

**Nassau County  
Office of the Comptroller**



**Limited Review  
of the  
Nassau County Department of Information Technology's  
Telecommunications Management**

*Hon. George Maragos*  
**Comptroller**

**December 1, 2011**

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## Executive Summary

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### **Background**

The Department of Information Technology (“IT”) is responsible for the management of Nassau County’s (“County”) telecommunication lines (exclusive of Police Department and Nassau Community College). Telecommunication lines represent landlines and include telephone, facsimile, alarm and data communication lines, such as T1<sup>1</sup> lines.

The management of the telecommunication lines entails managing telephone installations, disconnections and moves for department relocations. It also involves reviewing telephone, mobile phone and BlackBerry device invoices, and updating the County’s telephone directory (known as Nassau Communications or “NASCOM”).

County operators use NASCOM to direct calls to the correct County department, agency or employee. The listing is also used to allocate telecommunication charges to County departments on a pro-rated basis, including the allocation of costs for the New York State court system in Nassau County. In 2009, the County was reimbursed \$412,313 for telecommunication costs associated with the New York State court system. We were advised by IT that the NASCOM listing included all voice, data, alarm and facsimile lines.

The County’s telecommunication, mobile phone and BlackBerry device costs amounted to approximately \$4.7 million and \$4.6 million in 2009 and 2010 respectively<sup>2</sup>.

### **Audit Scope, Objectives, and Methodology**

The objective of our audit was to examine the adequacy and effectiveness of the internal controls surrounding IT’s management of telecommunications. The period audited were the years 2009 and 2010.

The audit was planned and performed to obtain reasonable assurance that the audit information is free of material misstatements. An audit includes examining documents and other available evidence that would substantiate the accuracy of the information tested, including all relevant records and contracts. It includes testing for compliance with applicable laws and regulations, and any other auditing procedures necessary to complete the examination. We believe that this audit provides a reasonable basis for the audit findings and recommendations.

### **Summary of Significant Findings:**

- An Excessive Number of County Telecommunication Lines Resulted in Higher than Necessary Cost to the County
- Telephone Bills Were Not Adequately Reviewed by IT for Unauthorized Usage

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<sup>1</sup> Type of broadband telecommunications connection used especially to connect Internet service providers to the Internet's infrastructure.

<sup>2</sup> Exclusive of the Nassau County Police and Nassau Community College, which pay their own telecommunication bills.

## Executive Summary

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- Lack of a Telecommunications Policy May Result in the County Paying for Unnecessary Services
- The County's List of Mobile Phone and Blackberry Users Was Incomplete and Inaccurate

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The matters covered in this report have been discussed with IT management throughout 2010 and 2011. An Exit Conference was held with the Commissioner of IT to discuss the preliminary audit findings. IT provided a response, which is included as an Appendix to this report.

**Table of Contents**

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<b><u>Findings and Recommendations</u></b>	<b><u>Page Number</u></b>
<b>An Excessive Number of County Telecommunication Lines Resulted in at Least \$1 Million in Unnecessary Cost to the County .....</b>	<b>1</b>
<b>Telephone Bills Were Not Adequately Reviewed by IT for Unauthorized Usage .....</b>	<b>3</b>
<b>Lack of a Telecommunications Policy May Result in the County Paying for Unnecessary Services .....</b>	<b>4</b>
<b>The County’s List of Mobile Phone and BlackBerry Users Was Incomplete and Inaccurate .....</b>	<b>5</b>
<b>Appendix – Information Technology Response and Auditors’ Follow-up .....</b>	<b>8</b>

## Audit Findings and Recommendations

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### Audit Finding (1):

#### An Excessive Number of County Telecommunication Lines Resulted in at Least \$1 Million in Unnecessary Cost to the County

Based on our review, Nassau County (“County”) continues to pay for an excessive number of telephone lines that are not in use, which has resulted in a higher telecommunication expense than necessary. We also noted that the allocation of telecommunication costs distributed to County departments is incorrect because the basis for the allocation, the County’s telephone listing (“NASCOM”)<sup>3</sup>, contains erroneous entries.

