



To Honorable County Council Members  
Honorable Steve Ehlmann, County Executive

March 27, 2017

The Emergency Communications – Fire/EMS and Police Dispatch examination opened October 20, 2016, has been completed, and the draft report is being issued today. The scope of the review covered January 1, 2014 – September 30, 2016. Fieldwork for the review was completed on December 14, 2016, and our report reflects the results of work performed through that date.

The objectives of the review were to determine whether internal controls were adequate and effective, operations and records were in compliance with established standards, regulations, policies and procedures, and resources were being used efficiently.

The examination covered emergency and non-emergency dispatching, radio operations, call records, staffing/scheduling, training, the CAD system for the EMS/Fire and Police Dispatch Divisions', and the 911 Division. We reviewed the internal control environment surrounding those activities, as well as performed an evaluation of the effectiveness and efficiency with which department objectives are being achieved. In addition, reviews for compliance with the County Charter and Ordinances, Missouri Statutes, and internal policies and procedures were performed.

This audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*, and consisted of examining, on a test basis, sufficient evidence to afford a reasonable basis, for our opinion.

In our opinion, except for the opportunities included in this report, internal controls were adequate and effective and operations and records were in compliance with established standards.

The issuance of this report completes the formal examination process. However, if you wish to discuss any aspects of the audit or report, please contact me

*Brent Statler*

Brent R. Statler, CPA, CGAP  
County Auditor

**Attachment**

Copy to Joann Leykam, Director of Administration  
Jeff Smith, Director of Emergency Communications



**Emergency Communications Fire/EMS and Police Dispatch  
Examination Report  
Opened October 20, 2016**

Scope: Fire/EMS: January 1, 2014 – September 30, 2016  
Police Dispatch: January 1, 2016 – September 30, 2016  
911: January 1, 2014 – September 30, 2016

## Table of Contents

I. Background and Introduction .....	1
Authority and Activity.....	1
Funding.....	2
Staffing.....	5
II. Status Board.....	6
III. Executive Summary.....	8
IV. Detailed Findings.....	9
Compliance Opportunities.....	9
Interdepartmental Opportunities.....	11

## *BACKGROUND AND INTRODUCTION*

### **Authority and Activity:**

The Department of Emergency Communications was established by County Code Section 201.010 on January 1, 2016. The Department is comprised divisions for police dispatching, fire and ambulance (EMS) dispatching, and radio and microwave emergency radio technology and support. The Department also manages the 911 system and the naming and numbering for properties in the unincorporated County and contracted municipalities.

As a 911 answering point, the Department's Dispatchers receive emergency and non-emergency calls for service and determine the appropriate level of response, dispatching police, fire, and EMS personnel to the caller's location. The Department utilizes Computer Aided Dispatching (CAD), Next Generation 911, and digital radio technology to assist in dispatching calls. Dispatchers operate in twelve-hour shifts providing round the clock service every day of the year. Dispatchers also receive extensive on-going training to maintain dispatching certifications.

The Department of Emergency Communications' program mission as stated in the 2016 budget is as follows:

The mission of the Department of Emergency Communications is to provide quality 911, radio communications and dispatching services to the citizens and police, fire and EMS first responders of St. Charles County. The Department will work in close coordination with various police, fire and EMS agencies in getting aid to individuals in need by utilizing state of the art NG911, other telephone services, CAD and emergency radio equipment. Our personnel will train and prepare to be the life-line for emergency personnel in the field, and we will provide the essential link to the citizens of the county thru the use of nationally recognized dispatching protocols and pre-arrival instructions. The Department will carry out our mission while at the same time being fiscally responsible for the various

**Funding:**

Note: Prior to 2016, the divisions of the Emergency Communications Department were spread out among several departments with various funding sources: Dispatch and Alarm Fund (2011-2015), 911 Fund (2011-2015), Emergency Communications System Fund (2011-2015), Sheriff Field Operations (2011-2014), and Police Field Operations (2015). For 2011 to 2015, only amounts from the Dispatch and Alarm Fund and 911 Fund are presented in this report.

