

**Performance Audit 22-03:  
Cellular Device Management**

**October 2022**

**City Auditor**

Stan Sewell, CPA, CGFM, CFE

**Senior Auditor**

Lisa Culver, CFE





# OFFICE OF INTERNAL AUDIT

## Stan Sewell, City Auditor

October 13, 2022

To: Mayor Kelly  
City Council Members

Subject: Cellular Device Management Audit (Report #22-03)

Dear Mayor Kelly and City Council Members:

The attached report contains the results of our audit of the City's cellular device management administered by Department of Technology Services (TS). Our audit found cellular device purchases are approved by TS and Verizon cellular services are charged at contract rates. We identified cost savings that could be realized if the Verizon cellular account is monitored. The City's cellular device management process is in need of updated policies, inventory control procedures, and segregation of duties. The cell phone allowance program is being handled by Finance according to the policy with the exception of obtaining a required approval in certain situations. In order to address the noted areas for improvement, we recommend actions to develop comprehensive policies, TS to monitor Verizon charges and to provide City departments with Verizon usage and cost data.

We thank the management and staff of the TS and Finance Departments, Purchasing Division and the City's Verizon Representative for their cooperation and assistance during this audit. When we initiated this audit, TS had already identified this area as being in need of improvement and more efficient processes. We are happy to have provided assistance to TS.

Sincerely,

Stan Sewell, CPA, CGFM, CFE  
City Auditor

Attachment

cc: Audit Committee Members  
Joda Thongnopnua, Chief of Staff  
Brent Goldberg, Chief Financial Officer  
Ryan Ewalt, Chief Operating Officer  
Julia Bursch, Deputy Chief Operating Officer  
Tyson Morris, Chief Information Officer  
Koren Sapp, Deputy Chief Information Officer  
Jim Arnette, Tennessee Local Government Audit [jim.arnette@cot.tn.gov](mailto:jim.arnette@cot.tn.gov)

## TABLE OF CONTENTS

AUDIT PURPOSE.....	2
BACKGROUND.....	2
Statistical Information.....	3
FINDINGS AND RECOMMENDATIONS.....	3
Cost savings could be realized if Verizon costs and usage were monitored.....	3
Internal controls over cellular device management are needed.....	5
Policy and procedures are living documents that should be updated periodically as needed.....	5
The Cell Phone Policy outlines the requirements for an employee cell phone stipend.....	6
Segregation of duties and rotating job responsibilities are methods of implementing internal controls.....	8
Inventory should be safe guarded and records should be accurate.....	10
APPENDIX A: SCOPE, METHODOLOGY AND STANDARDS.....	12
APPENDIX B: PRIORITY LEVEL DEFINITIONS.....	13

---

## AUDIT PURPOSE

This audit was conducted in accordance with the Office of Internal Audit's 2022 Audit Agenda. The objectives of this audit were to determine if:

- All cellular device purchases were made in accordance with City policies and procedures;
- Verizon cellular services administered by Department of Technology Services are billed according to contract rates;
- The Department of Technology Services effectively manages the tracking, usage and disposal of cellular devices; and,
- The City's stipend program is administered according to policy.

---

## BACKGROUND

TS is responsible for contracting cellular service and equipment for the City. The City's *Purchasing Manual* and *Purchase Card Policies and Procedures* require all cellular devices to be approved by TS prior to their purchase. TS also processes departmental cellular device requests for service and equipment, maintains inventory of devices, and processes the payments.

When a department wants to assign a cellular device (phone, MiFi, iPad) to an employee, TS requires departments to use their ITOPS system to make cellular device/service requests. Once approved by TS, TS orders the cellular equipment/service. The equipment is delivered to TS where it is added to their inventory system and added to the Verizon account when cellular service is required. Then the equipment is provided to the employee.

The City has a contract with Verizon to provide wireless service for devices such as cell phones, iPads, and MiFi mobile hotspots. The contract is procured by the Purchasing Division and is a cooperative agreement based on contracts established by the State of Tennessee.