The Department of Information Technology (“IT”) provided the auditors with a copy of the NASCOM listing as of July 2009, which listed 11,500<sup>4</sup> active lines.<sup>5</sup> This listing included 1,501 telecommunication lines assigned to the New York State courts, for which the County is reimbursed. After deducting these lines, the NASCOM listing totaled 9,999 lines.

As part of our testing, we compared the number of lines reported in the July 2009 NASCOM listing to the number of employees in various County departments. The number of County employees<sup>6</sup> as of November 2009 was 6,784 (excluding police and Nassau Community College).<sup>7</sup> Based on this comparison, we determined that the number of telecommunication lines per the July 2009 NASCOM listing exceeded the number of employees by 3,215. The number of lines may exceed the number of employees due to the existence of facsimile lines, alarms and employees with multiple telephone lines.

We noted several County departments where the number of lines allocated as of November 2009 was significantly greater than the number of employees on record at that time or appeared disproportionate. For example:

- The Correctional Center had 1,076 lines but an average of 418 employees per shift (1,253 employees divided by three shifts). While the nature of the Correctional Center requires additional telecommunication lines for alarms, the number of lines appears to be significantly greater than the average number of employees per shift.
- The Parks Department had 815 lines but only 583 employees (including seasonal employees).
- Public Works had 838 lines for 924 employees; many of these employees are road crews and others who are not normally in an office setting.

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<sup>3</sup> NASCOM does not include mobile devices.

<sup>4</sup> Exclusive of the Nassau County Police Department and Nassau Community College.

<sup>5</sup> We received an updated NASCOM listing as of July 2010, which indicated that there are 11,713 lines or 213 more than in 2009. However, all of IT’s allocations for 2009 and through the second quarter of 2010 are based on the July 2009 number of 11,500.

<sup>6</sup> See footnote 4.

<sup>7</sup> Source: Listing of Active Nassau County Employees by Department as per NUHRS 11/17/2009.

## **Audit Findings and Recommendations**

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- Other County Departments and the number of employees compared to the number of lines attributed to those Departments were:
  - The Planning Department with 136 lines for 37 employees;
  - The Department of Social Services with 1,558 lines for 968 employees;
  - The Treasurer’s Office with 75 lines for 38 employees; and
  - The Health Department with 851 lines for 339 employees (including 222 lines which appear to be located at the Health Department’s former location at 240 Old Country Road).

Unless the need for these lines can be justified, the allocation of charges to these departments is excessive.

Although the July 2009 NASCOM listing reported 11,500 active lines, according to an IT review of the August 2010 Verizon invoices, the County paid for 18,378<sup>8</sup> lines, or 6,878 more lines than were listed in the NASCOM listing. IT personnel responsible for the management of the telephone lines estimate that, Countywide, the County is paying for 1,100 to 1,200 excessive lines. However, based upon IT’s review of the August 2010 Verizon invoices, this estimate may be underestimating the number of excessive lines. At a cost of approximately \$13 per month for each line, and using IT’s estimate of 1,100 to 1,200 unused lines, the County may be paying \$171,600 to \$187,200 per year in excessive costs. However, using the difference in the number of lines on the August 2010 IT listing of lines of 18,378 versus the number of employees as of November 2009 of 6,784, the County’s cost for possible unused lines may be significantly higher.

In July of 2010, senior IT management estimated a potential cost savings of 18% to 40% of monthly service charges after excessive lines are identified and disconnected. We note that over 82%, or approximately \$2.6 million annually, of the monthly Verizon costs are for service charges. Savings ranging from 18% to 40% of \$2.6 million in service charges amounts to \$468,000 to \$1,040,000 in annual savings. Therefore, identifying and disconnecting excess lines would result in a significant cost savings.

In August 2010, we requested clarification regarding the number of lines for which the County was being billed by Verizon. At that time, IT requested two weeks to assemble and review a “clean data set.” As of August 2011, we have not received this information and IT has not responded to our request for the update.

