

Approved: January 25, 2000

Date

Carl D. Holmes

MINUTES OF THE HOUSE COMMITTEE ON UTILITIES.

The meeting was called to order by Chairman Carl D. Holmes at 9:10 am on January 12, 2000 in Room 522-S of the Capitol.

All members were present except: Rep. Judy Morrison
Rep. Don Myers

Committee staff present: Lynne Holt, Legislative Research Department
Mary Torrence, Revisor of Statutes
Jo Cook, Committee Secretary

Conferees appearing before the committee: Cindy Lash, Legislative Division of Post Audit

Others attending: See Attached Guest List

Chairman Holmes introduced Cindy Lash, Legislative Post Audit, who presented an overview of the performance audit report Reviewing the 911 Emergency Phone Systems in Kansas, Part I: Identifying the Current Status (Attachment 1).

Ms. Lash explained that the Post Audit Committee had directed them (Legislative Post Audit) to do an audit of 911. Though it was a single audit, it was split into two parts for reporting purposes, so some of the information could be out before the end of the session.

The first audit deals with the current status of 911 in Kansas. There is no state-wide oversight nor state-wide information because the 911 services are administered by cities and counties. The auditors made calls to all entities providing 911, therefore all information is self-reported.

About 98% of Kansas citizens have access to some type of 911 service. Not all 911 service is the same throughout Kansas. There is Enhanced 911 (E-911) service, which identifies the caller's name, address and phone number. There are 67 counties in Kansas that offer E-911 Service. Next in line is D-911, which is similar to caller ID, which has the caller's name and phone number. Twenty counties offer this level of 911 service. The lowest level is called Basic 911, where no information is transmitted and is offered by 5 counties. Additionally, 8 Kansas counties have a mixture of these services, depending on the entity and five counties have no 911 service available to their residents. Two of these counties had plans to begin 911 service by the end of 1999.

Around one-fourth of the counties indicate they receive a significant number of 911 calls from cellular telephones. These calls are handled in the same manner as a Basic 911 call, regardless of the system the county or city uses. Officials pointed out that this has created problems because many cell phone users don't know their location.

Most counties levy the maximum allowable 911 tax (\$.75) and are saving this money to buy equipment. In 1998 approximately \$9.7 million was collected in 911 taxes. Counties were able to carryover balances of more than \$9.1 million, which will be used to buy or update 911 equipment.

At the time this report was done (April 1999), 67 counties had tested their systems for Y2K compliance. About half of those counties stated their systems were in compliance.

Ms. Lash responded to questions from Rep. Alldritt, Rep. McClure, Rep. Klein and Rep. Holmes.

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON UTILITIES, Room 522-S, at 9:10 a.m. on January 12, 2000

The second portion of the audit (Federal Mandates and Organizational Structure)(Attachment 2) was completed in August of 1999. This portion of the audit asked "What Will it Cost to Meet FCC Requirements Regarding Wireless Telephones, and What Options Exist for Recovering Those Costs?"

The FCC has issued regulations promoting Enhanced 911 services for people who call 911 on wireless phones. At present, when someone calls 911 from a wireless phone, the answering point receiving the call has no way to know the person's phone number or location. New FCC regulations will correct this situation in a two-phase process. Phase I requires wireless phone companies to provide, within six months of being asked to do so, the answering point with the caller's phone number and the phone number of the communication tower that received the signal. Phase II requires wireless companies (by October 1, 2001) to provide the caller's location, in latitude and longitude, within 125 meters. In both cases the wireless companies must provide the information only if the answering point requests it and is capable of receiving the information transmitted.

The costs of implementing both Phases will depend on the equipment currently in use and on the choices made in trying to meet the FCC's requirements. There are competing technologies for addressing the Phase I requirements and industry reports show that each option could have different costs for each answering point, local phone company and wireless phone company. Additionally, the strategy each one chooses for Phase I can affect the subsequent cost of implementing Phase II.

There have not been any cost estimates compiled to determine what it might cost Kansas taxpayers to provide Enhanced 911 for wireless phone users. None of the counties had a clear idea of how the requirements would be implemented or of how much they would cost.

There are currently two methods to provide the information for Phase II in providing the caller's location. Those methods are: Triangulation and Global Positioning Satellites (GPS). Costs for either of these methods are unknown.

Although the FCC didn't mandate a particular method for recovering the costs of providing Enhanced 911 service to wireless users, other states have imposed a tax on those users. Of the 30 states that have developed such a system, all have imposed a tax on wireless phone users - 21 of whom have a uniform statewide tax.

The post audit committee recommended that the appropriate legislative body might explore the possibility of creating a resource in the form of an advisory committee or task force to work with people from public safety, the wireless industry, the local phone companies, the state phone people and emergency services. The committee or task force could discuss, among other relevant topics, what is needed, how it can be done, does wireless need statewide oversight and what the statutory limitations are on how 911 money can be spent.

Ms. Lash responded to questions from Rep. Dahl, Rep. Sloan, Rep. Holmes, and Rep. McClure.

Chairman Holmes asked if the wireless people would be interested in providing information to the committee tomorrow about towers, triangulation and GPS.

