



Cobb County...Expect the Best!

INTERNAL AUDIT DIVISION

Report Number: 2012-001

***FINAL REPORT – Review of
Cobb County 800 MHz Operations***

February 3, 2012

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COBB COUNTY INTERNAL AUDIT

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February 3, 2012

MEMORANDUM TO COUNTY MANAGER

FROM: Latona Thomas, CPA, Manager 

SUBJECT: **FINAL REPORT** – Review of Cobb County 800 MHz Operations

This report presents the results of the subject report. The objective of our audit was to determine if the controls over 800 MHz operations are adequate to ensure compliance with the applicable Board of Commissioners (BOC) meeting agendas; billings and collections are accurate and in accordance with the respective user agreements; program assets (radios) are properly accounted for and secured; and expenditures are properly authorized. We conducted this audit as part of our FY10-11 audit plan.

Impact on the Governance of the County

The findings/recommendations in this report will improve the controls over 800 MHz operations to ensure:

- Complete and accurate radio counts are maintained and used to prepare the pro-rata allocation of both core replacement and annual maintenance costs;
- Program assets are properly accounted for and secured;
- Billing and collection information is properly accounted for and reported in the County's financial system;
- Expenditures are properly authorized in accordance with operational requirements; and
- Increased efficiency and effectiveness throughout the overall billing process.

Executive Summary

The results of our audit procedures revealed 800 MHz generally complied with applicable BOC meeting agendas regarding operational requirements, capital replacements, and expenditures for Fiscal Year 2010 had been properly authorized. Our results also revealed weaknesses and/or improvements needed in the areas of license agreement management, radio count inventory, record retention, segregation of duties, and the overall billing and collection process.

Recommendations

We made several recommendations to strengthen the controls over 800 MHz Operations including:

- Designate staff to review license agreements for ongoing compliance with requirements;
- Research the circumstances and true overpayment amount due Gold Cross Ambulance and process accordingly. Also, ensure that each non-County agency has a current license agreement on file;
- Include County users in the annual confirmation process;
- Ensure Access database is reconciled to radio counts on the 800 MHz system;
- Incorporate a way to distinguish all users in both the 800 MHz system and Access database;
- Develop and implement a mechanism to track all changes made to the 800 MHz radio network system or Access database;
- Complete a 100% independent confirmation and physical inventory of radio counts to include annual and periodic reconciliations;
- Ensure all parts and accountable items are maintained in accordance with the Countywide Accountable Equipment Policy;
- Re-compute and agree annual maintenance service agreement information to the billing spreadsheets;
- Verify radio count in the Motorola maintenance contract with annual physical confirmation;
- Provide Finance Department with a summary of allocated maintenance costs to County funds;
- Maintain all necessary supporting documentation in accordance with County and State of Georgia retention schedules;
- Maintain adequate segregation of duties;
- Ensure periodic changes to 800 MHz system and Access database; and
- Re-evaluate billing spreadsheets and eliminate duplicates.

Response

800 MHz and the Finance Department agreed with fourteen of the fifteen recommendations presented in the report, and proposed corrective actions are in process. The Finance Department did not concur with Recommendation 13 because they believe their compensating control regarding segregation of duties is sufficient. We provided an additional auditor comment on Page 13 for further emphasis. A follow-up on the implementation of the corrective actions will be performed within one year as most actions coincide with the FY2013 billing process. The auditee's complete response to the draft report is included as Appendix VI.

Copies of this report will be sent to Department Managers and staff affected by the report recommendations. Please contact me at (770) 528-2559 if you have any questions.

Background

Cobb County (the County) is the sole owner and operator of an 800 MHz radio system. The 800 MHz Operations staff is responsible for providing radio communications to public safety agencies for business purposes, providing intra-operable¹ and inter-operable² communications. The computer-based system network operates both voice and data communication, and primarily supports Public Safety agencies, departments of the County, Cobb's six cities, several hospitals, public transportation, schools and universities. The 800 MHz Operations staff is responsible for overseeing the programming of all radios using the system network and for administering the daily operations to ensure the integrity and security of the radio communications network is maintained.

A special revenue fund³ (800 MHz Fund) is used to account for the collection of monies for the 800 MHz core replacement system⁴. Operational costs are accounted in the General Fund. The 800 MHz Fund was originally set up to collect core dollars for future 800 MHz system replacements and upgrades; for spending Special Local Option Sales Tax⁵ (SPLOST) proceeds designated for 800 MHz radios; and for transferring monies previously reserved in other funds for core replacement and radio purchases.

Prior to the setup of the 800 MHz Fund, the County collected monies on a yearly basis from the six cities and other agencies for the future replacement of the core 800 MHz system and reserved the monies in the General Fund until such time as needed for the replacement. In addition, the County annually contributed its pro-rata share of core replacement by reserving monies on a yearly basis in the designated funds of the departments that use the 800 MHz system. In October 2005, the Board of Commissioners approved the transfer of all funds for future core replacement to the 800 MHz Fund.

Each non-County user is required to have a fully executed License Agreement with Cobb County or be approved for mutual aid access. These agreements govern the number of subscriber units on the County's system and sets forth the terms and conditions of the license. As of November 9, 2010, there were 5,804 issued and active radios, including authorized mutual aid users (MAU)⁶, on the 800 MHz radio system; however, only 4,879 radios were reflected in billing spreadsheets. MAUs on the radio system total 1,035 so the remaining negative 110 radios was the **net** difference between radio counts on the 800 MHz radio system and the billing spreadsheets.

¹ The ability of emergency responders to establish and sustain communications in support of mission operations.