## Statistical Information

### Exhibit 1: City Cellular Expenditures by Calendar Year

	2019	2020	2021
Verizon Cellular Payments <small>Note 1</small>	506,471	677,990	633,126
City Employee Stipends	391,020	429,330	433,080
<b>Total Payments</b>	<b>\$ 897,491</b>	<b>\$ 1,107,320</b>	<b>\$ 1,066,206</b>

Source: Oracle Financial

Note 1: Totals include all Verizon accounts

## FINDINGS AND RECOMMENDATIONS

### **Cost savings could be realized if Verizon costs and usage were monitored.**

TS is responsible for managing the City's cellular devices and services. One of these responsibilities is reviewing and processing the monthly cellular bills from Verizon. Our review of Verizon monthly charges found significant savings could be realized if the cost and usage were monitored. TS does not have a standard practice to review the Verizon data to determine if a particular type of device is on the correct price plan or if the account data is complete or accurate. Further, departments are not provided the Verizon account charges or usage data to review so they could identify cost benefits and waste.

The *Internal Control Manual for Local Governmental Entities and Other Audited Entities of Tennessee* states management should design control activities to achieve objectives and respond to risks. This would include providing itemized cellular charges to departments, reviewing transactions regularly and developing policies and procedures addressing these issues.

Our review of the October, November and December 2021 Verizon bills found the following:

- In October, out of 1,100 data lines, there were 375 accounts with no usage; and in November and December, out of 1,209 data lines there were 369 and 409 accounts respectively. The total monthly charges for the three month period for these devices with no data usage were \$38,953.
- During the same three month period, there were fewer than 100 cell phones listed in each monthly bill. The contract has a cell phone price plan with unlimited data, text, and voice for \$39.99; however, 90% of the phones are not on this plan. We found thirteen phone accounts where the monthly charge was over \$40 for this period. If these thirteen phones were switched to the \$39.99 unlimited plan a cost savings of \$6,477 per year would be

expected. One phone account had an average monthly charge of \$223 for the three month period.

As of June 15, 2022 there were 1,283 devices comprising the Verizon city-wide account. We analyzed the data from the account and found:

- Two tablets were incorrectly assigned a phone price plan instead of an unlimited data plan resulting in overcharges totaling approximately \$1,400 over a two year period.
- Nineteen devices were assigned to 15 former employees with charges totaling \$648.99 for June 2022. Some of these devices showed usage which may indicate they were assigned to a new employee or the device is still in the possession of the former employee. Most of these devices did not show any activity for the month.
- Forty devices were assigned to TS staff that is responsible for assignments in the Verizon account; 22 devices were assigned to one employee in Public Works; and 31 CPD In-Motion devices were not assigned to a specific patrol car.
- We found 6% of the devices where the cost center data was left blank. In addition, we noted incorrect or missing account information for the fund, cost center or account number. A total of 11 different account numbers were used by departments when classifying the purchased devices/services.

### **Recommendation 1:**

We recommend TS develop comprehensive written policies and procedures to address the management of cellular devices. This includes but not limited to procuring, ordering, billing, distributing and monitoring usage and costs of devices and services.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: January 31, 2023*

*Priority Level: 1*

### **Recommendation 2:**

We recommend TS periodically review the devices to ensure they are on the correct rate plan with the appropriate contracted rate.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: November 1, 2022*

*Priority Level: 3*

**Recommendation 3:**

We recommend TS provide City Departments the Verizon monthly usage data and cost so the Departments can evaluate if any cost savings could be recognized. This recommendation was previously made in Audit 14-03 Police Aircard Inventory Management.

***Auditee Response:** We concur with the finding and recommendation.*

***Estimated Implementation Date:** November 30, 2022*

***Priority Level:** 2*

**Recommendation 4:**

We recommend TS review the identified Verizon accounts for cost savings and update the Verizon account as necessary.

