and noted that 27 or 15 per cent of 180 lines were not needed. Management indicates that these lines will be cancelled.

A 5% reduction in phone lines would save the City up to \$100,000 annually

The City has approximately 24,000 phone lines. A City-wide review of phones could result in identifying additional unnecessary phones. A five per cent reduction in phone lines would save the City in the range of \$75,000 to \$100,000 annually in monthly service costs.

Inadequate review of divisional telecommunication inventory and services results in unnecessary telecommunication costs.

Recommendations:

- 15. City Council request the City Manager to direct divisions to review their respective inventory of telecommunication devices to ensure that it reflects the current status of such devices. Inventories should be adjusted where appropriate and reviews should be performed on a periodic basis.**
- 16. City Council request the City Manager to develop exception reporting criteria to assist in evaluating unnecessary telecommunication costs. Criteria identified should include devices and services with no activity, suspended phones beyond a specified period and phones no longer in use. Devices and services no longer required should be cancelled.**

F. USER ACCESS CONTROLS FOR INVENTORY AND BILLING APPLICATIONS NEEDS STRENGTHENING

Telecommunication inventory and payments are centrally maintained and processed through the NetPlus system.

Lack of access controls over the NetPlus System increases the potential of granting access to unauthorized users

Currently there is no formal written application for requesting user authorization to the NetPlus system. Users are added to the system based on individual email or telephone requests. User accounts are not included in the City's electronic telephone directory or a database of users with automated access.

Further, the City I&T Division does not have a process in place to periodically review user access with the divisions and update user access accordingly.

Lack of controls over NetPlus System access increases the potential of granting access to unauthorized users.

Recommendation:

- 17. City Council request the Chief Information Officer to develop a process requiring formal written documentation for granting access to the NetPlus telecommunication system. Periodic review of NetPlus system user access should be conducted to ensure continued access aligns with job duties.**

G. REPORT FINDINGS AND RECOMMENDATIONS MAY HAVE RELEVANCE TO CITY AGENCIES AND CORPORATIONS

Cost saving opportunities exist for City Agencies and Corporations

Many of the issues and recommendations included in this report may have relevance to City Agencies and Corporations

Many of the issues and recommendations included in this report may have relevance to City Agencies and Corporations. Management representatives in each of these organizations should review report issues and recommendations and consider the relevance to their respective organizations.

For example, we contacted selected City Agencies and Corporations to determine whether additional financial benefits were available through pooling City telecommunication contracts or if there are other contracts with Agencies and Corporations with more competitive pricing.

A City agency or corporation with 5,000 land lines could potentially save \$1.2 million a year in monthly service costs

Based on discussions with representatives from City Agencies and Corporations we believe substantial savings are available to City Agencies and Corporations through conversion to Voice Over Internet Protocol (VOIP) phones. Available cost savings are dependent on the number of phone lines converted to VOIP.

The City saves approximately \$20 per line per month. A City agency or corporation with 5,000 land lines could potentially save \$1.2 million a year in monthly service costs.

Recommendation:

18. City Council request the Chief Executive Officers of City Agencies and Corporations review the issues and recommendations included in this report and consider the relevance to their respective organizations. Particular emphasis should be placed on evaluating the cost benefit of converting landlines to Voice Over Internet Protocol (VOIP).

CONCLUSION

This report identifies estimated cost saving opportunities in telecommunication services costs. Some savings identified are one time recoveries, while others are annually recurring cost reductions.

We have also provided a general recommendation for City Agencies and Corporations to evaluate all report recommendations for relevance to their organizations and to consider relevance of the City's Voice Over Internet Protocol (VOIP) contract as well. We believe significant savings in telecommunications costs could be achieved through a conversion to a VOIP phone system.

Implementation of the recommendations contained in this report together with the recommendations in the confidential attachment will improve controls over the management and administration of telecommunication expenses and contracts.

**Management's Response to the Auditor General's Review
Controls Over Telecommunication Expenses Need Improvement**

<u>Rec No</u>	<u>Recommendation</u>	Agree (X)	Disagree (X)	<u>Management Comments:</u> <i>(Comments are required only for recommendations where there is disagreement.)</i>	<u>Action Plan/ Time Frame</u>
1.	City Council request the Chief Information Officer to develop a process for reviewing contract compliance during the time the contract is awarded as well as during the contract period.	X			A contract compliance process will be developed and implemented. Q4, 2014 for process development Q1, 2015 for implementation
2.	City Council request the General Manager, Transportation Services to review existing payment processes for traffic light circuits and evaluate the need to obtain a formal contract for traffic light circuits to include payment requirements, terms, conditions and service levels.	X			An evaluation of the requirements for a formal contract will be conducted. Q4, 2014

<u>Rec No</u>	<u>Recommendation</u>	Agree (X)	Disagree (X)	<u>Management Comments:</u> (Comments are required only for recommendations where there is disagreement.)	<u>Action Plan/ Time Frame</u>
3.	<p>City Council request the City Manager to direct divisions to implement a process for ongoing review and monitoring of telecommunication costs including costs incurred by management employees responsible for approving billing invoices.</p> <p>Costs incurred as a result of personal use should be reimbursed to the City.</p>	X			<p>A process, with policy changes as required, will be developed.</p> <p>Q4, 2014 for process development</p> <p>Q1, 2015 for implementation</p>
4.	<p>City Council request the City Manager to direct divisions to review controls over access and use of group wireless phones. The inventory of group wireless phones should be reviewed and those not required should be cancelled.</p>	X			<p>Guidelines for Divisions to implement controls over their shared wireless phones will be developed.</p> <p>Q4, 2014 for guidelines development</p> <p>Q1, 2015 for implementation</p>
5.	<p>City Council request the City Manager in consultation with the Chief Information Officer consider placing limitations and restrictions on long distance calls outside North America. In particular, long distance calling capability should be disabled on group phones.</p>	X			<p>A review of long distance calling will be conducted, with implementation to follow:</p> <p>Q4, 2014 for review completion</p> <p>Q1, 2015 for implementation</p>