² The ability of emergency responders to communicate among jurisdictions, disciplines, and levels of government using a variety of frequency bands, as needed and authorized. System operability is required for system interoperability.

³ Special Revenue Funds are used to account for the proceeds of specific revenue sources that are legally restricted to the expenditures for specific purposes.

⁴ Core replacement includes enhancements and upgrades to the network infrastructure and equipment, as well as replacing the system's core transmitters and repeaters.

⁵ A one-cent sales tax program approved by the voters of Cobb County.

⁶ The mutual aid users have their own primary radio system and only utilize the system when Cobb County calls them for assistance or other mutual aid purposes.

Of the 4,879 radios on the billing spreadsheets, Cobb County agencies and departments accounted for 72.39% or 3,532 radios, with the remaining 27.61% or 1,347 radios used by non-County users.

General Fund activities include cash receipts from non-County users for their pro-rata share of annual maintenance costs, as well as personnel, lease, electricity for repeater sites, batteries for radios, and other general operational costs. Personnel costs include three staff persons whose time is charged at 100%. Annual maintenance costs for General Fund agencies and departments and non-County users accounted for 71.64% of the total 800 MHz expenditures charged to the General Fund in FY2010. The remaining maintenance costs are allocated to the respective County Funds based on a pro-rata radio count.

Our review covered activities for FY2010 (October 1, 2009 through September 30, 2010). Detailed information on our audit objective(s), scope and methodology is presented in Appendix I.

Results of Review

The results of our audit procedures revealed the following:

- The Finance department properly billed users based on the pro-rata radio count provided by 800 MHz staff;
- Non-County user core replacement payments were deposited and recorded properly in AMS Advantage⁷;
- Interfund transfers of core replacement allocations for County users were properly recorded;
- The 800 MHz Fund contains all core replacement monies received to date, including the applicable interest earned;
- The pro-rata allocation of FY2010 annual maintenance costs from each user (County and non-County) was received timely and properly recorded; and
- FY2010 expenditures were properly authorized.

Per the license agreements, each user's pro-rata share of the estimated cost of future core system replacement is calculated based on the number of authorized radio units that are utilized for voice communications on the network system and the projected total cost of replacement in 10 years. The core replacement cost was estimated at \$13,627,498 at the end of the ten-year term, beginning with FY2005. Five of the six cities opted to maintain its share of the core replacement dollars in a separate designated account or fund. The remaining city (Austell) remits its portion to the County each year. All remaining users (County and non-County) pro-rata share is maintained in the 800 MHz Fund. As of September 30, 2010, the projected core replacement reserve amount was \$8,176,499. Of this amount, \$6,494,179 (plus \$419,445 in interest income) is maintained in the 800 MHz Fund and \$1,682,320 is currently being held by the five cities in their respective accounts. We independently confirmed the amounts being held with the respective cities' Finance Directors.

We also determined improvements are needed in the areas of licensing agreement management, radio count inventory, records retention, segregation of duties, and the overall billing and collection process. These improvements are necessary to ensure adequate controls over 800 MHz operations.

Controls over the maintenance of the 800 MHz licensing agreements need strengthening

We noted no staff member was responsible for monitoring the execution of the user license agreements to ensure the provisions of the agreements are met. Due to the lack of adequate monitoring, several provisions of the agreement were not being followed. One user did not have a license agreement; minimum number of radios were not maintained; the County and users did not submit to each other audited reports of their Core Replacement Funds, and the Radio System Technical Advisory Committee did not meet as often as required.

⁷ AMS Advantage is a web-based system used by the County to record and monitor all financial activity.

One billed agency was not on the 800 MHz operating system

For FY2010, the County billed seventeen non-County agencies. One agency, Gold Cross Ambulance, was billed and subsequently paid \$2,314.80 in core replacement and maintenance fees. Per 800 MHz staff, the agency has not been on the 800 MHz radio system since the radio system was converted from analog to digital in 2007 and should not have been billed. We were unable to determine the total amount of the overpayment, but we did confirm the total core replacement amount collected for FY2008 through FY2010 was \$4,127.21. It is our understanding that this error was the result of an error in the preparation of the billing spreadsheets. Agreeing the list of billed agencies to those with license agreements and those in the 800 MHz radio system would have identified this error in advance.

Minimum number of radios was not maintained

During FY2010, two users fell below their established minimum number of authorized units collectively by seven units (City of Austell by six and Life University by one). It is our understanding that in the case of Life University, the one unit below minimum was the result of a stolen radio. Per the license agreements, users agree to maintain a designated minimum number of authorized radio units on the County's system. Although the minimum variance in this case is only seven radios, if no one monitors and ensures that all users adhere to the minimum radio standard, it affects the County and all users' ability to reasonably budget for the costs associated with operating on the system. The current license agreements provide no guidance regarding how to address users outside of the established range.

Audited reports of user core replacement funds were not reviewed

As stated previously, license agreements allow City users to budget and deposit in its own separate account or fund its pro-rata share of the estimated cost of the future replacement of the core system. The agreement further requires the County and users to submit to each other, an audited report of their core replacement funds for the previous year, within 180 days of each year-end. While both the County and City users make their Comprehensive Annual Financial Reports (CAFRs) available online, there is no documented evidence of review or confirmation to ensure the funds are being maintained as required. During our fieldwork, we were able to independently confirm each of the amounts being maintained by the respective cities; however, we believe an annual review of the CAFRs or confirmation on an annual basis is necessary.

