

**Wireless Services Audit
July 2009**

Patrice Randle, City Auditor
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City Auditor's Office

July 31, 2009

Honorable Mayor and Members of the City Council:

I am pleased to present the City Auditor's Office's report on wireless services at the City of Arlington. The purpose of the audit was to determine if the City has established effective controls over the authorization, billing, payment and monitoring of wireless services.

Management's responses to our audit findings and recommendations, as well as target implementation dates and responsibilities, are included in the following report.

We would like to thank the City Manager's Office and individual departments for their cooperation and assistance during the project.

A handwritten signature in cursive script that reads 'Patrice Randle'.

Patrice Randle, CPA
City Auditor

c: Jim Holgersson, City Manager
Fiona Allen, Deputy City Manager
Bob Byrd, Deputy City Manager
Gilbert Perales, Deputy City Manager
Trey Yelverton, Deputy City Manager

**Wireless Services Audit
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Wireless Services Audit



Office of the City Auditor
Patrice Randle, CPA
City Auditor

Project # 09-07

July 31, 2009

Executive Summary

The City has not established effective controls over wireless services

The City could save approximately \$43,000 per year by eliminating unused wireless devices and changing rate plans

The City could save money by reducing cell phone allowances

Opportunities for Improvement

- *Centralize the review and approval of invoices for wireless services*
- *Negotiate reduced rate plans*
- *Review and eliminate unnecessary cell phone allowances*

As part of the Fiscal Year 2009 Annual Audit Plan, the City Auditor's Office conducted an audit of wireless services. The audit was conducted 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. The objectives of the audit were to determine whether:

- current rate plans are cost effective;
- adequate controls exist over the authorization of wireless services, including cell phone allowances;
- adequate controls exist over the usage of wireless devices; and,
- decentralized review of wireless service charges is cost effective.

Generally, the City Auditor's Office noted that adequate controls do not exist over wireless services and that the City could save approximately \$43,000 per year by reducing service plans and additional monies by reducing cell phone allowances and eliminating seldom used wireless devices. The following exceptions were noted.

- Current rate plans are not cost effective.
- Most departments do not routinely analyze monthly cell phone bills to identify wireless devices with low usage.
- The City has not established effective controls over the authorization of cell phone allowances.

These findings and recommendations are discussed in the Detailed Audit Findings section of this report.

Audit Scope and Methodology

The audit was conducted in accordance with generally accepted government auditing standards. The scope of the review generally included payments for wireless services from March 2008 through March 2009 and current cell phone allowance amounts. The following methodology was used in completing the audit:

- obtained and analyzed billing detail from vendors;
- interviewed City employees responsible for overseeing wireless services;
- reviewed wireless services billing data recorded on the City's financial system; and,
- interviewed department representatives regarding usage of wireless devices.

The necessity of City-owned cell phones was not included in the scope of this review. Pagers (mostly used by the Police Department) and other wireless devices such as two-way radios were also not included. When implementing the recommendations included in this report, management should consider the use of other available technology as necessary.

Background

A portion of the City of Arlington's wireless services process is decentralized. Each department is responsible for activating, monitoring, and deactivating cell phones, and for reviewing invoices and authorizing payment. The process is centralized in that the Dispatch Services Division of the Arlington Fire Department is responsible for managing Blackberry and Windows Mobile data devices assigned to personnel responsible for receiving and responding to critical notifications from the City, Emergency Operations Center or their individual departments.

Voice, Data, Blackberry and Windows Mobile Service

The City of Arlington provides employees with wireless communication devices through AT&T Mobility, under the State's Department of Information Resources (DIR) contract. The contract provides the City discounts of 23% off selected published plans. As of March 2009, there were 225 employees with City-owned cell phones, 176 employees with data cards and an additional 113 employees with Blackberry and Windows Mobile service for a total annual base cost of approximately \$263,223. The base cost does not include miscellaneous items such as long distance charges, roaming charges, directory assistance charges, equipment charges, etc. These costs fluctuate each month and are not easily estimated; therefore, were not included in this calculation. The following charts show the distribution and base cost of these 514 devices.