We performed a further test using an undated NASCOM listing, which listed 147 lines allocated to the Comptroller’s Office, in order to compare its accuracy to the Comptroller’s Office records. We found 51 incorrect names (i.e., the wrong name assigned to an extension), 16 lines for which we could not validate an active extension, and 17 unassigned numbers in the NASCOM listing. In addition, in a test of 20 lines charged to the Comptroller’s Office, only five lines were still active as of August 2010.

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<sup>8</sup> This was recently confirmed at a meeting on July 1, 2011 when the Commissioner of IT stated that the County has approximately 18,000 lines.

## **Audit Findings and Recommendations**

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We found that five of the 20 lines were not in service and were not on the list of lines billed by Verizon.

We also note that the employee responsible for managing the NASCOM listing and coordinating the telecommunication line moves, additions and other changes to the County telephone system retired as of July 30, 2010. It is unclear as of the date of this report how these responsibilities will be delegated going forward.

As a result of our audit, in November 2010, the Administration began the Telephone Line Reclamation Project (“TLRP”) to verify all existing desktop telephone lines within the County.

### **Audit Recommendations:**

IT should determine the locations and types of all telecommunication lines, including data, facsimile, and alarm, to determine which lines are active and have a business necessity, and which lines are inactive, no longer needed, and can safely be disconnected without disruption to existing alarms or communications. The NASCOM listing should be updated to reflect the changes and reviewed regularly to ensure it is current.

IT should implement a review and update process of the NASCOM listing to ensure its accuracy and completeness. We suggest that IT send a copy of the NASCOM listing to each County department and have each department provide IT with all needed revisions. Telephone and facsimile lines, which the departments have confirmed are not in use, should be investigated and disconnected if determined to be unnecessary.

### **Audit Finding (2):**

#### **Telephone Bills Were Not Adequately Reviewed by IT for Unauthorized Usage**

A lack of dedicated staff precluded adequate review of the County’s numerous telecommunication bills, which may result in the County paying for unauthorized usage such as excessive personal or long distance calls.

At the time of our review, an IT clerk reviewed County telecommunication bills on a part-time basis. The review consisted of only comparing the bill to the prior month’s bill for reasonableness. Previously, three employees were responsible for the review of the bills; however, these employees either retired or were out on extended medical leave. The lack of staff assigned to review the bills increases the risk that IT will authorize payment of bills with inactive lines, unauthorized usage or for third party service providers.

It is imperative that the department review the telecommunication bills for accuracy and unauthorized usage before payment is made to the service provider. Unauthorized usage would include excessive personal usage, unauthorized long distance or international calls, personal calls made during non-business hours and calls made using third party

## **Audit Findings and Recommendations**

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providers. However, as noted above, the largest single component of the County's telecommunication costs is for service, and the accounting and technical staff need to coordinate their efforts to ensure that the County is not paying for excess lines.

### **Audit Recommendation:**

IT should ensure adequate staffing dedicated to reviewing the County's telephone bills for accuracy and appropriate business usage. These reviews should ensure that the County is reimbursed for any abuse or unauthorized usage.

### **Audit Finding (3):**

#### **Lack of a Telecommunications Policy May Result in the County Paying for Unnecessary Services**

The County did not have a telecommunications policy for the management of the County's telecommunications systems. In addition, there was no Countywide exit policy to notify IT when an individual's employment had been terminated, so that the telephone line could be disconnected or re-assigned, thereby eliminating unnecessary telecommunication lines.

For example, we reviewed the number of telecommunication lines allocated to the Comptroller's Office per the NASCOM listing and found 26 lines that had active voice mails for employees who had transferred from the department or no longer worked for the County. Departments may not be aware of the excess lines because, for example, a telephone may have been removed from an office or cubicle, but the line itself remained active.