Chairman Holmes reminded the committee to bring forward committee bill requests tomorrow. He also stated he had spoken with the House Education Committee Chairman and plans were in the works to meet jointly during the third week of the session.

Meeting was adjourned at 10:00 a.m. Next meeting is scheduled for Thursday, January 13, 2000 at 9 a.m.

HOUSE UTILITIES COMMITTEE GUEST LIST

DATE: January 12, 2000

NAME	REPRESENTING
Jolene Benham	Sign Language Interpreter
Marci Van	Sedgwick County
Diane Goetz	Sedgwick County
Susan Richard	ALLTEL
Randy Allen	Kansas Association of Counties
KEITH FADDIS	OVERLAND PARK POLICE
Kelly Kuitala	City of Overland Park
Jennifer Crow	Federico Consulting
Whitney Damron	KC, KS/WYCO
ED SCHAUB	WESTERN RESOURCES
Kim Gully	LKM
Robin Kempf	Legis Post Audit
Sandy Braden	SuBell Mobile
David Factor	Johnson County
DAVID ROSENTHAL	SWB/KCOHT

HOUSE UTILITIES COMMITTEE GUEST LIST

DATE: Jan. 12, 2000

NAME	REPRESENTING
Rebecca J. Aranda	KCDHH (Deaf & Hard of Hearing)
Kevin Drain	Shawnee County CECC
Kim Adams	Topeka Independent Living
Rhoda Smith	Topeka Independent Living
Bell Nguyen	Shawnee County CECC
Don & Miles	Kansas Electric Cooperatives
Nick Everett	ATT
Mike Murray	SPRINT
Anthony A. Fackell	ADA Coordinator (KS)



PERFORMANCE AUDIT REPORT

**Reviewing the 911 Emergency Phone Systems
in Kansas, Part I: Identifying the Current Status**

**A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas**

99-13

HOUSE UTILITIES

DATE: 1-12-00

ATTACHMENT 1

Legislative Post Audit Committee

Legislative Division of Post Audit

THE LEGISLATIVE POST Audit Committee and its audit agency, the Legislative Division of Post Audit, are the audit arm of Kansas government. The programs and activities of State government now cost about \$8 billion a year. As legislators and administrators try increasingly to allocate tax dollars effectively and make government work more efficiently, they need information to evaluate the work of governmental agencies. The audit work performed by Legislative Post Audit helps provide that information.

We conduct our audit work in accordance with applicable government auditing standards set forth by the U.S. General Accounting Office. These standards pertain to the auditor's professional qualifications, the quality of the audit work, and the characteristics of professional and meaningful reports. The standards also have been endorsed by the American Institute of Certified Public Accountants and adopted by the Legislative Post Audit Committee.

The Legislative Post Audit Committee is a bipartisan committee comprising five senators and five representatives. Of the Senate members, three are appointed by the President of the Senate and two are appointed by the Senate Minority Leader. Of the Representatives, three are appointed by the Speaker of the House and two are appointed by the Minority Leader.

Audits are performed at the direction of the Legislative Post Audit Committee. Legislators or committees should make their requests for performance audits through the Chairman or any other mem-

ber of the Committee. Copies of all completed performance audits are available from the Division's office.

LEGISLATIVE POST AUDIT COMMITTEE

Representative Kenny Wilk, Chair
Representative Richard Aldritt
Representative John Ballou
Representative Lynn Jenkins
Representative Ed McKechnie

Senator Lana Oleen, Vice-Chair
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Senator Pat Ranson
Senator Chris Steineger
Senator Ben Vidricksen

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Barbara J. Hinton, Legislative Post Auditor

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LEGISLATURE OF KANSAS
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April 13, 1999

To: Members, Legislative Post Audit Committee

Representative Kenny Wilk, Chair
Representative Richard Alldritt
Representative John Ballou
Representative Lynn Jenkins
Representative Ed McKechnie

Senator Lana Oleen, Vice-Chair
Senator Anthony Hensley
Senator Pat Ranson
Senator Chris Steineger
Senator Ben Vidricksen

This report contains the findings from our completed performance audit, *Reviewing the 911 Emergency Phone Systems in Kansas, Part I: Identifying the Current Status of the Systems*.

The report also contains an appendix which details the status of each public safety answering point in the State, as reported to us by county and city officials.

At a later date, we will issue Part II of this performance audit, which will study the cost of new federal requirements placed on answering points and examine whether the existing 911 systems are efficient and effective.

We would be happy to discuss the findings presented in this report with any legislative committees, individual legislators, or other State officials.


Barbara J. Hinton
Legislative Post Auditor

EXECUTIVE SUMMARY
LEGISLATIVE DIVISION OF POST AUDIT

What is the Current Status of the 911 Systems in Kansas?

Nearly all counties have 911 services, and most offer Enhanced 911. page 7
Almost 90% of Kansas counties have 911 services for all residents. In the five counties that have only partial service, 911 is generally available in the largest population centers. The counties that have no 911 services tend to be sparsely populated. Altogether, 98% of all Kansans have 911 services available to them.