City-Owned AT&T Voice Service

Department	# of Employees	Annual Amount	Average Monthly Cost
Police	153	\$92,981.16	\$50.64
Fire	42	7,657.44	15.19
Public Works & Transportation	8	3,763.68	39.21
Parks & Recreation	10	3,303.84	27.53
Water Utilities	4	1,605.96	33.46
Community Development & Planning	4	1,514.76	31.56
City Council	1	733.32	61.11
Community Services	2	702.36	29.27
Convention Center	1	264.72	22.06
Total	<u>225</u>	<u>\$112,527.24</u>	

Source: AT&T billing records as of March 2009

City-Owned AT&T Data Cards

Department	# of Employees	Annual Amount	Average Monthly Cost
Public Works & Transportation	59	\$32,010.12	\$45.21
Community Services	50	26,406.00	44.01
Water Utilities	26	13,546.92	43.42
Community Development & Planning	20	12,761.52	53.17
Police	14	6,426.72	38.25
Information Technology	5	2,966.16	49.44
Parks & Recreation	2	114.96	4.79
Total	<u>176</u>	<u>\$94,232.40</u>	

Source: AT&T billing records as of March 2009

City-Owned AT&T Blackberry/Windows Mobile Service			
Department	# of Employees	Annual Amount	Average Monthly Cost
Police	37	\$18,486.48	\$41.64
Fire	21	10,520.28	41.75
Information Technology	14	7,081.20	42.15
Management Resources	5	2,548.20	42.47
Public Works & Transportation	5	2,503.80	41.73
City Manager's Office	5	2,468.04	41.13
City Council	5	2,307.96	38.47
Parks & Recreation	4	2,095.68	43.66
Water Utilities	4	1,855.32	38.65
City Attorney's Office	3	1,500.24	41.67
Financial Services	2	1,047.84	43.66
Convention Center	2	1,012.20	42.18
Community Services	2	1,012.08	42.17
Economic Development	1	523.92	43.66
Workforce Services	1	523.92	43.66
Community Development & Planning	1	488.28	40.69
Environmental Services	1	488.16	40.68
Total	113	\$56,463.60	

Source: AT&T billing records as of February 2009

During this audit, the monthly usage for each AT&T device was reviewed for a 13-month period to determine if the rate plan associated with that device was commensurate with the monthly usage. In many cases relating to voice and data service, the monthly usage did not justify the rate plan. More information is described in the Detailed Audit Findings.

In addition to the AT&T devices mentioned above, the City of Arlington utilizes Sprint Solutions, Inc. to provide Blackberry devices and connection cards within the Handitran program. Seven of nine Blackberry devices are assigned to contracted taxis, while the remaining two are held as reserves. All nine devices are configured as data only. Management indicated that since the Handitran software could not be installed on AT&T devices, the City was required to select another vendor. The City, therefore, contracted with Sprint. As with the AT&T contract, the City receives a 23% discount off of Sprint's listed prices.

The City paid Sprint approximately \$11,000 between March 2008 and February 2009. The Sprint billings included equipment, Blackberry usage, connection cards and text messaging charges. A Sprint representative indicated that the City's connection card data plan included unlimited text messaging. Although immaterial (less than \$30), the City should not have been billed for the text messages.

Cell Phone Allowances

In September 2003, the City published the "Cell Phone Transition Guide" to assist departments in implementing a switch from City-owned phones to cell phone allowances. The guide explains that a decision was made during the Fiscal Year 2004 budget process to reduce costs by reducing the

number of City issued cell phones and providing tiered cell phone allowances to employees in positions that require accessibility during and after business hours. The Information Technology Department provided departments with historical usage data for each City issued cell phone and developed proposed allowance levels. Departments were encouraged to utilize the allowance whenever possible and reserve the use of City-provided phones for special cases such as when a cell phone needs to be shared by employees. In either case, Deputy City Manager approval was required before an employee received an allowance or a City-issued phone.

As of May 2009, 420 City employees were receiving cell phone allowances ranging from \$20 to \$50 per month, for a projected annual total of approximately \$219,000. The following chart shows the number of employees receiving allowances, by department.