Advisory committee did not meet as required

Per the license agreements, the County agreed to establish a Radio System Technical Advisory Committee comprised of seven representatives of the County, appointed by the County Manager, and one representative appointed from each City who is a contractual user on the system. The purpose of the committee is to facilitate communication among all users of the system and to work together towards the accomplishment of an integrated, interoperable and technically advanced system. The committee should meet semi-annually, or more often if necessary, to discuss system related or site specific complaints, recommend changes, and upgrades or enhancements to the system. We noted the Advisory Committee only met twice since the license agreements were approved in late 2007. We also noted no documentation to support the lack of meetings for any reason. Having regular committee meetings helps ensure that all users of the system have input into its development and operations.

Recommendations

800 MHz management should:

Recommendation 1: Designate a staff member to review license agreement requirements for future compliance issues. Written standards and procedures should be developed to ensure a) each non-County user maintain its minimum number of authorized units; b) documented evidence of review or confirmation each of the five cities are maintaining their core replacement funds as required; and c) the Advisory Committee meets semi-annually or maintain written justification to support any meetings not held.

Auditee's Response:

Concur – 800 MHz staff is in the process of gathering a copy of all executed user agreements, and the Radio System Manager will monitor compliance. Written standards and procedures will be developed, reviewed and approved by April 2012. See Appendix VI on page 20 for the auditee's complete response and corrective action plan.

Recommendation 2: Research the circumstances and true overpayment amount due Gold Cross Ambulance and process accordingly. Also, ensure each billable non-County agency has a current user license agreement on file as required by the County and State retention policies.

Auditee's Response:

Concur – Gold Cross Ambulance services and billings were discontinued with the cessation of the analog radio system on October 1, 2011. No overpayment is applicable. See Appendix VI on page 21 for the auditee's complete response and corrective action plan.

Radio count inventory process needs improvement

An accurate count of active radios on the system is essential in order to determine the pro-rata share of the replacement costs for each system user. The 800 MHz radio system network, which is maintained and monitored by the system specialist, has the capability to provide a report of all issued and active radios as assigned to each user, although the system is limited to only producing real-time inventory reports. Although the 800 MHz system is the best source to determine the number of active radios, the listing is not used during the annual radio count reconciliation process. To maintain the radio counts, the 800 MHz staff uses a Microsoft Access database to perpetually track and monitor radio count inventories, including the radio serial numbers of each licensed non-County and County users. Each time additions, deletions, or other changes are required, the changes must be made in both systems. On an annual basis, 800 MHz staff downloads data from the Access database into a Microsoft Excel spreadsheet and analyzes any radio inventory changes. Confirmation of radio counts are sent via email to all non-County users based on the information recorded in the Access database. The radio counts of all County users were excluded from this process. Once the physical confirmations are completed, the radio counts in the Access database are updated accordingly and used to prepare billing worksheets for the upcoming period.

We were unable to determine the completeness and accuracy of the 800 MHz radio counts as of September 30, 2010, due to the nature of records maintained, the staff's inability to re-create applicable documents, and the lack of available staff resources needed to research discrepancies within the timeframe requested.

As an alternative to the completeness test, we evaluated the accuracy of the Access database by reconciling the total radio counts to the number of issued and active radios on the 800 MHz system. On November 9, 2010, there were 5,804 issued and active radios on the system; however, only 4,879 radios were reflected in billing spreadsheets from the Access database.

Per initial and subsequent discussions with 800 MHz staff, the difference of 925 represents MAUs and Regional Partner users⁸ who are not billed for use on the Cobb County radio system.

We independently reconciled this difference, noting the timing of the reports, and noted 21 MAU and Regional Partner agencies with radios totaling 1,035. Of these agencies, four had individual radio counts in excess of 100 on the system network (City of Roswell = 335, City of Douglasville = 209, City of Atlanta = 169, and State of Georgia = 125). We further determined that there were 228 radios in the Access database listing, but not on the radio system; and an additional 118 radios on the radio system, but not reflected on the Access database listing.

Subsequent to the exit conference, 800 MHz staff provided an Access database report that included over 17,000 radios. It is our understanding that the list includes all billable radios, MAUs, and Regional Partner agencies, but we are unable to substantiate this assertion. We requested a breakdown of the listing in the three categories, but 800 MHz staff was unable to provide because the Regional Partner aspect is evolving and not all users have been completely added, verified, and cleaned up in the Access system.

The process for maintaining radio counts needs improvement because:

- County users are not included in the annual email confirmation process;
- The Access data is not reconciled to 800 MHz system network data;
- An independent verification of updates of radio counts is not performed; and
- A periodic physical inventory count of radios is not conducted.

County users were not included in the confirmation process

During our reconciliation between the radio system network and Access database, there were 161 unresolved differences in the radio counts for Cobb County agencies and departments alone. Since County employees are the primary users of the network system, confirming their radio counts are vital to the completeness and accuracy of the inventory and billing process. An incorrect radio count can affect the pro-rata share allocated to other County and non-County users.

⁸ Regional Partner Users use another primary radio system and require communication for mutual events utilizing regional resources.

Recommendation

800 MHz management should:

Recommendation 3: Include Cobb County agencies and departments in the annual email confirmation process.

Auditee's Response:

Concur – This process will begin with the next radio count effort in the second quarter of 2012.

Access data is not reconciled to the 800 MHz system network data

Since the 800 MHz radio system contains all issued and active radio counts, it is the overall data source from which all other supporting schedules must be reconciled. The radio counts from any other source are deemed insufficient and cannot be relied upon or used to accurately account for billing purposes. A comparison of radio counts on the 800 MHz system and Access database should be performed as part of the annual radio count confirmation process. In addition, because the system network is only capable of producing real-time reports, it is imperative that year-end reports are maintained as supporting documentation for inventory and billing purposes. Performing reconciliations is a control activity that helps to ensure the accuracy and completeness of amounts and transactions. This is especially critical as significant changes (as in the case of the Regional Partner changes) are made to either the radio system or the Access database. Both systems should be modified to easily identify each radio by agency and user type and then reconciled for agreement.