Enhanced 911 services (which identify the caller's name, address, and telephone number) are available in about two-thirds of Kansas counties, which covers 93% of the State's population. The remaining counties and population are served by Identification 911 services (which identify the caller's name and telephone number only). In counties with no 911 services, residents reach emergency services by calling one or more 7-digit numbers.

About one-fourth of the counties said they receive a significant number of 911 calls from cellular telephones. page 8
For most 911 answering points, calls from cellular telephones must be handled as if they came in on a Basic 911 system that provides no information about the caller. County officials pointed out that this creates problems because many cell phone users don't know their own number or location. Information we obtained from county officials generally didn't validate concerns that law enforcement officers were misusing 911 services on their cellular phones, or that counties were refusing to accept cellular calls from outside their service areas.

Most counties levy the maximum allowable 911 tax, and are saving money to buy equipment. page 10
About two-thirds of the counties charge the 75¢ maximum fee. In calendar year 1998, about \$9.7 million in 911 taxes were collected Statewide, and counties carried over balances totaling \$9.1 million. Nearly all counties with a carryover balance told us they were saving money to buy or update their 911 equipment.

The 911 systems in 67 counties have been tested for Year 2000 compliance; officials in about half of those counties reported their systems currently are in compliance. page 14
Year 2000 compliance only concerns those counties that have Enhanced 911 or Identification 911 systems. Only 12 counties with those types of systems hadn't tested their systems at the time of the audit.

APPENDIX A: Detailed Summary of Counties' 911 Systems page 15

This audit was conducted by Cindy Lash, Sonja Erickson, Robin Kempf, and Kate Watson. Randy Tongier was the audit manager. If you need any additional information about the audit's findings, please contact Ms. Lash at the Division's offices. Our address is: Legislative Division of Post Audit, 800 SW Jackson Street, Suite 1200, Topeka, Kansas 66612. You also may call (785) 296-3792, or contact us via the Internet at: LPA@mail.ksleg.state.ks.us.

Reviewing the 911 Emergency Phone Systems in Kansas, Part I: Identifying the Current Status

Emergency telephone services, known as 911, operate under the control of city and county governments. To help fund these 911 services, local governments can charge telephone users up to 75¢ per month for each phone line wired into a residence or business. The law prohibits the taxation of wireless (cellular) telephones. A recent Federal Communication Commission order requires local governments and cellular phone companies to provide cellular phone users, under certain conditions, with improved 911 services. A bill introduced in the Senate to extend the 911 tax to cellular telephones, which could help finance the cost of those improvements, has raised broader questions about how well the system is functioning in Kansas.

There's no Statewide oversight of the 911 system, so legislators lack such basic information as which counties have 911 systems, how technologically sophisticated those systems are, and whether counties have a single consolidated system or multiple systems. Without this basic information, it's difficult to determine whether the citizens of Kansas are being well-served by the 911 system, and to make informed decisions about the need for additional taxes in this area.

This audit was conducted in two parts. This first part answers the following question:

1. What is the current status of the 911 systems in Kansas?

To answer this question, we contacted emergency preparedness directors in each county to find out how many 911 systems exist in each county and who administers them. We then contacted these 911 administrators to obtain detailed information about how their systems are structured and operated. We also contacted most city or county clerks to get such financial information as tax revenues and carryover balances.

To help ensure the information we obtained by telephone was accurate, we faxed city and county officials copies of the information they provided and asked them to review and sign off on those figures. We also visited the 911 center in Topeka to get a basic understanding of how a center operates. Originally, this question included a comparison of Kansas' 911 system with other states' systems. Because of time constraints and because the comparison fit more logically with fieldwork that will be done in Part II of the audit, the other state comparison is being included with that report.

In conducting Part I of this audit, we followed all applicable governmental auditing standards set forth by the U.S. General Accounting Office. Our findings begin on page 7, following a brief overview of the 911 system in Kansas.

The second part of the audit addresses the following questions:

2. **What will it cost to meet FCC requirements regarding wireless telephones, and what options exist for recovering those costs?**
3. **Does the current structure of the 911 system result in inefficiencies, higher costs, or other problems for the citizens of Kansas?**

Part II of the audit is being issued later, and should be read in conjunction with this report.

Overview of the 911 System

In 1968, the federal government passed legislation that created 911 as the standard emergency telephone number nationwide. Federal officials have encouraged—but not required—local units of government to adopt this system.

The advantages of a single, 3-digit, nationally recognized emergency number include:

- it can be dialed quickly
- it's easy to remember
- it's the same no matter where you are, or which public safety entity you need (police, fire, ambulance)

Using 911 gives callers quicker access to appropriate emergency services, which should help save lives, reduce property damage, and increase public safety.

The 911 System In Kansas Is Controlled by Local Units of Government

Kansas law gives cities and counties the authority to provide 911 service and to levy a tax to pay for that service of up to 75¢ per month for each telephone line that is hard-wired into a business or residence. The law specifies how the tax is to be collected and remitted, and limits how the moneys may be used. Specifically:

- the tax is to be collected from individuals and businesses by local telephone companies as part of the monthly billing
- telephone companies must remit the tax to local units of government on a quarterly basis, retaining up to 2% of the tax revenues as an administrative fee
- tax revenues may be used to pay only the following expenses: monthly telephone bill for 911 services, initial installation and non-recurring start-up costs, capital improvements or equipment and other physical enhancements to the system, and acquisition and installation of road signs that aid in the delivery of emergency services.