Department	# of Employees	Annual Amount	Average Monthly Allowance
Parks & Recreation	72	\$ 37,216	\$ 43.07
Community Services	61	36,065	49.27
Police	65	27,865	35.72
Public Works & Transportation	49	25,571	43.49
Water Utilities	44	21,670	41.04
Fire	39	21,129	45.15
Information Technology	28	16,574	49.33
Community Development & Planning	17	9,602	47.07
Financial and Management Resources	19	9,244	40.54
City Attorney's Office	6	3,361	46.68
City Manager's Office	4	2,400	50.00
Environmental Services	4	2,100	43.75
Library	5	2,042	34.03
Aviation	2	1,200	50.00
Convention Center	1	600	50.00
Economic Development	1	600	50.00
Internal Audit	1	600	50.00
Workforce Services	1	600	50.00
Municipal Court	1	480	40.00
Total	420	\$ 218,919	

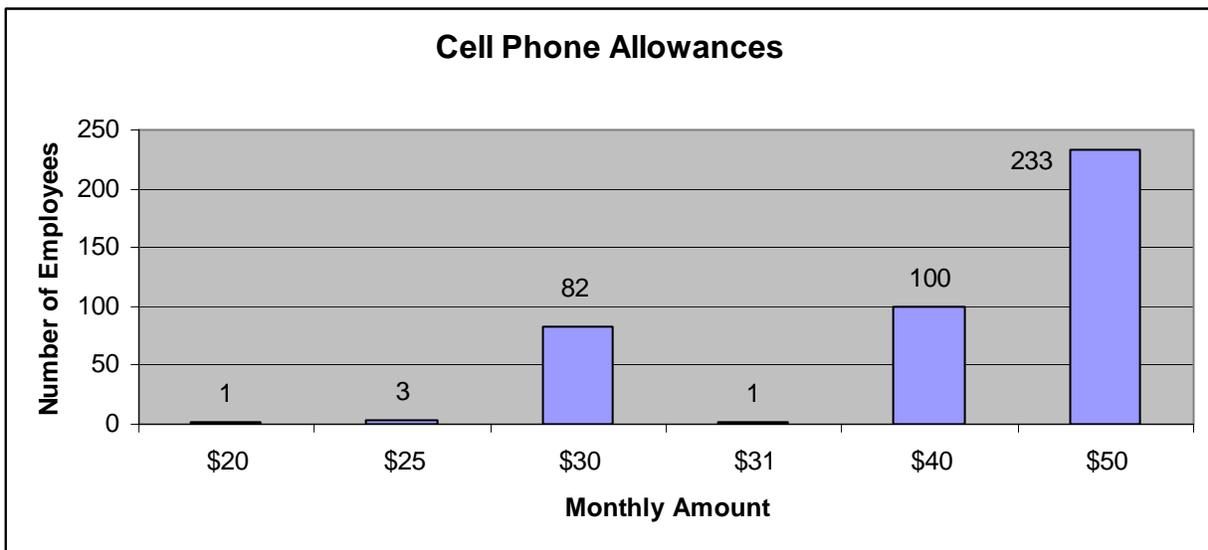
Source: Lawson Financial System as of May 3, 2009

Professional, management and executive employees receive slightly higher cell phone allowances, on average, than administrative and technical employees. The following chart summarizes the number and dollar amount of allowances provided to various categories of employees.

Employee Category	# of Employees	Annual Amount	Monthly Average
Administrative and Technical Personnel	74	\$ 33,865	\$ 38.14
Professional	251	134,504	44.66
Senior Management and Executives	95	50,550	44.34
Total	<u>420</u>	<u>\$ 218,919</u>	

Source: Lawson Financial System as of May 3, 2009

The majority of employees receive a cell phone allowance of \$50 per month, as shown in the following graph.