Recommendations

800 MHz management should:

Recommendation 4: Ensure the Access database is reconciled to the listing of radios on the 800 MHz system during the annual radio confirmation process. Any differences noted should be researched and resolved. The 800 MHz system real-time reports should be maintained as supporting documentation of the reconciling process.

Auditee's Response:

Concur, with comments – 800 MHz staff will use the 800 MHz database and radio serial numbers to reconcile the radio counts for the end-of-year reconciliation for FY2012 and determine if this process needs to be continued in 2013. If this process is discontinued in 2013, an acceptable alternative will be presented for approval and implemented accordingly.

In addition, 800 MHz staff has researched and identified a unique communications asset management tool that would provide inventory management, asset management and parts inventory capabilities. This tool will also address recommendations 5, 6, 7; enhance their ability to capture employee workload; and help identify services performed for agencies outside Cobb County and for HB 489 negotiations. 800 MHz will identify funding during the FY2013 budget process to include grants, if applicable. See Appendix VI on page 21 for the auditee's complete response and corrective action plan.

Recommendation 5: Incorporate a way to distinguish all users in both the 800 MHz system and Access database. Clearly identifying billable users, MAUs, Regional Partner agencies, and other functions will prove to be a valuable tool during the overall reconciliation process.

Auditee's Response:

Concur – This is already being done within the 800 MHz system with unique identifiers assigned to Cobb County and our Regional partners. Access was modified to include a field that identifies a radio as a billable or mutual aid radio. These identifiers will be used in performing the end-of-year reconciliation for FY2012.

Independent verification of updates to database are not performed

During 800 MHz's confirmation process, staff reconciles the current year radio count (by user) from the Access database to the prior year radio count and identifies any changes. The results are used to prepare the email confirmations for non-County users. We duplicated this process during our audit procedures and noted 19 changes in user counts between FY2009 and FY2010 for a net cumulative increase in radio counts of 199.

For each of the changes, no written documentation or confirmation was maintained to provide support. Email confirmation replies from non-County users were not always received or a different count confirmed, and no record of email confirmation requests were maintained in some instances. We attempted to obtain further details regarding each change, but it is our understanding that no staff resources were available to research any further.

A process to track and monitor all changes made to the radio count inventory system should be implemented. Performing an independent verification of the changes to the radio count adds another level of control to ensure the accuracy and completeness of the radio inventory.

Recommendation

800 MHz management should:

Recommendation 6: Develop and implement a mechanism to track all changes made to the 800 MHz radio network system or the Access database. During the development of this mechanism, staff should re-evaluate the process of adding, removing, and updating radios to be sure both the radio system network and Access database are updated perpetually. These changes should be periodically reviewed by a person independent of the input function and agreed to documentation supporting the change. Evidence of review should be documented via initialing or signature.

Auditee's Response:

Concur – A mechanism is in place for tracking changes made to both the 800 MHz system and Access, but not all the supporting documents were readily available. Improvements to further track the ‘documents’ associated with the changes will occur as soon as possible, but no later than February 2012. The periodic review of the Access database will be completed annually by the Radio System Manager and include both signature and date of review. See Appendix VI on page 22 for the auditee’s complete response and corrective action plan.

No documented evidence of a periodic physical inventory exists

Although all radios on the 800 MHz system have been verified by the 800 MHz and/or Diversified⁹ staff for programming purposes between November 2010 and July 2011, we do not have documented evidence the physical inventory of radios was conducted. A periodic physical inventory verifies that the radio actually exists and is essential to ensure the accuracy of the radio inventory for billing and accountability purposes. In addition, there is not an established process to track parts other than when the parts are issued with the radio. Users are required to present broken parts in order to receive replacement parts; however, there is not an inventory tracking system for parts currently in place.

Recommendations

800 MHz management should:

Recommendation 7: Complete an extensive 100% independent confirmation and physical inventory of the radio count of each County agency or department, city, or non-County agency with authorized radios (including mutual aid users) on the 800 MHz radio network system. The results should be reconciled as of a specified date to both the perpetual inventory maintained in the Access database and the 800 MHz operating system, with any differences researched, resolved, and updated accordingly. User agencies should be required to sign or electronically confirm their agreement with the results. A separate list of available radios and parts currently maintained at 800 MHz headquarters should also be included. This overall inventory process should be reviewed and approved by the Department Manager (with evidence) via signature. In addition to the above, the following should be performed moving forward:

- An annual confirmation of changes made throughout the year along with the total radio count as of the County's year end; and
- A complete 100% physical inventory should be conducted every three to five years, as decided by management.

Auditee's Response:

Concur – The documented and signed inventory of all users and physical inventory of all radios with the exception of mutual aid users who are outside the Metro Atlanta area will be included. Mutual aid users outside the Metro Atlanta area will be confirmed via email or other written correspondence. Spare radios are accounted for in Access but may not be accounted for in the 800 MHz radio system; however, they will be included in the physical radio inventory.

Tracking spare parts are more difficult since we do not have a database for tracking consumable parts. Established practices track who was issued parts with the issued radio equipment; however, in the interim, two signatures are required for the issuance of specified spare parts and an inventory maintained.

The inventory will be completed for annual billing purposes beginning next inventory process, which concludes October 2012 and will be reviewed and documented by the Radio System Manager. See Appendix VI on page 22 for the auditee's complete response and corrective action plan.

⁹ Diversified Electronics is an authorized radio service shop provider.