A comprehensive telecommunications policy would indicate who has the authority to request and approve installations and moves of telephone, facsimile, or data lines, and ensure that IT is properly notified when an employee's status changes. It would also indicate who, based upon an employee's title and job duties, is authorized to have multi-line service and long distance or international calling capabilities. The policy would also specify the required approval levels and the business justification for the distribution of County mobile phones and BlackBerries. The policy would restrict the usage of all telecommunications for County business only, and indicate how to handle deviations from the policy and consequences for abuse or personal use noted.

New installations, including multi-line services, moves or changes, did not require justification. The requisition of multi-line services and levels of service greater than is required for job duties resulted in increased costs to the County.

There was no policy for the distribution of County mobile phones and BlackBerries. However, a request form was required to be completed when these telecommunication devices were requested. In May 2010, we were provided with an undated list of mobile phone and BlackBerry users in the County. We selected a sample of ten individuals out of

## **Audit Findings and Recommendations**

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652 listed users and requested copies of the request forms for these users. The request forms required the business justification for the issuance of the device and the signature of the Department Head, the Commissioner of IT and the Deputy County Executive. Two of the ten forms requested were not provided to us by IT. One of the eight forms provided lacked a business justification. Four of the eight forms provided were missing the signature of the Deputy County Executive.

The lack of a policy and properly approved request forms for the issuance of County mobile phones and BlackBerries increased the risk of potential abuse and increased costs to the County for unauthorized users.

The request form was also inadequate because the level of service being requested or approved was not defined. Our review of invoices from Sprint, the County's mobile phone provider, illustrates that there is an inconsistency in the level of service being provided to BlackBerry users. For example, three of five users in the Treasurer's Office had more costly levels of service than the Department Head.

### **Audit Recommendations:**

IT should work with the Department of Human Resources to develop a comprehensive telecommunications policy, which would:

- a) specify who has the authority to request and approve installations and moves of telephone, facsimile, alarm or data lines and require that business justifications be provided with those requests;
- b) ensure that IT is properly notified when an employee's status changes by specifying who has responsibility for the notification;
- c) indicate which employees, based upon their title and job duties, are authorized to have multi-line service and long distance or international calling capabilities;
- d) state the required approval levels and the business justification for the distribution of County mobile phones and BlackBerries; and
- e) restrict the usage of all telecommunications for County business only; indicate how to handle deviations from the policy and include consequences for any abuse or personal use identified.

### **Audit Finding (4):**

#### **The County's List of Mobile Phone and BlackBerry Users Was Incomplete and Inaccurate**

IT's list of mobile device users was incomplete and inaccurate which exposes the County to the risk of unauthorized users or usage, and may result in excessive costs to the County.

## Audit Findings and Recommendations

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Mobile phone and BlackBerry services are provided by Sprint. We reviewed a Sprint invoice for the month of January 2010. Charges totaled \$23,576 of which \$22,092 or 94% were for recurring access charges and associated surcharges. Annual mobile phone and BlackBerry costs were \$272,176 and \$435,858 for 2009 and 2010 respectively.

In May 2010, IT provided us with an undated listing of mobile phone and BlackBerry users, which listed 652 lines<sup>9</sup> including 47 lines that were listed as unassigned. We found that IT's list included the names of individuals who were no longer with the County.

We reviewed the January 2010 Sprint invoice and determined that 610 numbers were billed by Sprint out of 646 numbers listed on the invoice. The remaining 36 numbers had no activity, and therefore no charges. In addition, we noted varying levels of access costs on the Sprint invoice and individuals listed with more than one mobile device.

In June 2010, we requested a corrected list and clarification of whether the County was paying service costs for the 47 unassigned devices. As of May 2011, we have not received a response to this request. We were advised by e-mail that IT was making calls to determine which employees had BlackBerries or mobile phones.

Based upon our review of IT's listing and the Sprint bills, it appears that the listing provided to us in May is incomplete and that IT has not accounted for all of the mobile devices in use or being billed. We also determined that at least seven devices on the Sprint invoice (five listed as unassigned by IT, one that was not on the list at all, and one listed by IT as cancelled in 2007) were active as of the January 2010 billing date with a cost to the County of \$326.