There's no State-level oversight of the system, nor have local units of government established any type of coordinating body for the various systems.

Three Types of 911 System Are Used in Kansas

Dialing 911 connects the caller directly to a public safety “answering point”. In Kansas the answering points tend to be located in a police or sheriff’s office, and the people who answer the calls frequently also dispatch the required emergency services. The type of 911 system used can affect how quickly, and even whether, assistance is received. Three general types of 911 are currently used. As described below, all three connect the caller to a person who can take verbal information; the difference is in the type of additional information that’s supplied automatically over the telephone line.

- **Enhanced 911 (called E-911)** displays the caller’s name, address, and telephone number on a computer screen. This system offers the greatest level of service to the public, because it allows the answering point to know where the caller is even if he or she can’t speak, or if the call is interrupted before all the necessary information is provided.
- **Identification 911 (called D-911)** displays only the caller’s telephone number. The answering point can use the telephone number to obtain the address, but this step delays the response time.
- **Basic 911** provides no information about the caller. In a situation where the caller can’t respond, the answering point has to trace the telephone number and obtain the address before it can send out emergency assistance.

Although Enhanced 911 provides the greatest protection to the public, there are several reasons why a local unit of government might not have it: it’s more expensive than the other systems, and it requires street addresses to achieve the maximum benefit. Some Kansas counties still don’t have street addresses in rural areas.

Most Counties Have Only One 911 Dispatch Center But Several Have Two or More

The typical Kansas county has one answering point that provides countywide coverage. However, 15 counties have multiple answering points with varying ranges of coverage. (The issues of potential duplication and overlap that this raises will be explored in Part II of the audit.) Counties with multiple answering points are described below:

- Nine counties have two answering points that together provide coverage for the entire county. Seven of those counties have one answering point that covers a single city and another that covers the rest of the county. Those counties include Bourbon, Dickinson, Labette, Lyon, Nemaha, Pottawatomie, and Sumner. In the

remaining counties, Cowley and Douglas, coverage is divided between two parts of the county rather than a city and county.

- Four counties have three or more answering points that provide coverage for the entire county. Those counties include Butler, Johnson, Leavenworth, and Montgomery.
- Two counties have two or more answering points but cover only part of the county. Those include Wilson and Cloud counties. Wilson has two answering points that provide coverage for the cities of Neodesha and Fredonia. Cloud County has four answering points that provide coverage for individual cities.

What Is the Current Status of the 911 Systems in Kansas?

In answering this question, we looked at four issues: the availability of service, cellular calls, funding, and Year 2000 compliance. We found that 911 service is available almost everywhere in Kansas, usually as Enhanced 911—the format that provides the answering point with the caller's name, address, and telephone number. About one-fourth of the counties get a significant percent of their 911 calls from cellular telephones. Residents of most counties are taxed at the maximum rate, and some counties carried over seemingly large balances of 911 tax revenue from 1998. However, officials in many counties told us they must build up a surplus before they can purchase new equipment. The 911 systems in 68 counties have been tested for computer problems associated with the Year 2000; about half of those reported they were in compliance.

Nearly All Counties Have 911 Services, And Most Offer Enhanced 911

Two notes about our methodology help explain the data that follows: First, all information was self-reported by city and county officials; there was no way for us to independently verify its accuracy. Second, we chose to use the county as our unit for reporting information. In most cases, there was only one 911 system in a county. But when there were more—for example, if a city operated its own 911 system while the remainder of the county was covered by another system—we combined the information. We classified a county as “mixed” if the various systems were different (for example if the city charged a different tax rate than the county, or offered a different level of service). The “mixed” category typically is small, and Appendix A, which has county by county data, breaks out the information that was combined.

Fully 90% of Kansas counties have 911 services for all residents. In the five counties that have only partial service, 911 is generally available in the largest population centers, which means most people in those counties have 911 services as well. The five counties that have no 911 tend to be very sparsely populated. Overall, 98% of Kansans have 911 services available to them.

More Kansas residents will have 911 services in the future. Two counties without service (Gove and Linn) currently are levying a 911 tax to build up moneys so they can begin 911 services. In addition, three counties with partial services are levying taxes to extend their 911 services countywide (Doniphan, Pawnee, and Wilson).

Enhanced 911 services are available in about two-thirds of Kansas counties, which covers 93% of the State's population. Most of the remaining counties and population are served by Identification 911 services. With both of these services the answering point can determine where the call came from, even if the caller is unable to

speaking. Only about 1.2% of Kansans have Basic 911 services while another 1.6% have no 911 at all. The map at the top of page 9 shows the types of 911 services available in each county.

In the five counties where there are no 911 services, residents reach emergency services by calling one or more 7-digit numbers. These numbers take slightly longer to dial, are more difficult to remember (particularly for children), and may not be known to people who are visiting an area.