Recommendation 8: Ensure all parts and accountable items are maintained in accordance with the Countywide Accountable Equipment Policy.

Auditee's Response:

Concur – We will comply when the County policy is issued, but no later than December 31, 2012.

Controls over the payment of the annual maintenance contract needs improvement

Review of the contract/invoice

For FY2010, the annual maintenance service agreement with Motorola was \$2,158,292 after the impact of a pre-payment discount. The County received a detailed multi-page contract and invoice, which provided an itemized listing of all the maintenance services to be performed and their related costs.

The detailed items were grouped and summarized on the first page of the invoice. We reconciled the detailed service pages to the summary page information and determined that the detailed service pages totaled \$46,639 more than the amount shown on the summary page and the amount billed by Motorola. While this does not affect the total amount allocated to users and recorded in the financial system, no one was able to explain this discrepancy. As such, we are unable to determine if this amounts to an underpayment for FY2010. In this instance, the discrepancy resulted in the County's favor, but there is no process in place to ensure the County is not overcharged in error.

In addition, there were some costs in the maintenance contract not allocated to the non-County users. One such cost is maintenance for 'Radio IP server and software support'. In FY2009, this cost was included in the service contract and allocated to Cobb users; however, in FY2010, the cost, totaling \$10,584, had been allocated to the General Fund when the amount was actually removed from the Motorola detailed service pages. As a result, the General Fund was charged for an amount that should have been allocated to the voice-users or not billed at all. This is another example of how the lack of review could result in an overcharge for services.

We also noted the maintenance contract included a listing of all radios on the system. 800 MHz staff did not verify the radio listing nor was it used in the radio confirmation process. An inaccurate radio count could affect the amount charged on the maintenance contract and thus the overall pro-rata amount charged to system users.

Purchasing procedures require that contracts and invoices be reviewed for accuracy prior to approval. Inadequate review can result in the County being bound to contracts that do not meet our needs and/or paying for services we did not receive.

Recommendations

800 MHz management should:

Recommendation 9: Designate a staff member to review and re-compute the back-up sections of the Motorola annual maintenance service agreement and agree to the final invoice summary. This review should also include a clear understanding of the agreed-upon services for the respective fiscal year. Any discrepancies should be resolved prior to preparing the billing spreadsheet and submission to the Purchasing Department for finalization.

Auditee's Response:

Concur – A staff member will be identified for this purpose by no later than December 31, 2012.

Recommendation 10: Verify the radio count in the Motorola contract with annual physical confirmation process. Any deviation from the annual physical confirmation should be justified and documented.

Auditee's Response:

Concur – This will be done for the FY2013 contract review.

Allocation of the maintenance costs to the related funds

Based on the radio counts for each County user agency and department, we calculated the amount of FY2010 maintenance costs that should be charged to each Fund. We compared our calculation to the amount allocated on the purchase order. We determined that the General Fund was overcharged by \$78,129; the Fire Fund was undercharged by \$46,851; the E911 Fund was undercharged by \$16,385; and the Grant Fund (270) was undercharged by \$14,896 with the remaining difference resulting from rounding.

The documentation provided did not support the actual amounts allocated between funds. Again, the net effect on the overall County's financial reporting is zero; however, it does impact the individual funds. See chart below.

FUND ALLOCATIONS

Fund #	IA Calculated	P.O. Allocations	Difference	Fund
010	\$1,114,950.78	\$1,193,080.23	\$78,129.45	General
270	\$14,895.61	\$0.00	(\$14,895.61)	Grant
210	\$13,556.53	\$13,556.73	\$0.20	Senior Services
200	\$53,300.23	\$53,301.05	\$0.82	Transit - Operating
230	\$542,306.60	\$495,455.27	(\$46,851.33)	Fire
260	\$303,608.25	\$287,223.20	(\$16,385.05)	E-911
500	\$114,271.49	\$114,272.97	\$1.48	Water
710	\$1,402.86	\$1,402.88	\$0.02	Risk Management
Total	\$2,158,292.35	\$2,158,292.33	-\$0.02	

Table 2 – Source: Purchase Order Data AMS, Billing Spreadsheets 800 MHz staff

Recommendation

800 MHz management and Finance staff should:

Recommendation 11: Provide the Finance Department with a summary of allocated maintenance costs to County funds along with the supporting spreadsheet used for billing purposes. Finance Department staff should agree the summary to any supporting documents prior to recording the transactions in the County's financial system.

Auditee's Response:

Concur – Additional documentation will be supplied to the Finance Department in conjunction with the annual billing spreadsheet. Finance will reconcile the spreadsheet provided by 800 MHz for the allocation of maintenance costs to supporting documentation provided by the same department prior to billings.

Record retention updates needed for compliance

The 800 MHz staff was not in compliance with the County and State record retention guidelines. Records to support radio counts for FY2010 core replacement and maintenance cost billings were not retained. During our audit process, we were unable to obtain the spreadsheets used to support FY2005 through FY2008 core replacement and maintenance cost billings. In addition, 800 MHz staff found it difficult to locate confirmations and other documentation to support the radio counts used in their billing spreadsheets.

The County's Records Policy and Procedures Manual and the State of Georgia Retention Schedules for Local Governments provide specific retention periods for various paper and electronic records. In addition, the records should be maintained in a manner that allows for reasonable access upon request. 800 MHz staff's inability to locate or produce these records without the need for extensive staff resources reflects non-compliance with the established record retention policy.

Subsequent to the issuance of the draft report, Finance was able to provide spreadsheets to support billings for core replacement and maintenance costs going back to 2005; however, due to the timing of the receipt, no review was performed and thus no assurance provided.