The primary funding for the reviewed Emergency Communications Divisions are provided by the Emergency Communications Fund. The historical funding for the Divisions is presented below.

Emergency Communications Fire and EMS Emergency Communications Fund (273-7300) – Expenditures Fiscal Years 2011-2016								
Fiscal Year	Salaries & Benefits	% Increase	Operating Expenditures	% Increase	Capital Expenditures/ Transfer Out	% Increase	Total Expenditures	% Increase
2011	\$1,590,974	N/A	\$583,794	N/A	\$5,088,711	N/A	\$7,263,479	N/A
2012	\$1,608,445	1.1%	\$578,455	-0.9%	\$3,041,977	-40.2%	\$5,228,877	-28.0%
2013	\$1,574,022	-2.1%	\$620,648	7.3%	\$174,580	-94.3%	\$2,369,250	-54.7%
2014	\$1,689,003	7.3%	\$735,103	18.4%	\$74,077	-57.6%	\$2,498,183	5.4%
2015	\$1,724,273	2.1%	\$521,115	-29.1%	\$189,087	155.3%	\$2,434,475	-2.6%
2016*	\$2,075,602	20.4%	\$632,920	21.5%	\$684,656	262.1%	\$3,393,178	39.4%

**Emergency Communications 911 Division  
Emergency Communications Fund (273-7330) – Expenditures  
Fiscal Years 2011-2016**

<b>Fiscal Year</b>	<b>Salaries &amp; Benefits</b>	<b>% Increase</b>	<b>Operating Expenditures</b>	<b>% Increase</b>	<b>Capital Expenditures/ Transfer Out</b>	<b>% Increase</b>	<b>Total Expenditures</b>	<b>% Increase</b>
2011	\$39,551	N/A	\$397,460	N/A	\$283,391	N/A	\$720,402	N/A
2012	\$40,720	3.0%	\$383,771	-3.4%	\$0	-100.0%	\$424,491	-41.1%
2013	\$45,984	12.9%	\$381,077	-0.7%	\$0	0.0%	\$427,061	0.6%
2014	\$47,848	4.1%	\$370,701	-2.7%	\$0	0.0%	\$418,549	-2.0%
2015	\$49,018	2.4%	\$352,307	-5.0%	\$0	0.0%	\$401,325	-4.1%
2016*	\$56,036	14.3%	\$410,314	16.5%	\$0	0.0%	\$466,350	16.2%

**Emergency Communications Police Dispatch  
Emergency Communications Fund (273-7310) – Expenditures  
Fiscal Years 2011-2016**

<b>Fiscal Year</b>	<b>Salaries &amp; Benefits</b>	<b>% Increase</b>	<b>Operating Expenditures</b>	<b>% Increase</b>	<b>Capital Expenditures/ Transfer Out</b>	<b>% Increase</b>	<b>Total Expenditures</b>	<b>% Increase</b>
2016*	\$1,490,236	N/A	\$57,260	N/A	\$0	N/A	\$1,547,496	N/A

Revenues generated by the Emergency Communications are deposited in the Emergency Communications Fund. The historical funding is presented below:

Emergency Communications Fire and EMS Emergency Communications Fund (273-7300) – Revenues Fiscal Years 2011-2016						
Fiscal Year	Property and Sales Taxes	Inter-governmental Revenue	Interfund Transfers	Other Revenue	Total Revenue	Emergency Communications Revenue as a Percentage of Expenditures
2011	\$2,749,876	\$4,981	\$0	\$102,373	\$2,857,230	39.3%
2012	\$2,816,250	\$2,018	\$3,499	\$3,992	\$2,825,759	54.0%
2013	\$2,756,859	\$2,915	\$4,547	\$4,374	\$2,768,695	116.9%
2014	\$3,000,788	\$1,868	\$6,409	\$8,133	\$3,017,198	120.8%
2015	\$2,899,324	\$496,548	\$8,353	\$10,364	\$3,414,589	116.9%
2016*	\$3,215,000	\$266,091	\$3,288,136	\$7,000	\$6,776,227	109.4%