In three of the five counties that have no 911 services (Chase, Elk, and Linn), residents can dial a single 7-digit number that connects them to a dispatcher for all emergency services. In Gove and Wallace Counties, residents have to dial different numbers for different emergency services (for example, police, fire, and ambulance). The more 7-digit numbers involved, the greater the possibility of delay in reaching the appropriate dispatcher.

About One-Fourth of the Counties Said They Receive A Significant Number of 911 Calls From Cellular Telephones

For most answering points, calls from cellular telephones require special handling. Unlike a call from a telephone that is hard-wired into a business or residence, a cellular call currently carries no identifying information, regardless of the type of 911 system the answering point uses. All cellular calls have to be handled as if they came in on a Basic 911 system. County officials pointed out two unique problems this creates:

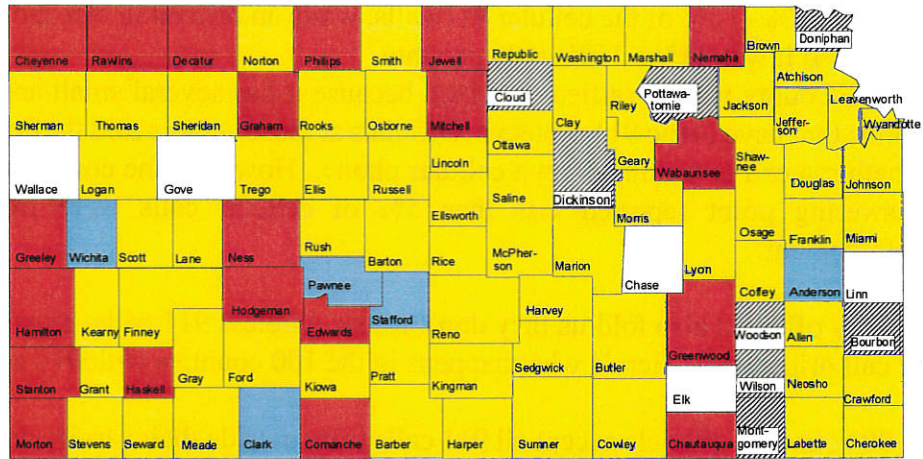
- many cell phone users don't know their own number. If the call gets disconnected for some reason, the answering point can't call the person back.
- cellular callers may not know where they are, particularly if they're traveling in an unfamiliar area. It can take an answering point a long time to determine the location, if it can be done at all.

As the map at the bottom of page 9 shows, county officials' estimates of the percentage of 911 calls that come from cellular telephones vary quite a bit. In the 23 counties with the highest percentage of 911 calls from cell phones, officials said the rate ranged from 26% to 50% (in Hodgeman County) of all 911 calls.

Information we obtained from county officials generally didn't validate concerns that law enforcement officers were misusing 911, or that counties were refusing to accept cellular calls from outside their service area. Here's what these officials told us about law enforcement officers using 911:

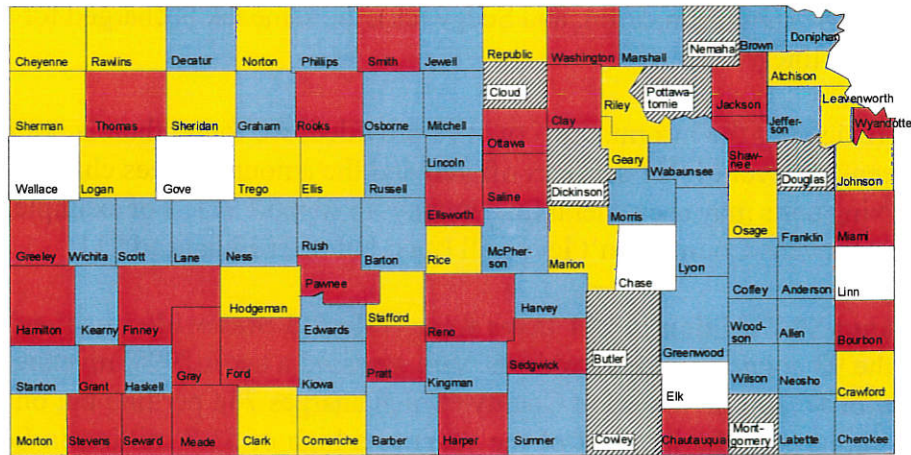
- in 96 of 100 counties with 911 services, officials said fewer than 5% of their cellular 911 calls could be attributed to law enforcement officers. This was the

Level of 911 Service



E-911 (67 counties)
 D-911 (20 counties)
 Basic 911 (5 counties)
 Mixed (8 counties)
 No 911 (5 counties)

Percentage of Total 911 Calls Attributed to Cellular Phones



More than 25% (23 counties)
 10% - 25% (28 counties)
 Less than 10% (41 counties)
 Mixed (8 counties)
 No 911 (5 counties)

- lowest range we offered them to choose from, but 63 officials spontaneously commented that law enforcement doesn't use the 911 line at all.
- in 3 counties, law enforcement officers reportedly use 911 more frequently. Two counties (Reno and Atchison) estimated that calls from law enforcement officers made up 5% - 10% of the cellular 911 calls, while an official in Neosho County estimated it was 11% - 15% in that county.
 - Cloud County was classified as mixed because it has several small answering points that have Basic 911 systems. Officials at those centers said they can't tell whether a call is coming from a cellular phone. However, the county's largest answering point reported less than 5% of cellular calls were from law enforcement.