***Auditee Response:** We concur with the finding and recommendation. This review will be conducted by reviewing each monthly bill.*

***Estimated Implementation Date:** November 30, 2022*

***Priority Level:** 3*

**Internal controls over cellular device management are needed.**

Internal controls are policies, procedures and activities designed to safeguard assets and assist organizations in meeting objectives. The City's cellular device management process is in need of updated policies, inventory control procedures, and required approvals. The lack of policies and procedures, oversight and accountability has resulted in the City incurring unnecessary costs for services and equipment.

**Policy and procedures are living documents that should be updated periodically as needed.**

*The Internal Control Manual for Local Governmental Entities and Other Audited Entities in Tennessee* states management should implement control activities through policies and the policies should be periodically reviewed and updated. The City instituted a cell phone allowance on February 13, 2012 which transitioned employees with City cell phones to a monthly allowance. To manage the new process, TS established a *Cell Phone Policy*. The policy provides for and regulates the use of City issued and employee-owned phones for city business as well as a cell phone stipend. However, over the years, the policy has become outdated.

The policy does not cover the current technology needs of the City. In addition to cell phones, City departments purchase devices such as tablets, iPads, and MiFis, which require wireless service. These types of devices represent 91% of the Verizon accounts. There are less than 100 city-issued cell phone Verizon accounts.

TS has been given authority over all technology purchases with responsibilities that include wireless device procurement, ordering, billing, inventory and monitoring. However, the *Cell Phone Policy* does not reflect this current practice.

The policy states the Mayor determines when an employee is authorized to receive a city-issued cell phone instead of a personal cell phone allowance. As a result, the employee is required to submit a *Cell Phone Agreement* form that is approved by the Department Head and Mayor. TS does not use this form or obtain the required approvals. TS uses the ITOPS system for managing and approving wireless device/service requests which do not include the Mayoral or Department Head approval for cellular service and equipment requests.

### **The Cell Phone Policy outlines the requirements for an employee cell phone stipend.**

According to the policy, it is the responsibility of the Department Head to ensure the assignment of a cell phone allowance to an employee is prudent and necessary to add value. The Department supervisor submits the *Cell Phone Agreement* form with the designated eligibility criteria to their Administrator. If “other” is chosen as an eligibility requirement on the form, the Mayor’s signature is required.

The *Cell Phone Agreement* forms must be filed with the City Finance Office prior to allowing the disbursement. The Payroll Division is responsible for entering the employee’s monthly allowance and retaining the forms, we chose a sample of 49 employees out of 809 who received a 2021 cell phone stipend to verify if the *Cell Phone Agreement* form was filed in Payroll. Our review found only 1 of the 49 employee forms could not be located in the Payroll files.

A review of the 48 forms found nine lacked the required authorizations. In addition, two forms did not indicate the eligibility criteria and on two other forms the employee’s position listed was not the employee’s current position. The policy requires the Department to verify the continued need for the allowance annually. Further, the monthly cell phone allowance rates which were established in FY12 and FY13 have not been revised since inception.



A second TS policy, the *IT Technology Use Policy* established in 2015, is also outdated. The purpose of this policy is to ensure the safe and secure use of technology equipment by users of the City's network and to help assure proper accountability of technology. The *Employee Information Guide* states employees are expected to follow this policy. This policy manual could not be located on the City's e-portal and is not supported by TS.

### **Recommendation 5**

We recommend TS revise the *Cell Phone Policy* to ensure it reflects the current processes for cellular device management and technology needs. This recommendation was also made in Audit 14-03 Police Aircard Inventory Management.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: January 31, 2023*

*Priority Level: 1*

### **Recommendation 6:**

We recommend TS review the cell phone allowance amount on a periodic basis and revise it as necessary.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: January 31, 2023*

*Priority Level: 3*

### **Recommendation 7:**

We recommend Finance ensure the *Cell Phone Agreement* forms are properly completed prior to entering the allowance amount into Oracle.