Emergency Communications 911 Division Emergency Communications Fund (273-7330) – Revenues Fiscal Years 2011-2016						
Fiscal Year	9-1-1 Revenue	Inter-governmental Revenue	Interfund Transfers	Other Revenue	Total Revenue	Emergency Communications Revenue as a Percentage of Expenditures
2011	\$575,917	\$0	\$0	\$7,595	\$583,512	81.0%
2012	\$485,496	\$0	\$147	\$2,748	\$488,391	115.1%
2013	\$437,767	\$0	\$248	\$2,486	\$440,501	103.2%
2014	\$493,410	\$0	\$344	\$317	\$494,071	118.0%
2015	\$445,208	\$493,498	\$355	\$1,843	\$940,904	234.5%
2016*	\$500,000	\$266,091	\$770,152	\$5,200	\$1,541,443	330.5%

**Emergency Communications Police Dispatch  
Emergency Communications Fund (273-7310) – Revenues  
Fiscal Years 2011-2016**

<b>Fiscal Year</b>	<b>9-1-1 Revenue</b>	<b>Inter-governmental Revenue</b>	<b>Interfund Transfers</b>	<b>Other Revenue</b>	<b>Total Revenue</b>	<b>Emergency Communications Revenue as a Percentage of Expenditures</b>
2016*	\$0	\$0	\$1,547,496	\$0	\$1,547,496	100.0%

\* These are the estimated amounts from the 2017 budget.

**Staffing:**

The number of full-time equivalent authorized positions for the reviewed Emergency Communications Divisions (Fire/EMS, Police, and 911) decreased (-2.1%) from 47.0 full-time positions in 2011 to a total of 46.0 full-time budgeted employees in 2016. Note: The 2011 amount includes personnel from the Dispatch and Alarm Fund, 911 Fund, and Sheriff Field Operations.

## II. STATUS BOARD

The status board provides a summary of the reviewed Emergency Communications Division functions and processes. Each cell located under a function represents an activity that is to be completed to ensure that the process is performed in an effective and efficient manner. The color of the cells represents the assessment regarding completion of the activity. The legend below gives a description of the definition of each color.

- Red indicates management's immediate attention is required.
- Yellow indicates an opportunity for improvement exists.
- Green indicates there is no action necessary at this time.
- Blue indicates a process that was not included in the scope of the review.
- Grey indicates a County issue that should be addressed by management, but is not necessarily a direct responsibility of the audited department/office.

Emergency Calls	Non-Emergency Calls	Transfers	Call/Record Retention	911 Database/Addressing	Administrative Functions
911 calls are received by 1 of 6 Public Service Answering Points –St. Peters, St. Charles, Lake St. Louis, O’Fallon, Wentzville, and Emergency Comm.	Non-emergency calls involve the lack of a threat, no crime in progress, or non-priority symptoms.	Hospitals, nursing homes, and treatment facilities contact Emergency Communications to arrange patient transfers.	Call information is stored in the CAD (name, location, time, etc.) and the call audio is stored in Emergency CallWorks for all calls received by Emergency Comm.	Emergency Comm. Maintains the County Master Street Address Guide (MSAG) listing all properties and the emergency response units assigned to them.	Scheduling: There are four 12-hour shifts (48 hrs/36 hrs) and up to 5 employees per shift. Mandatory OT is sometimes required.
If the call requires fire or medical service, it is transferred to the Fire/EMS Dispatchers.	Non-emergency calls come in through phone lines, radio, and 911.	A Dispatcher enters the information for transfer location and time into the CAD system.	Call records are kept indefinitely and audio is kept for 1 yr. State law requires the info and audio to be kept for 1 yr.	The MSAG is updated for new construction and for errors noted during a call dispatch.	Training: Dispatchers receive extensive initial training and are required to maintain a Dispatcher certification.
A Dispatcher receives the call information and a map is displayed on the Computer Aided Dispatch (CAD) system.	Types of calls include vehicle lock-outs, property damage, complaints, and non-serious illness.	If the transfer is an emergency, available units are dispatched immediately.	Records are stored on 3 servers, backed up at least daily, and up to every ½ hour depending on the server.	Change requests are sent through the MSAG to the phone companies which have final authority over the updates/changes.	Training: The certification and State require Dispatchers to receive a minimum # of training hours every 2 years.
Landline calls list the street address of the call. Cell phone calls list the latitude and longitude to determine the location.	Units are not dispatched to the scene unless there is an imminent threat (ex. child locked in vehicle).	Non-emergency transfers are held in the CAD system until the time of transfer.	To request a copy of tapes or information from 911 calls, a citizen must complete a records release request.	Errors are researched to determine the correct units that should be dispatched based on location.	Training: Training hours and certificates are tracked and reported to apply for recertification.
The Dispatcher asks the caller for information about the situation to assess the priority level.	Non-911 calls are documented in the CAD system.	The CAD will notify the appropriate Dispatcher when the transfer time arrives.	<b>The Director and County Counselor will review the request and determine if it can be processed. (A2)</b>	New construction must also have street names and #s assigned.	Quality Assurance: 25 911calls for fire, EMS, and Police are randomly selected each week for review.