County officials also told us they don't refuse wireless 911 calls, regardless of where the call originates. Here's what happens in the 100 counties with 911 services:

- in 90 counties, officials accept all 911 calls from outside their service area, then transfer the calls to the appropriate answering point.
- in 10 counties officials said they don't receive wireless calls from outside their area, most often because they don't have a cellular tower to relay the call.

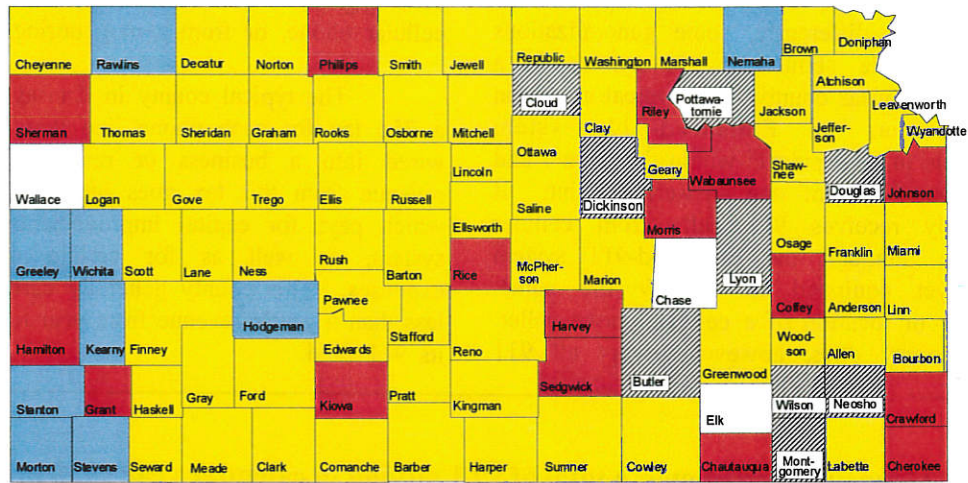
Most Counties Levy the Maximum Allowable 911 Tax, And Are Saving Money To Buy Equipment

State law allows local units of government to charge residents a fee of up to 75¢ per month for each telephone line hard-wired into a business or residence. As the map at the top of page 11 shows, about two-thirds of the counties charge the maximum fee. In all but 3 counties (Johnson, Lyon, and Sedgwick), the same tax is charged for business and residential lines.

In reviewing the information counties provided, we found there's not always a link between the level of 911 services offered and the amount of fees charged. That's because taxing units may use general fund moneys to support 911. For example, Kearny County and Stevens County don't levy a 911 tax, but offer Enhanced 911.

About \$9.7 million in 911 taxes were collected Statewide in calendar year 1998. In the 93 counties where residents were assessed a tax in 1998, revenues ranged from a low of \$6,200 in Woodson County (which charges 75¢ per line but only began collecting moneys in the last half of the year) to a high of \$1.7 million in Sedgwick County (which charges 57¢ per residential line). The map at the bottom of page 11 shows the level of revenue collected in each county that year.

Monthly Fees



1998 Total Revenues



1-14

911 Services in a Typical Kansas County

Although every county operates its 911 system differently, some generalizations can be made about the 911 system in a "typical" Kansas county. The typical county in Kansas has an Enhanced-911 system available to all residents within the county and is operated out of one answering point. It regularly receives 911 calls from cellular phones, although the Enhanced-911 system isn't yet equipped to identify the name, number or location of a cellular phone caller. This county does, however, accept all 911

calls, regardless of whether they come from a cellular phone, or from a neighboring county.

The typical county in Kansas collects a 75¢ tax for each phone line that is hard-wired into a business or residence. The revenue from this tax goes into a 911 fund which pays for capital improvements to the system, as well as for certain operating expenses. This county generally carries over less than a year's revenue from year to year in its 911 fund.

Counties carried over a total of \$9.1 million in calendar year 1998 in 911 tax levy moneys. Most counties carried over from \$10,000 to \$50,000. Nearly all counties with a carryover balance told us they are saving money to buy or update 911 equipment. The map at the top of page 13 shows the carryover balance in each county. The map at the bottom of page 13 puts these carryover amounts into perspective by showing how the amount carried over compares with the amount of revenue collected. For example, even though Shawnee County had a large carryover balance (more than \$600,000), that amount represented only about 9 months of revenue. In more than half the counties, less than one year's revenue was carried over.

911 in the Kansas City Metropolitan Area Is a Cooperative Affair

A unique situation exists in Johnson, Wyandotte, and Leavenworth Counties with regard to 911 administration. These three counties are members of the Mid-America Regional Council, a bi-state county group in the Kansas City metropolitan area. The counties cooperate in a variety of areas, such as transportation, environmental services, and emergency services, which includes the provision of 911.