Recommendation

800 MHz management should:

Recommendation 12: Maintain documentation to support each aspect of the billing and collection process. This should include, but not be limited to radio count changes, confirmations, inventory, billing spreadsheets, interfund transfers, etc. in accordance with both the County and State of Georgia Retention Schedules.

Auditee's Response:

Concur – Supporting documentation will be maintained. Going forward, Finance will maintain with the spreadsheets, an electronic copy of supporting documentation reconciled to the spreadsheet.

Segregation of duties needs improvements

We reviewed the billing and collection procedures within the Finance Department and noted that the same staff person prepared and distributed the billing invoices, approves the transactions in the County's financial system, and received the payments from non-County users. In addition, several 800 MHz staff have access to both the radio network system and the Access database. These duties should be separated; however, if not practical, a periodic report of all changes to either system should be produced and reviewed by the Department Manager. Management reviews provide a basis for detecting problems and to ensure consistency and reasonableness.

A fundamental element of internal control is the segregation of certain key duties. The basic idea underlying segregation of duties is that no employee or group of employees should be in a position to both perpetrate and conceal errors or fraud in the normal course of their duties by performing incompatible duties. These duties include custody of assets, authorization or approval of related transactions affecting those assets, and the recording or reporting of related transactions. For instance, the person who maintains and reconciles the accounting records should not be able to obtain custody of checks, and the person who opens the mail and prepares a listing of checks received should not be the person who makes the deposit or maintains the accounts receivable accounting records.

Recommendations

Finance Director/Comptroller should:

Recommendation 13: Designate a separate staff to receive payments from non-County users. In addition, the Finance Division Manager should review the invoices and interfund transfers as prepared by the Finance Accountant.

Auditee's Response:

Do Not Concur – Billings have been approved by the Finance Director and prior to the current Director, these were approved by the Assistant Comptroller. Approval for transactions will be delegated to the Finance Division Manager in subsequent years. A separate Finance staff member reconciles all receipts for core replacement in the 800 MHz Special Revenue Fund several times per year to ensure the accuracy of receipts.

Additional Auditor Comment: In our opinion, this compensating process does not address the risk of having the same person receive and account for remittances. Reconciling the Fund account only acknowledges the remittances that were deposited, not those that may not. As such, the Finance Department assumes the risk associated with their current practice.

800 MHz management should:

Recommendation 14: Ensure a periodic review of all changes made to the 800 MHz radio network system and the Access database should be performed by the Department Manager or a position level higher than those making the changes. Evidence of this review should be documented and maintained.

Auditee's Response:

Concur – Appropriate reviews will be made and noted during the next end of year inventory process for FY2013.

Process preparation of billing spreadsheets needs improvement

800 MHz staff maintains several Microsoft Excel spreadsheets to support its allocation of core replacement and annual maintenance costs; however, there was no clear explanation or purpose of each use. Many of the spreadsheets have been maintained for a significant period of time (prior to the current Radio System Manager) but is not used for any specific reporting purposes. Based on our limited review of the numerous spreadsheets, it appears the spreadsheets represent a duplication of staff resources, which cannot be substantiated or utilized beyond preparation. During our interview with Finance staff, we noted that many of the spreadsheets received from the 800 MHz System Manager are not used for any review or reconciliation purposes. Only one spreadsheet is used to prepare both user invoices and internal transfers between County funds.

A streamlined-process will minimize the risk of errors and reduce the amount of staff hours needed to prepare and distribute the billing spreadsheets to Finance staff. It will also aid 800 MHz in its compliance with the State and County retention policies.

Recommendation

800 MHz management should:

Recommendation 15: Re-evaluate its current process flow from inventory confirmations to the preparation and distribution of billing spreadsheets. Any duplication of effort should be eliminated. In addition, 800 MHz should coordinate with Finance staff and determine what specific information is needed and in what format. After which, any information deemed unnecessary should be discontinued.

Auditee's Response:

Concur – The noted duplication and necessary information was reviewed and corrected prior to this final report.

Appendix I

Detailed Objective(s), Scope, and Methodology

Objective(s)

The objective of our audit was to determine if the controls over 800 MHz operations are adequate to ensure:

- Compliance with the applicable Board of Commissioners agenda;
- Billings and collections are accurate and in accordance with the respective user agreements;
- Program assets (radios) are properly accounted for and properly secured; and
- Expenditures are properly authorized.

Scope

The audit covered the billing for October 1, 2009 to September 30, 2010.

Methodology

To accomplish our objectives, we interviewed Finance and 800 MHz staff to obtain an understanding of the 800 MHz billing and collection process. We reviewed the billing worksheet provided by the 800 MHz department. We reviewed the invoices, payment and recording for non-County users. We reviewed the interfund transfer of core replacement and allocation of Motorola payment for County users.

In order to accomplish our objective, we performed the following sub-objectives for each department:

1. Determined 800 MHz management's compliance with the applicable Board of Commissioners agenda.
2. Determined if billings and collections are accurate and in accordance with the respective user agreements.
 - a. We were unable to independently confirm the radio counts for each user agency as of October 1, 2009.
 - b. Determined if the obligated core replacement costs of each user was billed correctly.
 - c. Determined if the maintenance costs of each user was billed correctly.
 - d. Determined if receipts of user agencies were properly recorded and reported.
3. Determined if program assets (radios) are properly accounted for and properly secured.
4. Determined if expenditures are properly authorized.