*Auditee Response (Finance): We concur with the finding and recommendation.*

*Estimated Implementation Date: October 31, 2022*

*Priority Level: 2*

### **Recommendation 8:**

We recommend Finance provide departments with a list of employees with cell phone allowances to verify on a periodic basis.

**Auditee Response (Finance):** *We concur with the finding and recommendation. When asked, Payroll has provided this information to departments.*

**Estimated Implementation Date:** *January 31, 2023*

**Priority Level:** *3*

### **Recommendation 9:**

We recommend TS revise the *IT Technology Use Policy* and ensure it is distributed and available to City employees.

**Auditee Response:** *We concur with the finding and recommendation. A comprehensive technology use policy has been developed and is being reviewed by Administration.*

**Estimated Implementation Date:** *March 31, 2023*

**Priority Level:** *1*

### **Segregation of duties and rotating job responsibilities are methods of implementing internal controls.**

Segregation of duties is a basic internal control to ensure no single individual has the authority to execute two or more transactions across a process without checks and balances.<sup>1</sup> Without this basic control, fictitious Verizon accounts could be established without detection.

As stated previously, TS procures all technology purchases and handles these requests through ITOPS. However, ITOPS requests for Verizon services/devices are not routed to TS upper management and do not document the required department head approval.<sup>2</sup>

The ITOPS request for Verizon devices/service is sent directly to an TS employee who has the ability to make purchases via a portal directly from Verizon. When the equipment is received, the TS employee uses the Verizon portal to assign a phone number to the device and adds the employee's name and cost center information. The same TS employee has access to TS's Oomnitza inventory system to add the device as well. The TS employee deploys the device to the requesting departmental employee without requiring a signature at

---

<sup>1</sup> *Internal Control and Compliance Manual for Governmental Entities and Other Audited Entities in Tennessee*

<sup>2</sup> City Code Section 2-547 states all purchases made under the provisions of this article shall be made pursuant to a written requisition from the head of the department, agency or division.

pickup. Once the device is picked up, the TS employee closes the ITOPS ticket.

**Recommendation 10:**

We recommend TS segregate the duties of ordering, assigning, receiving, inventorying, and deploying Verizon equipment and service accounts to more than one staff.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: November 30, 2022*

*Priority Level: 1*

**Recommendation 11:**

We recommend TS conduct a monthly review comparing the Verizon bill device total to the Oomnitza Verizon cellular device total. This reconciliation will ensure new accounts added to the Verizon bill are properly authorized and added to inventory.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: November 30, 2022*

*Priority Level: 2*

**Recommendation 12:**

We recommend TS ensure the Department Head's approval is acquired prior to initiating a Verizon purchase. This may be accomplished in various ways such as a form which documents the business need for the purchase as well as the approval; using ITOPS and ensuring the request captures the approval; or setting up additional lines in the Verizon purchase order for "non-included equipment" which would allow equipment purchases to be separated from the service charges and would require the approval in Oracle.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: October 31, 2022*

*Priority Level: 1*

**Recommendation 13:**

We recommend TS ensure all requests for cellular devices and services receive upper TS management approval before processing.

***Auditee Response:** We concur with the finding and recommendation.*

***Estimated Implementation Date:** October 31, 2022*

***Priority Level:** 2*

#### **Recommendation 14:**

We recommend TS ensure a signature is obtained and retained when equipment is dispensed from the Oomnitza inventory.

***Auditee Response:** We concur with the finding and recommendation.*

***Estimated Implementation Date:** December 31, 2022*

***Priority Level:** 2*

#### **Inventory should be safeguarded and records should be accurate.**

GAO best practices for an accurate inventory include the development of written policies and procedures, ensure completeness of count, and establish accountability.<sup>3</sup> During the audit, we reviewed the 2021 cellular devices received from Verizon and CDW to verify if the devices were added to TS's Oomnitza inventory system. Each of the 68 iPads and tablets purchased from CDW during this period were located in TS's inventory system.

However, we found TS is not updating the inventory records when the device is deployed. Further, we found the inventory records were not always complete with device or accounting information. This could easily lead to devices being mishandled or lost without detection.