Emergency Calls	Non-Emergency Calls	Transfers	Call/Record Retention	911 Database/Addressing	Administrative Functions
The Dispatcher selects a code for the emergency and the ProQA program provides questions for the Dispatcher to ask in order to gather more information.	Any necessary reports are completed and appropriate entities are notified, if needed.	The Dispatcher sends the appropriate unit(s) and monitors the transfer until it is completed.	If approved, the requestor will be notified of the date and time that records can be reviewed at Emergency Communications' facility.	Developers send a naming request with suggested names. Street #s must follow established patterns for existing streets.	Quality Assurance: Calls are graded and an Incident Performance Report is completed. Dispatchers review reports with Supervisors to discuss improvements.
The CAD displays the units available to respond and closest hospitals (if needed) using a mobile data system.			Copies of records and audio can be purchased for \$0.10/page or the cost of materials and salary of the employee making the tape.	Street names cannot be duplicated within the County to eliminate confusion when dispatching to a location.	Performance Measures
The Radio Position will dispatch the appropriate units to the scene.			Other jurisdictions/law enforcement agencies can request copies of records at no charge.		Department Operating Procedures/Policy Manual (A1)
All field units have AVL mobile data systems to display call coordinates.			Weekly logs of 911 calls received are posted on the County website available to view at no cost.		Purchasing
While units are in route, the Dispatcher will continue to talk to the caller to provide instructions, if possible.					Payroll
If needed, the Dispatcher can relay additional information to the responding units or dispatch additional units.					Petty Cash
If the CAD is not functioning, a manual card system is used to dispatch calls and the call information is recorded into the CAD later.					911 Revenue Collection: Phone companies remit fees collected from customers to pay for 911 services. (B1)

### III. EXECUTIVE SUMMARY

Following is a summary of opportunities for improvement which were noted during our review of the Emergency Communications Fire/EMS, Police Dispatch, and 911 Divisions:

#### **A. Compliance Opportunities**

1. Department Directives: Nine (56.3%) of the sixteen directives reviewed were missing one or more employee signatures.
2. Media/Public Requests: Documentation supporting that either the Department Director and/or County Counselor's approved the records to be released was not always retained.

#### **B. Interdepartmental Opportunities**

1. 911 Tax Collections: The following was noted during a review of 911 tax collections: 1) Some companies are paying the tax as two cents (\$0.02) per line/customer rather than two percent (2.0%) of the base rate and 2) Forty-five (75.0%) out of sixty companies reviewed did not have a signed contract on file with the County.