Appendix II

Abbreviations and Glossary

800 MHz radio	A blend of traditional two-way radio technology and computer-controlled transmitter.
Interfund Transfer	Transfer of monies between two separate funds.
Special Revenue Fund	A fund is set up to record the revenue and expenditure for a special purpose.
MAU	Mutual Aid Users – Users who have or use another primary radio system and require communications for mutual events utilizing Cobb County resources in either agency's jurisdiction.
Regional Partner Users	Users who have or use another primary radio system and require communications for mutual events utilizing regional resources in either agency's jurisdiction.
Intra-operable	The ability of emergency responders to establish and sustain communications in support of mission operations.
Inter-operable	The ability of emergency responders to communicate among jurisdictions, disciplines, and levels of government, using a variety of frequency bands, as needed and authorized. System operability is required for system interoperability.

Appendix III

Major Contributors to the Report

Latona Thomas, CPA, Manager

Miranda Wang, CPA, Staff Auditor I, Auditor-in-Charge

Barry Huff, Staff Auditor I

Appendix IV

Final Report Distribution List

Sam Heaton, Fire Chief/Interim Public Safety Agency Director
Tony Wheeler, 911 Manager
Tracy Roberts, 800 MHz Radio System Manager
Jim Pehrson, CPA, Finance Director/Comptroller
Internal Audit Division File

Appendix V

Outcome Measure(s)

This appendix presents detailed information on the measurable impact our recommended corrective action(s) will have on County operations.

Type and Value of Outcome Measure(s):

- Reliability of Information – Recommendations, when implemented, will provide assurance of the completeness and accuracy of 800 MHz radio counts; pro-rata allocation of core replacement and maintenance costs and billing amounts. (See pages 5-14).
- Protection of Resources – Recommendations, when implemented, will increase the safeguards over 800 MHz radios and spare parts. (See pages 7-10).

Methodology Used to Measure the Reported Benefit:

As of November 19, 2010, the 800 MHz radio system network report reflected 5,804 radios and the Microsoft Access database reflected 4,879 radios.

Appendix VI

Auditee's Response to the Draft Report



COBB COUNTY E911 COMMUNICATIONS BUREAU

140 North Marietta Parkway
Marietta, Georgia 30060-1454
(770) 499-4163 • fax: (770) 590-5719

Tony N. Wheeler
Emergency Communications Manager

DATE: January 20, 2012

TO: Latona Thomas, CPA, Manager, Internal Audit

FROM: Tracy Roberts, Radio System Manager

THRU: Tony Wheeler, 911/Director *Tony N. Wheeler*

SUBJECT: Response to the Internal Audit Division's Draft Report – Review of FY2010 Cobb County 800 MHz Operations

This memo is in response to the subject report dated November 22, 2011. The review determined that 800 MHz generally complied with applicable BOC meeting agendas regarding operational requirements, and capital replacements, and expenditures for Fiscal Year 2010 had been properly authorized.

You made several recommendations and our response to those recommendations are provided below.

800 MHz management should:

Recommendation 1: Designate a staff member to review license agreement requirements for future compliance issues. Written standards and procedures should be developed to ensure a) each non-County user maintain its minimum number of authorized units; b) documented evidence of review or confirmation each of the five cities are maintaining their core replacement funds as required; and c) the Advisory Committee meets semi-annually or maintain written justification to support any meetings not held.

Response: Concur

We are in the process of gathering a copy of all the executed user agreement contracts. Compliance will be monitored by the Radio System Manager. Written standards and procedures will be developed, reviewed and approved by April 2012.



1st Nationally Accredited Communications Agency in Georgia

Recommendation 2: Research the circumstances and true overpayment amount due Gold Cross Ambulance and process accordingly. Also, ensure each billable non-County agency has a current user license agreement on file as required by the County and State retention policies.

Response: Concur

Gold Cross Ambulance was an analog radio system user and has not indicated their interest in continuing services on the County's digital radio system. With the cessation of the analog radio system on October 1, 2011, billing of Gold Cross for use of the analog system will cease as well. As such, no overpayment is applicable. Finance did not bill Gold Cross for FY 2011.

Recommendation 3: Include Cobb County agencies and departments in the annual email confirmation process.

Response: Concur

This process will begin with the next radio count effort in the second quarter of 2012.

Recommendation 4: Ensure the Access database is reconciled to the listing of radios on the 800 MHz system during the annual radio confirmation process. Any differences noted should be researched and resolved. The 800 MHz system real-time reports should be maintained as supporting documentation of the reconciling process.

Response: Concur, with comments

The 800 MHz system administrative tool is not an inventory management system; however, we will use the system administrative tool, the 800 MHz database and radio serial numbers to reconcile the radio counts for the end-of-year reconciliation for FY2012 and determine if this process needs to be continued in 2013. If this process is discontinued in 2013, an acceptable alternative will be presented for approval and implemented accordingly.

We have researched and identified a unique communications asset management tool that would eliminate the need to use the Access database and the 800 MHz system administrative tool for inventory management, asset management, and parts inventory. If purchased, this product will address the recommendations listed here and in recommendations 5, 6, and 7. This product further enhances our ability to capture employee workload and would be helpful in identifying services performed for agencies outside Cobb County and for HB489 negotiationsⁱ. We will try to identify funding for this product in the 2013 budget process and/or grants if applicable.

Recommendation 5: Incorporate a way to distinguish all users in both the 800 MHz system and Access database. Clearly identifying billable users, MAUs, Regional Partner agencies, and other functions will prove to be a valuable tool during the overall reconciliation process.

Response: Concur

This is already being done within the 800 Mhz system with the unique identifiers assigned to Cobb County and our Regional partners. Access was modified to include a field that identifies a

radio as a billable or mutual aid radio. These identifiers will be used in performing the end-of-year reconciliation for FY2012.