### **Audit Recommendations:**

IT should immediately:

- a) verify that all assigned users are still employed by the County;
- b) determine the number of unassigned mobile phones or BlackBerries and investigate who has possession of those devices;
- c) disconnect lines determined to be inactive;
- d) ensure that levels of access of each current user is reviewed and approved by his/her Department Head;
- e) ensure that in the future:
  - i. mobile phone and BlackBerry assignments be based upon job descriptions and departmental needs;
  - ii. the levels of telephone access be uniform, unless circumstances require additional access;

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<sup>9</sup> Excluding the Police Department and Nassau Community College.

## **Audit Findings and Recommendations**

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- iii. request forms from departments for telecommunication services indicate the level of access granted to each individual; and
- f) establish a completion date for the implementation of these recommendations.

**Department of Information Technology Response  
Limited Review of Nassau County’s IT Telecommunications Management  
May 17, 2011**

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**I. SUMMARY.**

The Limited Review of the Nassau County Department of Information Technology’s Telecommunications Management resulted in four (4) recommendations, which we have addressed below. We have accepted the first three, have agreed in principle with the fourth, and have noted our proposed remedial actions.

Several initiatives are already under way, including line/cost reduction and policy development.

**II. COMPTROLLER’S OFFICE RECOMMENDATIONS.**

**Audit Finding (1): An excessive Number of County Telecommunications Lines Resulted in Higher than Necessary Cost to the County**

**Audit Recommendation:** IT should determine the locations and types of all telecommunications lines, including data, facsimile, and alarm, to determine which lines are active and have a business necessity, and which lines are inactive, no longer needed, and can safely be disconnected without disruption to existing alarms or communications. The NASCOM listing should be updated to reflect the changes and periodically reviewed to ensure it is current.

**IT Response:** Agree. Using software licensed to the County, IT is conducting an automated calling “verification” program to survey all NC agency phones (except PD).

The plan was detailed at a Kickoff meeting for Commissioners with an email notification to all employees.

Beginning on Monday, November 22, 2010, IT started the program to auto-contact county lines daily at times designed to meet optimal employee availability.

Reports were generated daily detailing the results with verified lines tagged as good and auto populated to master sheet.

Non-verified lines were continually called over a two-week (14-day) period. At the end of that period, those lines that remained unverified were subject to an additional review by department heads. This phase of the project has been divided into increments of roughly 500 phones at a time and managed by location.

## Appendix – Information Technology Response and Auditors’ Follow-up

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Department heads were provided a list of phone numbers to review with instructions to deem the line as “in use” or as “not needed”. Phone lines deemed as “not needed” were placed in “vacation mode” for 30 days. The vacation mode “option” still incurs charges BUT allows IT to turn back on those lines in cases where data was missing or incorrect.

Any lines remaining on vacation mode will automatically be removed from the County’s bill on the 31<sup>st</sup> day.

As a result of the survey, IT identified over 4,600 suspect or unverified lines. To date, the County has removed 493 lines at a cost of \$13.01 per line per month.

This comprehensive review of lines and costs has been launched, with an estimated 6-month timetable. Cost reductions in the range of 10-15% are expected.

### **Auditor’s Follow-up Response:**

*Since the inception of this review, the IT Department has not been able to provide a complete list of valid telephone lines by Department. IT is in charge of monitoring and managing the County’s telecommunications budget of approximately \$5 million each year.*

*In its response to the Comptroller’s report, IT acknowledged that it had identified “4,600 suspect or unverified lines”. The cost to the County over twenty months for 4,600 lines was approximately \$1.2 million. A comparison of the Verizon monthly service charges of December 2009 and November 2011 indicates there has been an increase in Verizon service charges for County telephone service.*

### **Audit Finding (2): Telephone Bills were Not Adequately Reviewed by IT for Unauthorized Usage**

**Audit Recommendation:** IT should ensure adequate staffing dedicated to reviewing the County’s telephone bills for accuracy and appropriate business usage. These reviews should ensure that the County is reimbursed for any abuse or unauthorized usage.

