



Office of the City Auditor

Date: February 4, 2008
To: Deb Hermann, Chair, Finance and Audit Committee
From: Gary White, City Auditor
Subject: Request for Information on 911 Audit Work

During the January 30th Finance and Audit Committee, Councilman Johnson asked whether the City Auditor's Office had completed any audit work of the 911 system. This memorandum summarizes the work we have done.

SUMMARY

In our January 2000 audit, *Emergency Medical Services System*, we found the 911 system was sometimes a bottleneck and that the average delay in answering calls was increasing. The Police Department attributed the delay to turnover and difficulty filling vacant call-taker positions. We further reported that the 911 workload was increasing due to the use of cellular phones. Our *City Services Performance Report for Fiscal Year 2001* found that a 2001 city ordinance set a performance standard of answering 90 percent of 911 emergency telephone calls within 18 seconds and we found this standard was not achieved. Since then, we have been told repeatedly that the Police Department phone system does not allow the department to measure the time to answer 911 calls.

WORK PERFORMED

We reviewed the following reports and summarized their findings related to 911.

- *Emergency Medical Services System*, January 2000
- *Fire Fighting Force Resource Allocation Follow-up*, September 2000
- *City Services Performance Report for Fiscal Year 2001*, March 2002
- *City Services Performance Report for Fiscal Year 2002*, March 2003
- *City Services Performance Report for Fiscal Year 2003*, March 2004
- *City Services Performance Report for Fiscal Year 2004*, May 2005
- *City Services Performance Report for Fiscal Year 2005*, November 2005

RESULTS

EMS System, January 2000. We identified 911 as an issue in our assessment of the EMS System.¹ We reported that the 911 system was sometimes a bottleneck as the time to answer 911 calls was increasing.

The Police Department's 911 system reports showed the average time to answer 911 calls had doubled from 9 seconds in February 1999 to 19 seconds in August 1999. The percentage of calls answered within 12 seconds decreased steadily over the seven months we reviewed, from 82 percent in February to 65 percent in August. The Police Department attributed the increased delay to turnover and difficulty in filling vacant call-taker positions. The report also showed that callers abandoned 14 percent of 911 calls between February and August 1999. Call takers were expected to call back the abandoned calls when they are not on a line. Thus, more abandoned calls contributed to tying up the phone lines.

We found that when all call takers were on a line, callers heard a recording telling them to stay on the line or call MAST or Fire directly at their respective seven-digit numbers. The Police Department did not track how often callers got the recording – but call takers were aware of the queue and length of time that the earliest call had been in queue. According to a communications unit supervisor, technology at the time did not allow giving callers the option of connecting directly because Fire and MAST were separate numbers. They were not “extensions” of 911.

We further reported that the 911 workload had increased over the past few years with increased use of cellular phones. Call takers often got more than one call for incidents such as car accidents. At the time, cellular phones did not allow for the automatic location and telephone number of the caller, requiring call takers to manually enter information into the dispatch system.

We recommended the police chief take steps to reduce turnover among call takers and increase the proportion of filled positions.

Fire Resources Allocation Follow-up, September 2000. In our follow-up audit of fire resource allocation,² we suggested management measure response time and establish a response time goal. For a fire or EMS incident, management should measure:

¹ Performance Audit: *Emergency Medical Services System*, Office of the City Auditor, Kansas City, Missouri, January 2000.

² Follow-up Audit: *Fire Fighting Force Resource Allocation*, Office of the City Auditor, Kansas City, Missouri, September 2000.

- System-wide response time: from when a call was received at 911 to the time the first unit reports arrival at the scene.
- Dispatch time: from the moment of receipt of the 911 data transmission, or in case of a 7-digit access, the receipt of the location, callback number, and type of incident to the time a unit is dispatched.

City Service Performance Reports. One of the performance measures in our annual city services performance reports was the time to answer 911 calls. In 2001, we reported the percent of 911 calls answered within 12 and 24 seconds or about 3 to 6 rings, based on one of the Police Department reports.³

We also reported that the Police Department's phone system report did not distinguish between calls coming in through 911 and the department's non-emergency line. While both types of calls come in to the same system, 911 calls are automatically prioritized if there is a queue. A city ordinance passed in March 2001 set a performance standard for answering 90 percent of 911 emergency telephone calls within 18 seconds.⁴

We found that the Police Department was not meeting the goal of answering 90 percent of calls within 18 seconds. The department answered 71.7 percent of calls within 12 seconds and 79.2 percent of calls within 24 seconds in fiscal year 2001.

The City Services Performance Report for Fiscal Year 2002⁵ indicated the Police Department no longer measured the time to answer 911 calls. The department had a new phone system that could not differentiate between a call answered by a call taker and a recorded message that answers when all lines were busy. Subsequent city services performance reports for fiscal years 2003, 2004, and 2005 indicated no change in the Police Department's ability to measure the time to answer 911 calls.

If you have any questions or need copies of these audits, please contact me at 513-3320.

cc: Mayor Mark Funkhouser
Members of the City Council
Wayne Cauthen, City Manager
Rich Noll, Assistant City Manager
Troy Schulte, Budget Officer

³ *City Services Performance Report for Fiscal Year 2001*, Office of the City Auditor, Kansas City, Missouri, March 2002.

⁴ Code of Ordinances, Kansas City, Missouri, Section 34-372(a).

⁵ *City Services Performance Report for Fiscal Year 2002*, Office of the City Auditor, Kansas City, Missouri, March 2003.