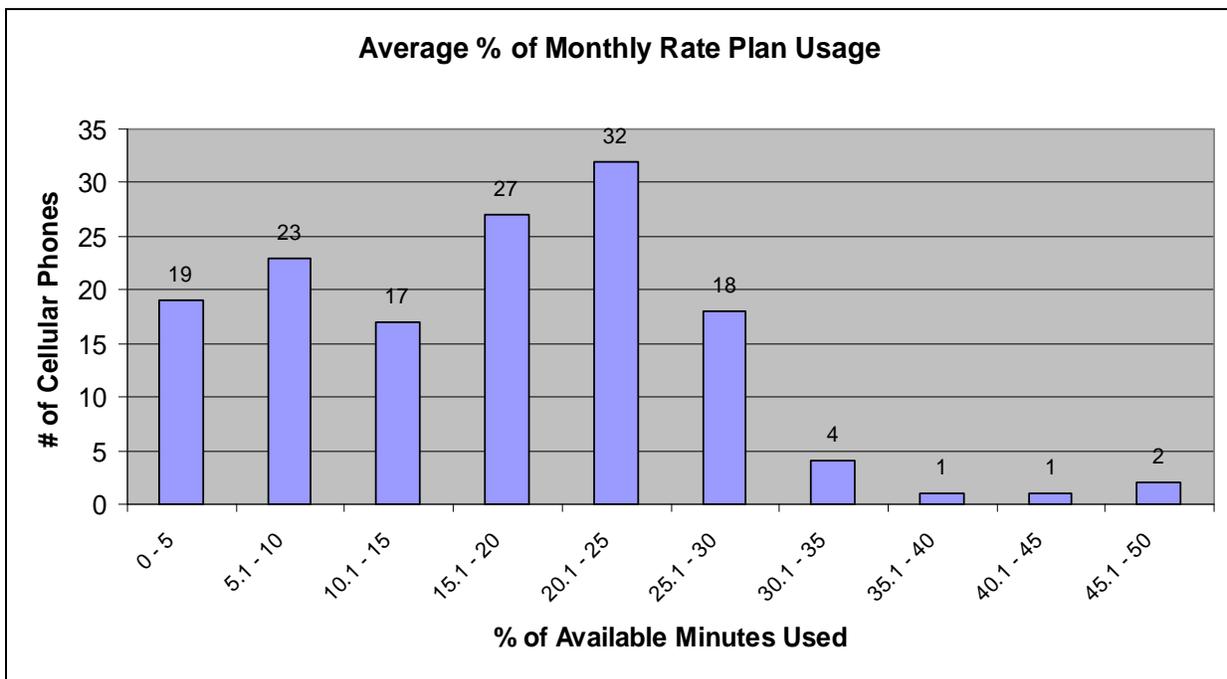
Source: Lawson Financial System as of May 3, 2009

Detailed Audit Findings

1. Current rate plans for voice and data services are not cost effective, resulting in potential annual savings of \$43,000.

In order to control the cost of wireless service, users must be on a rate plan which is justified by the amount of monthly usage. Based on the current voice rate plans, the number of anytime minutes available for the 225 City-owned voice service phones is 188,850 minutes. For the 13-month period of this review, the total average monthly usage was 46,462 minutes with a minimum usage of 32,764 in January 2009 and a maximum of 65,285 in June 2008. Users are, therefore, using only approximately 24.6% of the total available minutes.

It was determined that 144 of the 225 cell phone users (64%) did not maximize the amount of anytime minutes available through their particular rate plan. As depicted on the graph below, the average monthly usage on these 144 phones was less than half of the minutes available. For 118 of the 144 phones, the average usage did not exceed 25% of the available minutes. In addition, five phones which had minimal usage during the 13-month audit period should be reviewed by management for possible disconnection. Through discussions with department personnel, it was determined that five additional phones would be disconnected due to lack of use. Switching voice service plans for the 144 cell phones to one that is commensurate to the average monthly usage could save the City approximately \$43,000 per year.



Source: AT&T billing records

AT&T also offers pooled rate plans. The most equitable pooled rate plan for the City appears to be the NBI Business Pooled Nation Plan which includes 450 anytime shared minutes per month,

unlimited nights and weekends and unlimited mobile-to-mobile calls. The rate for this plan is \$33.29 per phone, with no limit on the number of phones. The NBI Business Pooled Nation Plan would include a total of 101,250 shared minutes per month compared to the 188,850 currently purchased. Based on 225 voice devices, the base cost of this plan would be \$89,883 per year (225 devices x \$33.29 per month x 12 months). This results in an estimated annual savings of \$22,644 (\$89,883 compared to the \$112,527 on page 3). Even though the pooled plan results in a cost savings, it is not as cost effective as changing to rate plans that are more commensurate with each individual's monthly cell phone usage.