**IT Response:** Agree in principle. We propose that County agencies and departments participate in the review of telephone bills, to identify and authorize specific needs: out of state calls, etc.

### **Auditors’ Follow-up Response:**

*Although IT agrees with our finding, IT has yet to assign personnel the task of reviewing the billing detail available through the Verizon portal, which entails examining over 115,000 lines of data and bills are being approved without confirming accuracy. Currently, bills are only examined for reasonableness as compared to the preceding*

*month. We reiterate our recommendation that the bills be reviewed to ensure that the County’s bill is accurate and reflects appropriate business usage.*

**Audit Finding (3): Lack of a Telecommunications Policy may Result in the County Paying for Unnecessary Services**

**Audit Recommendation:** IT should work with the Department of Human Resources to develop a comprehensive telecommunications policy, which would:

- a) specify who has the authority to request and approve installations and moves of telephone, facsimile, alarm or data lines and require that business justifications be provided with those requests;
- b) ensure that IT is properly notified when an employee’s status changes by specifying who has responsibility for the notification;
- c) indicate which employees, based upon their title and job duties, are authorized to have multi-line service and long distance or international calling capabilities;
- d) state the required approval levels, and the business justification for the distribution of County mobile phones and BlackBerries; and
- e) restrict the usage of all telecommunications for County business only; indicate how to handle deviations from the policy and include consequences for any abuse or personal use identified.

**IT Response:** Agree. A policy is being developed with the assistance of Human Resources and County Attorney. A Draft will be released in August 2011, for review and comment by County agencies and departments.

**Auditors’ Follow-up Response:**

*We concur with the corrective action taken by IT.*

**Audit Finding (4): The County’s List of Mobile Phone and Blackberry Users Was Incomplete and Inaccurate.**

**Audit Recommendation:** IT should immediately:

- a) verify that all assigned users are still employed by the County;
- b) determine the number of unassigned mobile phones or BlackBerries and investigate who has possession of those devices;

## **Appendix – Information Technology Response and Auditors’ Follow-up**

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- c) disconnect lines determined to be inactive;
- d) ensure that levels of access of each current user is reviewed and approved by his/her Department Head; and
- e) ensure that in the future:
  - i. mobile phone and BlackBerry assignments be based upon job descriptions and departmental needs;
  - ii. the levels of telephone access be uniform, unless circumstances require additional access; and
  - iii. request forms from departments for telecommunication services indicate the level of access granted to each individual.

### **IT Response:** Agree.

Each department’s cellular and air card list has been distributed to each department head.

Each department has to justify every cellular and air card device assigned to their department.

An action plan has been recommended to each commissioner for non-users and overcharges per cell user.

An application is being developed to allow each commissioner to easily review and authorize their usage each month.

IT Project managers are assigned to manage each department on going and assist in verification of usage with the commissioner each month.

Global policy review and changes will be implemented after all devices have been assessed.

Policy changes may include:

Pooled phones per department for seasonal or sporadic use

Upgrade plans for current devices to reduce cost.

### **Auditors’ Follow-up Response:**

*We reiterate our recommendations regarding IT’s management of mobile telecommunications devices.*

**III. RESOURCE REQUIREMENTS.**

With upwards of 12,000 telephone devices to be surveyed and additional vigilance required for ongoing line and phone usage, we will have to revisit our current support staff organization, to ensure that we address these initiatives in the order that produces maximum savings.

In addition, that same organization will be charged with evaluating new telephone technology, to identify long-term Countywide efficiencies and cost reduction.

**Auditors’ Follow-up Response:**

*As stated in our report, there is a lack of dedicated staff to review the telecommunications charges. We note that one of the employees who did perform reviews of the bills was laid off as of July 1, 2011. Therefore, we are concerned that IT’s ability to adequately monitor telecommunications costs and establish an adequate system of internal control will be impacted.*