Seven of the eight counties in the Council have signed a 911 Interlocal Cooperation Agreement, which covers the administration of 37 local answering points. The agreement requires each county to share all operation, administrative, and maintenance costs on a per capita basis, to participate in a regionwide modernization of the 911 equipment, and to take part in the ongoing management of the regional 911 system.

According to information provided by the Council, it costs approximately \$2 million per year to operate the 911 system in the seven-county metro area. Each county is responsible for imposing a surcharge or tax on its residents to pay for its share of the costs.

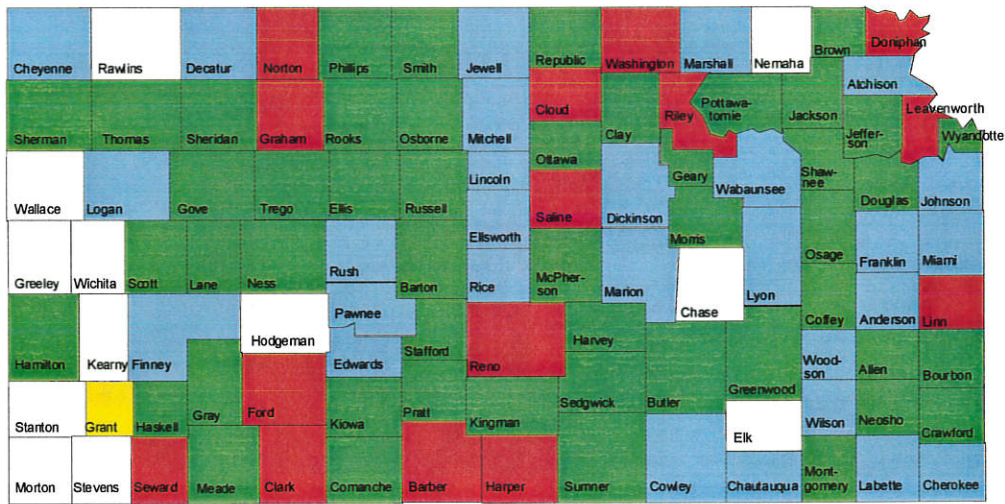
Although membership clearly gives rise to the financial obligation of sharing costs, the counties receive many benefits from participating in the Cooperation Agreement. The counties have standardized their equipment and share a common technological support system. Representatives meet frequently to discuss new technology. Recently, the Council tested equipment in each county to ensure compliance with Year 2000, and the Council is planning to jointly install equipment which could pinpoint the location of cellular phone callers.

911 Revenue Carried Over from 1998 to 1999



- More than \$500,000 (5 counties)
- Between \$100,001 and 500,000 (14 counties)
- Between \$50,001 and 100,000 (22 counties)
- Between \$10,001 and 50,000 (39 counties)
- Between \$1 and 10,000 (6 counties)
- Carried nothing over (7 counties)
- Doesn't assess any 911 tax (12 counties)

Ratios of Carryover Balance to Annual Revenue from 1998

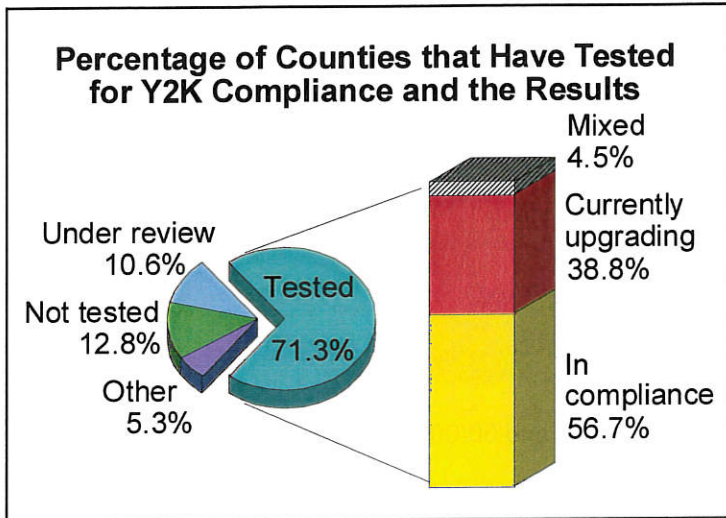


- More than 3 years revenue (1 county)
- 2 to 3 years revenue (15 counties)
- 1 to 2 years revenue (28 counties)
- Less than 1 years revenue (49 counties)
- Doesn't assess any 911 tax (12 counties)