During a review of the 176 City-owned AT&T data devices, 90 of the devices were on an unlimited data usage rate plan and 86 were on a limited rate plan. For the 90 devices with unlimited access, nine had minimal usage. Management indicated that they would determine whether the devices with minimal usage should be reassigned or disconnected. For the 86 devices with limited access, a total of 395,027,000 kilobyte (KB) is available for usage. However, over a three-month period, actual usage averaged only 14,863,927 KB, representing 3.8% of capacity. Since these devices were not activated until January 2009, additional usage history is necessary to determine what volume is considered normal and to determine if rate plans should be changed.

Recommendation:

The City Manager should require that cellular voice rate plans are immediately reviewed to ensure that plans are commensurate with actual usage. Cell phone plans should then be reviewed on a routine basis and changes made as deemed necessary.

Management's Response:

Concur. A directive will be issued to Department Heads for the immediate review of phones issued and rate plans in effect. Departments will be required to appoint an employee to monitor usage as it relates to the rate plan, and to review billings prior to preparing a payment authorization. (Exhibit I)

Target Date: October 1, 2009

Responsibility: Department Heads

Recommendation:

The City Manager should require that data usage is monitored for the remainder of the fiscal year. Management should then be required to negotiate with AT&T if other available plans are more reasonable when compared to the City's actual data usage.

Management's Response:

Concur. All Department Heads will monitor data usage through the second quarter of FY 2010. After the review period, the departments and Finance (Purchasing) will determine if other rate plans are available that are more in line with actual use.

Target Date: October 1, 2009

Responsibility: Department Heads/Finance

2. The City has not established adequate controls over the authorization of cell phone allowances.

The City Auditor's Office reviewed a random sample of 30 employee cell phone allowances to determine whether the allowances were appropriately authorized and entered to the Lawson payroll system correctly. As noted in the Background section of this report, Deputy City Manager approval is required for cell phone allowances.

Out of a sample of 30, the City Auditor's Office was not able to determine if Deputy City Manager approval was given for nine of the allowances. Seven of the nine allowances were provided to Police or Fire Department employees, which were given blanket authorization to grant allowances. However, the current Position Control Coordinator (responsible for recording allowances) did not have documentation of the blanket authorization. In addition, documentation for two other allowances (non Public Safety personnel) was not found. Supporting documentation could exist with individuals previously responsible for recording allowances.

In reviewing the sample of 30 allowances, the City Auditor's Office noted that several employees had changed positions (and responsibilities) since their initial approval and may no longer be qualified for a cell phone allowance. Review of the City's policy indicated that there was no provision for periodic confirmation of the need for allowances. In addition, based on review of job titles, descriptions and anticipated use, it is questionable as to whether some of the employees should receive cell phone allowances.

The City Auditor's Office performed research to determine what other organizations typically include in their cell phone policies. Generally, most organizations had policies that were more comprehensive and detailed than the City of Arlington's. Many organizations' policies addressed the following items that are not included in the City's policy.

- Reviews to determine whether specific allowances should be retained, changed or discontinued were required on an annual basis.
- Reviews to determine whether cell phone allowances were necessary when an employee changes positions or responsibilities were required.
- Criteria were developed for determining the appropriate level of each wireless device allowance.
- Employees were required to sign an agreement acknowledging their responsibilities for accepting a cell phone allowance.
- Employees were required to retain their monthly detailed statements for reference during the annual supervisory review of allowances.

The City Auditor's Office did not perform a review of personal cell phone records to verify business usage. Such a review was considered outside the current scope of this audit. Requiring supervisors to review the necessity of cell phone allowances upon employee reassignments and

annually confirm that employees still require a cell phone allowance to effectively perform their job duties would help ensure that allowances are only provided as needed.

Recommendation:

The City Manager should require that cell phone allowances are immediately reviewed, on a case-by-case basis, to determine whether they should be discontinued or reduced. All cell phone allowances should then be reviewed on at least an annual basis.