In 2021, a total of 95 cellular devices were received from Verizon. We chose a sample of 34 to verify if they were added to TS's inventory system. The review located only 11 (32%) of the 34 Verizon devices in the inventory records. We discovered this occurred because TS does not add devices such as MiFis and certain iPhones to inventory because Verizon provides them at no cost. The wireless connectivity devices such as MiFis comprise approximately 91% of devices found in the Verizon bills.

There were a total of 79 cellular devices added to the Oomnitza inventory in 2021 from the Verizon and CDW purchases. The Oomnitza system tracks the status of each device until deployed with

---

<sup>3</sup> A Government Accountability Office's Executive Guide – Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property

descriptions such as “shelf stock,” “out for repair,” or “ready to be deployed.” The system may also show the intended assigned user if it is known by TS prior to deploying the device. Of the 79 devices, 38 (48%) of the device inventory records we reviewed showed the device had not been deployed to the assigned user. However, these devices were not located in TS’s storeroom. Yet, we were able to confirm 97% of these devices were with the intended assigned user as listed in TS’s inventory system.

**Recommendation 15:**

We recommend TS conduct a complete inventory of cellular devices (as well as all technology equipment) in their possession. They should ensure the inventory records are accurate and complete. They should also ensure an accurate audit trail of each device is maintained when deployed to the user.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: October 31, 2022*

*Priority Level: 1*

**Recommendation 16:**

We recommend TS develop written policies and procedures for the inventory process.

*Auditee Response: We concur with the finding and recommendation.*

*Estimated Implementation Date: January 31, 2023*

*Priority Level: 2*

---

## APPENDIX A: SCOPE, METHODOLOGY AND STANDARDS

Based on the work performed during the preliminary survey and the assessment of risk, the audit covers the cellular device management process from January 1, 2021 to June 30, 2022. When appropriate, the scope was expanded to meet the audit objectives. Source documentation was obtained from Finance and Technology Services Departments, Purchasing Division and the City's Verizon representative. Original records as well as copies were used as evidence and verified through physical examination.

To achieve the audit's objectives, we analyzed the Verizon data and contract prices for the audit period. We reviewed TS's Oomnitza inventory records and verified inventory stored in the storeroom. We verified cellular device purchases were made according to policy. We reviewed employee cell phone allowance payments and approval forms. To evaluate the efficiency of the process, we interviewed staff to gain an understanding of the process, researched best practices and reviewed policies and procedures.

The sample size and selection were statistically generated using a desired confidence level of 90 percent, expected error rate of 5 percent, and a desired precision of 5 percent. Statistical sampling was used in order to infer the conclusions of test work performed on a sample to the population from which it was drawn and to obtain estimates of sampling error involved. When appropriate, judgmental sampling was used to improve the overall efficiency of the audit.

We conducted this performance audit from March 2022 to September 2022 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.

---

## APPENDIX B: PRIORITY LEVEL DEFINITIONS

**Priority 1:** Critical control weakness exists that exposes the City to a high degree of risk. Noncompliance with federal, state or local law, regulation, statute, charter or ordinance will always be considered a priority 1.

**Priority 2:** Control weakness exists that exposes the City to a moderate degree of risk.

**Priority 3:** The opportunity for improved efficiency or reduced exposure to risk exists.

---

### **City of Chattanooga Fraud, Waste, and Abuse Hotline**

Internal Audit's Fraud, Waste, and Abuse Hotline gives employees and citizens an avenue to report misconduct, waste or misuse of resources in any City facility or department.

Internal Audit contracts with a hotline vendor, The Network, to provide and maintain the reporting system. The third party system allows for anonymous reports. All reports are taken seriously and responded to in a timely manner. Reports to the hotline serve the public interest and assist the Office of Internal Audit in meeting high standards of public accountability.

To make a report, call 1-877-338-4452 or visit our website:

[www.chattanooga.gov/internal-audit](http://www.chattanooga.gov/internal-audit)