**Compliance - Department Directives**

Discussion and Background	Cause	Risk/Effect	Recommendation	Management Response
<p>Section 6.2.0.1 of the Emergency Communications Policy Manual authorizes the Administrative staff to issue directives as a means to publish temporary rules, regulations, procedures, resources, or information to all employees. The directives are placed in a book for employees to review. The Policy states "Employees must check the directive book daily and employees will complete a signoff sheet to signify understanding of any new Directive(s). Employees are responsible for information contained in the directives. Failure to check the Directive Book daily or any violations of rules, regulations or procedures contained in directives may result in disciplinary action."</p>	<p>Nine (56.3%) of the sixteen directives reviewed were missing one or more employee signatures.</p>	<p>Compliance with Department policies.</p>	<p>The Emergency Communications Department should ensure that employees review and sign off on directives in a timely manner as required by Department Policy.</p>	<p>The majority of the missing signatures were from employees no longer with us or who were unaffected by the Directive. Realizing this was a less than ideal way of communicating this type of information to our employees this type of format is no longer used. Currently we used a feature in our scheduling software called "Required Messages" that forces our employees to acknowledge receipt of new information before being able to use the software further. We are currently working with the PD to being utilizing PowerDMS which will further improve and enhance how this information is communicated internally.</p>

**Compliance – Media/Public Requests**

Discussion and Background	Cause	Risk/Effect	Recommendation	Management Response
<p>Section 1.5.0.1 of the Emergency Communications Policy Manual requires that public requests for incident reports or call recordings be submitted in writing. All requests must be approved by the Department Director and County Counselor's Office prior to release. The completed record requests are kept on file with either the Department Director (for Fire and EMS Division requests) or the Police Dispatch Manager (for Police Dispatching Division requests).</p>	<p>For five (50.0%) of the ten public record requests reviewed, there was no documentation supporting that either the Department Director and/or County Counselor's approved the records to be released.</p> <p><u>Note:</u> The Police Dispatch Division Manager stated that approval is typically received via email, but the emails are not saved.</p>	<p>Compliance with department policies. Opportunity for improved documentation.</p>	<p>The Emergency Communications Department should ensure that record requests are properly approved prior to release as required by Department policy.</p>	<p>Internally, Emergency Communications will review our workflow and policies in an effort to standardize how requests are received, processed, approved and transmitted. Our goal is to have this review and standardization in place by April 1st, 2017.</p>

**Interdepartmental – 911 Tax Collections**

Discussion and Background	Cause	Risk/Effect	Recommendation	Management Response
<p>County Code 140.070: A. The St. Charles County Council hereby affirms and authorizes the tax of two percent (2%) of the tariff local service rate for telephone service as authorized by Section 190.305, RSMo., and the approval of the voters on August 7, 1984, for the purpose of funding "911" service in St. Charles County. B. Any person, corporation or company providing telephone service in St. Charles County shall, and is hereby authorized to, collect the two percent (2%) tax from every billed service user of the service provider in the County. The service provider shall remit the tax funds to the County in accordance with the contracts between the telephone service providers and the County.</p>	<p>The following was noted during a review of 911 tax collections:</p> <ol style="list-style-type: none"> <li>1) Some companies are paying the tax as two cents (\$0.02) per line/customer rather than two percent (2.0%) of the base rate; and</li> <li>2) Forty-five out of sixty (75.0%) companies reviewed did not have a signed contract on file with the County.</li> </ol>	<p>Compliance with County ordinances and State statutes. The County may not be receiving all possible tax revenue. Opportunity for improved documentation.</p>	<p>The Emergency Communications Department should work with the County to ensure that:</p> <ol style="list-style-type: none"> <li>1) 911 tax collections are properly calculated and remitted; and</li> <li>2) Companies providing phone service have a signed contract to operate in the County.</li> </ol>	<p>The collection of the 911 tax is currently handled by the Finance Department. The Director or Emergency Communications and the Director of Finance concur that this practice should continue. The Director of Finance has agreed to begin monitoring the taxes submitted for compliance with the 2% tariff rate as approved. Further, the Finance Department will work to ensure that each service provider has an up to date contract with the County concerning the providing of 911 services and the payment of 911 related taxes.</p>