Management's Response:

Concur. The City Manager's Office will issue a directive to Department Heads requiring them to review all cell phone allowances and make recommendations as to which can be reduced or eliminated. Additionally, each department will be required to confirm that proper authorization for each allowance has been documented. The directive will also require an annual review that coincides with the end of each fiscal year and include the requirement for a Department Head to specifically designate an employee to monitor usage as it relates to the rate plan, and review billings prior to payment authorization.

Target Date: September 15, 2009

Responsibility: City Manager's Office/Department Heads

Recommendation:

The City Manager should ensure that the current City policy on cell phones is updated to include:

- a requirement for annual supervisory review of allowances including a determination as to whether an allowance should be retained, changed, or discontinued;
- criteria establishing dollar limits for allowances based on usage and need, not position;
- signed acknowledgement of responsibilities by allowance recipients; and,
- a requirement for supervisory review of allowance necessity when an employee is reassigned to another position.

Management's Response:

Concur. The City Manager's Office will update the current City policy on cell phones.

Target Date: October 31, 2009

Responsibility: City Manager's Office

3. The City provides cell phone allowances that could exceed the cost of estimated business usage, resulting in potential annual savings.

As noted in the Background section of this report, the "Cell Phone Transition Guide" encouraged departments to utilize cell phone allowances whenever possible. Three tiered allowances were established at \$30, \$40 and \$50 per month. Specific information on how to determine which tier to provide an employee was not included in the guide. However, a rate chart was included that indicated employees could obtain discounted service from AT&T at 890 minutes per month for a cost of \$49.99.

Based on published cell phone rates currently available to City employees, \$50 per month would fund 900 anytime minutes (15 hours) and unlimited night and mobile-to-mobile minutes. Since most cell phone plans include the mobile-to-mobile feature, business-related calls could result in no additional charges. For example, a department director utilizing an AT&T cell phone (with the mobile-to-mobile feature) to reach an on-call employee that also uses an AT&T cell phone with the mobile-to-mobile feature would result in no additional billing to the department director or the on-call employee.

Organizations typically provide cell phone allowances at a rate that compensates employees for the estimated cost of business usage. The majority of City employees that receive a cell phone allowance receive \$50 per month. The City Auditor's Office did not attempt to determine how much cell phones were used for business purposes during an employee's workday. However, many of the cell phone allowances were justified by comments that the employee must be accessible during and after working hours.

AT&T currently offers City employees a discounted plan with 450 anytime minutes for \$33.99 per month. It appears reasonable that cell phone allowances granted to employees with minimal business use could be decreased to \$30 per month or eliminated if the employee's business use does not substantiate a cell phone allowance. The following table depicts potential cost savings.

Potential Cell Phone Allowance Savings			
			<u>Totals</u>
Number of Units	100	233	
Current Allowance	<u>\$40</u>	<u>\$50</u>	
Current Annual Cost	\$48,000	\$139,800	
50% Reduction:			
Total Annual Cost	\$42,000	\$111,720	
Total Annual Savings	\$6,000	\$28,080	\$34,080
75% Reduction:			
Total Annual Cost	\$39,000	\$97,800	
Total Annual Savings	\$9,000	\$42,000	\$51,000

Recommendation:

The City Manager should provide cell phone allowances at rates that compensate employees for the estimated cost of business usage.

Management's Response:

Concur. After departmental reviews have been completed, the City Manager's Office will review the current cell phone allowance structure to ensure that actual allowance rates compensate employees for the estimated cost of business usage.

Target Date: November 1, 2009

Responsibility: City Manager's Office

4. The City has not effectively monitored cell phone usage and billings.

The September 2003 "Cell Phone Transition Guide" outlined the responsibilities for City-provided wireless devices. The responsibilities assigned to departments included:

- obtaining Deputy City Manager approval for employees to receive a City-provided phone;
- monitoring cell phone usage and working with the Purchasing Division to adjust rate plans as necessary;
- budgeting for cell phone service and processing monthly invoices;
- reporting lost or stolen phones to the provider so that the number could be suspended; and,
- conducting annual departmental reviews to establish City-provided phone services in order to affirm their continued justification or rate plan.

The City Auditor's Office noted that not all departments reviewed their wireless device bills closely, resulting in the following exceptions.