<u>Rec No</u>	<u>Recommendation</u>	Agree (X)	Disagree (X)	<u>Management Comments:</u> (Comments are required only for recommendations where there is disagreement.)	<u>Action Plan/ Time Frame</u>
6.	City Council request the Chief Information Officer to implement a process for timely reporting of telecommunication expenses and related details to divisions. Wireless service providers should be directed to provide additional billing details to assist in divisional review and analysis of voice and data use charges.	X			<p>Internal review of process improvements and the potential for outsourcing the telecom expense management process will be conducted.</p> <p>If outsourcing is viable, implementation via RFP</p> <p>Q1, 2015 for process review and decision on outsourcing.</p> <p>Q4, 2015 for RFP and implementation</p>
7.	City Council request the City Manager to direct divisions to ensure wireless phone users purchase appropriate wireless phone and data travel packages before travelling outside Canada.	X			<p>Guidelines for purchasing phone and data travel packages will be prepared and issued to City staff, and an oversight process established.</p> <p>Q4, 2014.</p>
8.	City Council request the City Manager to direct divisional management to ensure users understand wireless service plan usage limits. Appropriate changes to plans should be requested on a timely basis to avoid unnecessary costs.	X			<p>Annual education program for divisions related to wireless service plans will be developed and communicated.</p> <p>Q4, 2014</p>

<u>Rec No</u>	<u>Recommendation</u>	<u>Agree (X)</u>	<u>Disagree (X)</u>	<u>Management Comments:</u> <i>(Comments are required only for recommendations where there is disagreement.)</i>	<u>Action Plan/ Time Frame</u>
9.	City Council request the Chief Information Officer to review options for conference calling and evaluate whether cost savings could be achieved.	X			A review of conference calling options will be undertaken and recommendations developed Q4, 2014.
10.	City Council request the Deputy City Manager and Chief Financial Officer to develop a process to periodically reconcile invoices paid from SAP with the invoices approved in the NetPlus telecommunication system.	X			I&T will work with Accounting Services, under the DCM/CFO direction, to develop a reconciliation process. Q4, 2014 for process development Q2, 2015 for implementation
11.	City Council request the Deputy City Manager and Chief Financial Officer to review the existing process of manually updating invoice payment information from SAP to the NetPlus telecommunication system and evaluate whether the process can be automated.	X			I&T will work with Accounting Services, under the DCM/CFO direction, to review opportunities for process automation. Q2, 2015.
12.	City Council request the Chief Information Officer to implement a process ensuring vendor invoices agree with amounts provided in vendor contracts before payments are approved.	X			Reconciliation for payment process to be developed. Q1, 2015 for process development Q2, 2015 for implementation

<u>Rec No</u>	<u>Recommendation</u>	Agree (X)	Disagree (X)	<u>Management Comments:</u> (Comments are required only for recommendations where there is disagreement.)	<u>Action Plan/ Time Frame</u>
13.	City Council request the Chief Information Officer to perform a detailed review of 2013 and any prior period invoices for telecommunication service providers. Respective wireless vendors should be contacted regarding refund of any overpayments identified.	X			Exception reporting is part of the internal review of process improvements and the potential for outsourcing the telecom expense management process. Q1, 2015 for process review and decision on outsourcing. Q4, 2015 for implementation
14.	City Council request the Chief Information Officer to implement measures to ensure extra work order invoices are validated with price quotes where appropriate and accompanied by work completion reports before payment.	X			An improved process for work order invoice validation will be developed and implemented Q4, 2014.
15.	City Council request the City Manager to direct divisions to review their respective inventory of telecommunication devices to ensure that it reflects the current status of such devices. Inventories should be adjusted where appropriate and reviews should be performed on a periodic basis.	X			Divisions will be formally requested to comply with the Wireless Communications Devices Policy (section 5.10) and ensure accurate inventory is maintained. A compliance process will also be developed. Q1, 2015

<u>Rec No</u>	<u>Recommendation</u>	Agree (X)	Disagree (X)	<u>Management Comments:</u> (Comments are required only for recommendations where there is disagreement.)	<u>Action Plan/ Time Frame</u>
16.	City Council request the City Manager to develop exception reporting criteria to assist in evaluating unnecessary telecommunication costs. Criteria identified should include devices and services with no activity, suspended phones beyond a specified period and phones no longer in use. Devices and services no longer required should be cancelled.	X			Exception reporting is part of the internal review of process improvements and the potential for outsourcing the telecom expense management process. Q1, 2015 for process review and decision on outsourcing. Q4, 2015 for implementation
17.	City Council request the Chief Information Officer to develop a process requiring formal written documentation for granting access to the NetPlus telecommunication system. Periodic review of NetPlus system user access should be conducted to ensure continued access aligns with job duties.	X			A process for granting system access will be developed and implemented. Q4, 2014.
18.	City Council request the Chief Executive Officers of City Agencies and Corporations review the issues and recommendations included in this report and consider the relevance to their respective organizations. Particular emphasis should be placed on evaluating the cost benefit of converting landlines to Voice Over Internet Protocol (VOIP).	X			A letter of correspondence from the City Manager to the CEO's of the City Agencies and Corporations will be prepared Q4, 2014.