Recommendation 6: Develop and implement a mechanism to track all changes made to the 800 MHz radio network system or the Access database. During the development of this mechanism, staff should re-evaluate the process of adding, removing, and updating radios to be sure both the radio system network and the Access database are updated perpetually. These changes should be periodically reviewed by a person independent of the input function and agreed to documentation supporting the change. Evidence of review should be documented via initialing or signature.

Response: Concur

A mechanism is in place for tracking changes made to both the 800 MHz system and Access, but not all the supporting documents were readily available. It will be improved to further track the “documents” associated with the changes that will enhance end of the year inventory and audited review. This will occur as soon as possible, but no later than February 2012.

The periodic review of the Access database is done annually by the Radio System Manager. The signature and date of the reviewer will be captured in the documentation from this point forward.

Recommendation 7: Complete an extensive 100% independent confirmation and physical inventory of the radio count of each County agency or department, city, or non-County agency with authorized radios (including mutual aid users) on the 800 MHz radio network system. The results should be reconciled as of a specified date to both the perpetual inventory maintained in the Access database and the 800 MHz operating system, with any differences researched, resolved, and updated accordingly. User agencies should be required to sign or electronically confirm their agreement with the results. A separate list of available radios and parts currently maintained at 800 MHz headquarters should also be included. This overall inventory process should be reviewed and approved by the Department Manager (with evidence) via signature. In addition to the above, the following should be performed moving forward:

- An annual confirmation of changes made throughout the year along with the total radio count as of the County’s year end; and
- A complete 100% physical inventory should be conducted every three to five years, as decided by management.

Response: Concur – see response below

We concur with the suggestion of the documented and signed inventory for all users and the physical inventory of all radios with the exception of the mutual aid users who are outside the Metro Atlanta area. Not all mutual aid users and agencies are located within the Metro Atlanta area. Agencies like the FBI have access to the Cobb County radio system, but are deployed out of the state. Mutual aid users outside the Metro Atlanta area will be confirmed via email or other written correspondence.

Spare radios are accounted for in Access but may not be accounted for in the 800 MHz radio system, unless they were previously authorized and activated on the radio system. Regardless, they are tracked and accounted for. These radios will be included in the physical inventory.

The tracking of the spare parts is more difficult since we do not have a database for tracking consumable parts. Established practices track who was issued parts with the issued radio

equipment. The product identified in the response on recommendation #4 would improve this parts inventory accountability. In the interim, two signatures are required for the issuance of specified spare parts and an inventory maintained.

This inventory is reviewed by the Radio System Manager and signatures of the review will be included as we move forward. This inventory will be completed for annual billing purposes beginning next inventory process which concludes October 2012.

Recommendation 8: Ensure all parts and accountable items are maintained in accordance with the Countywide Accountable Equipment Policy. In addition, see response to Recommendation #7 regarding spare parts.

Response: Concur

We will comply when the policy is issued. This will be implemented when the County policy is issued, no later than December 31, 2012.

Recommendation 9: Designate a staff member to review and re-compute the back-up sections of the Motorola annual maintenance service agreement and agree to the final invoice summary. This review should also include a clear understanding of the agreed-upon services for the respective fiscal year. Any discrepancies should be resolved prior to preparing the billing spreadsheet and submission to the Purchasing Department for finalization.

Response: Concur

A staff member will be identified for this purpose by no later than December 31, 2012.

Recommendation 10: Verify the radio count in the Motorola contract with annual physical confirmation process. Any deviation from the annual physical confirmation should be justified and documented.

Response: Concur

This will be done for the FY2013 contract review.

Recommendation 11: Provide the Finance Department with a summary of allocated maintenance costs to County funds along with the supporting spreadsheet used for billing purposes. Finance Department staff should agree the summary to any supporting documents prior to recording the transactions in the County's financial system.

Response: Concur

Additional documentation will be supplied to the Finance Department in conjunction with the annual billing spreadsheet. Finance will reconcile the spreadsheet provided by 800 MHz for the allocation of maintenance costs to supporting documentation provided by the same department prior to billings.

800 MHz and Finance staff should:

Recommendation 12: Maintain documentation to support each aspect of the billing and collection process. This should include, but not be limited to radio count changes, confirmations, inventory, billing spreadsheets, interfund transfers, etc. in accordance with both the County's and State of Georgia Retention Schedules.

Response: Concur

Supporting documentation will be maintained. Going forward Finance will maintain with the spreadsheets, an electronic copy of supporting documentation reconciled to the spreadsheet.

Recommendation 13: Designate a separate staff to receive payments from non-County users. In addition, the Finance Division Manager should review the invoices and interfund transfers as prepared by the Finance Accountant.

Response: Billings have been approved by Finance Director and prior to current director these were approved by Assistant Comptroller. Approval for transactions will be delegated to Finance Division Manager in subsequent years. A Separate Finance staff member reconciles all receipts for core replacement in the 800 MHz Special Revenue Fund several times per year to ensure accuracy of receipts.

800 MHz management should:

Recommendation 14: Ensure a periodic review of all changes made to the 800 MHz radio network system and the Access database should be performed by the Department Manager or a position level higher than those making the changes. Evidence of this review should be documented and maintained.

Response: Concur

Appropriate reviews will be made and noted during the next end of the year inventory process for FY2013.

Recommendation 15: Re-evaluate its current process flow from inventory confirmations to the preparation and distribution of billing spreadsheets. Any duplication of effort should be eliminated. In addition, 800 MHz should coordinate with Finance staff and determine what specific information is needed and in what format. After which, any information deemed unnecessary should be discontinued.

Response: Concur

The noted duplication and necessary information was reviewed and corrected prior to this final report.

ⁱ HB489 – House Bill 489 is a service delivery strategy to mitigate or omit duplication of service between counties and cities.