- As noted in Finding #1, usage was low or non-existent for some devices. During the audit, departments identified 11 devices (five voice and six data) that could be removed from service. It also did not appear that departments analyzed usage details to identify possible service reductions.
- The City paid for service associated with wireless devices that could not be used due to technical reasons.
- In May 2008, several departments received wireless service bills with zero current usage charges. However, the departments were not able to explain to the City Auditor's Office why the May 2008 bills were significantly lower than expected. Subsequent discussion with an AT&T representative indicated that the zero billing was a result of a switch from billing in advance to billing in arrears.
- Departments used a variety of general ledger accounts to record wireless device charges. Wireless device charges were expensed to Rentals, Special Services, Other Supplies, Telephone Service, Phone Allowance and Maintenance of Office Equipment. Using multiple

accounts to record wireless charges makes it more difficult to monitor expenditures City-wide.

- Each month, AT&T provides the City with a disk summarizing cell phone activity. Currently, the disks are received within the Purchasing Division but are not used to manage cell phone activity nor process payments. Monthly and annual analysis is best performed using electronic data. However, because of a lack of centralized review, such analysis is not being performed. Non-review of electronic data could result in delayed detection of improper billings, identification of inefficient cell phone plans, etc.

Prior to 2003, the Information Technology Department managed telecommunication services for the City. However, the move towards cell phone allowances resulted in a decentralized approach to managing telecommunications. In a survey of other local entities, the City Auditor's Office found that the majority of entities (Denton, DFW Airport, Garland, Grand Prairie and Plano) manage wireless services centrally within the information technology or telecommunication services departments. One entity (Euless) identified the Purchasing Department as responsible for centrally managing wireless devices.

Recommendation:

The City Manager should identify and assign an individual or department the responsibility for centrally monitoring wireless device usage and billings. If a decision is made to keep the responsibility decentralized, the City Manager should require that each Department Head appoint an employee to monitor usage as it relates to the rate plan, and review billings prior to payment authorization.

Management's Response:

Concur. Monitoring wireless services will remain decentralized and, as indicated above, each Department Head will be required to specifically designate an employee to monitor usage as it relates to the rate plan, and review billings prior to payment authorization.

Target Date: October 1, 2009

Responsibility: Department Heads

Exhibit I

MEMORANDUM

TO: DEPARTMENT HEADS

FROM: ROBERT S. BYRD, DEPUTY CITY MANAGER/STRATEGIC SUPPORT

SUBJECT: WIRELESS SERVICES

DATE: AUGUST 3, 2009

Internal Audit recently completed the review of wireless services. As a result of the review, the following actions are required:

Cellular Rate Plans/Cellular Usage – City Issued Cell Phones

- All rate plans are to be reviewed immediately to ensure that current plans are commensurate with actual usage. In cases where usage appears minimal, continued deployment of the phone should be reviewed and/or the rate plan adjusted to suit actual usage.
- Departments are to appoint an employee to monitor usage as it relates to the rate plan, and to review billings prior to preparing a payment authorization.

Data Usage – City Issued Data Device

- All departments are to monitor data usage through the second quarter of FY 2010. If data usage appears minimal, continued deployment of the device should be reviewed. After the review period, Finance (Purchasing) will determine if other rate plans are available that are more in line with actual use.

Cell Phone Allowances

- All departments are to immediately review cell phone allowances on a case-by-case basis. After the review, the department should determine if an allowance should be continued, reduced, or eliminated.
- All departments are to verify that written approval from a Deputy City Manager is on file for all cell phone allowances.
- After the departmental review has been completed, the City Manager's Office will review the current cell phone allowance structure to ensure that actual allowance rates compensate employees for estimated cost of business usage.

Other Information

The City of Arlington Personnel Manual is being revised to reflect these and other changes. A draft copy of the updates is attached. The objective is to ensure adequate controls by reviewing allowances and eliminating seldom used wireless devices.

The wireless services process will remain decentralized.

Department heads are to report compliance with this memorandum to their Deputy City Manager no later than September 15, 2009. Questions should be directed to your Deputy City Manager.

c: Jim Holgersson, City Manager
 Trey Yelverton, Deputy City Manager
 Gilbert Perales, Deputy City Manager
 Fiona Allen, Deputy City Manager