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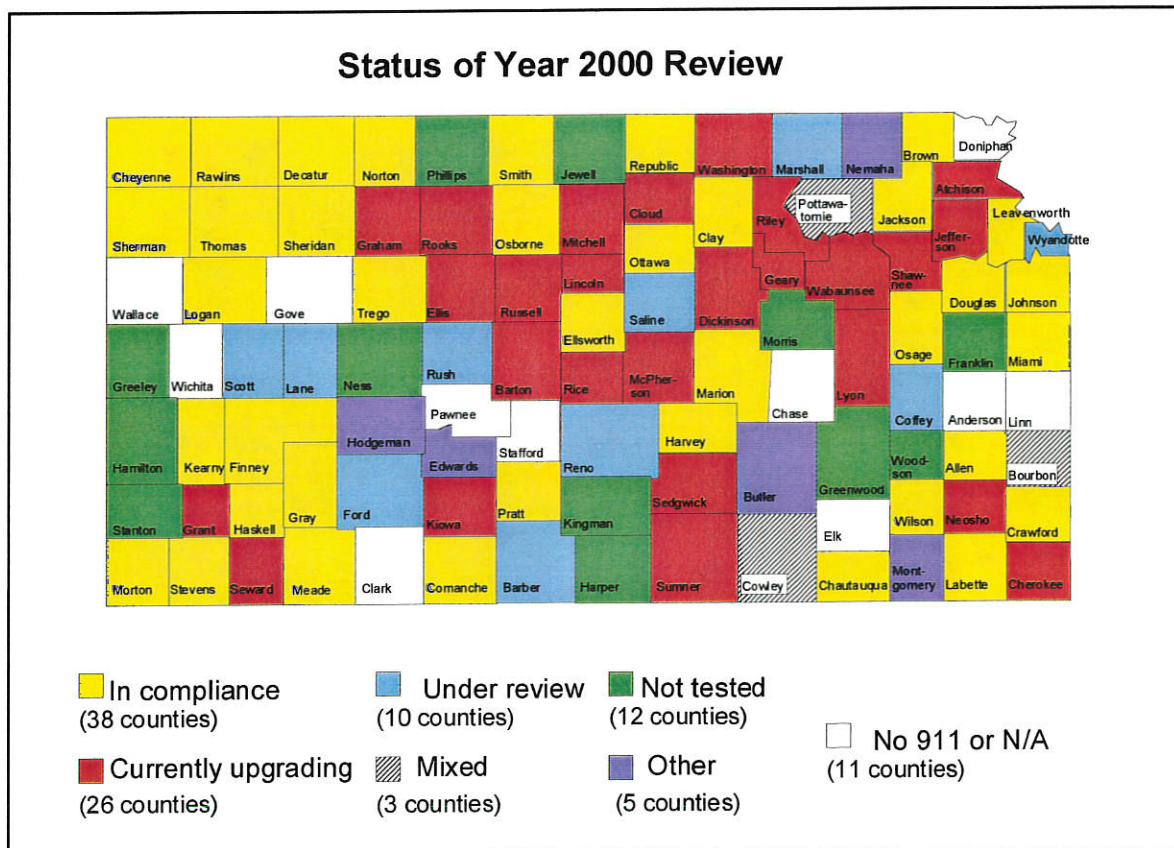
The 911 Systems in 67 Counties Have Been Tested for Year 2000 Compliance; About Half of Those Reported They Currently Are in Compliance

The accompanying graphic shows the status of counties in conducting a Year 2000 compliance review of their systems (pie chart), and the outcome of that review for the counties that have completed testing (bar chart). The graphic and percentages are based on the 94 counties that have Enhanced 911 or Identification 911 systems. Year 2000 is not expected to be an issue for Basic 911 systems.



The accompanying graphic shows the status of counties in conducting a Year 2000 compliance review of their systems (pie chart), and the outcome of that review for the counties that have completed testing (bar chart). The graphic and percentages are based on the 94 counties that have Enhanced 911 or Identification 911 systems. Year 2000 is not expected to be an issue for Basic 911 systems.

As the map at the bottom of the page shows, most counties' 911 systems either are in compliance, or county officials are somewhere in the process of reviewing or upgrading their systems.



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APPENDIX A

Detailed Summary of Counties' 911 Systems

The following table gives details about the 911 emergency telephone system in each county. For those counties that have more than one 911 answering point, we've included separate information for each center. For example, "Douglas1" serves all of Douglas County except the University of Kansas, and "Douglas2," serves only the University of Kansas. Also, Gove, Linn, and Wilson (Wilson1) Counties are currently assessing a 911 tax, so their financial information is included in this table, but these areas do not yet have 911 service. All three will use the tax revenues to implement a countywide 911 system in the future.

All information for this audit was collected through telephone interviews with city and county officials. To help ensure the accuracy of the data, we faxed officials copies of the information they provided and asked them to review and sign off on the figures. In all but a few cases they did so. The counties (or answering points) for which we didn't receive complete verification are marked with an "*".

County	Area covered	Type of 911	What % of 911 calls do you receive from cellular phones?	What % of cellular 911 calls do you receive from public safety officials?	Do you accept 911 cellular calls originating from other counties?	If not, why not?
Allen	whole county	E-911	Less than 10%	Less than 5%	Yes	
Anderson	whole county	Basic 911	Less than 10%	Less than 5%	Yes	
Atchison	whole county	E-911	32%	5% to 10%	Yes	
Barber	whole county	E-911	Less than 10%	Less than 5%	Yes	
Barton	whole county	E-911	Less than 10%	Less than 5%	Yes	
Bourbon 1	whole county, except City of Fort Scott	D-911	10% to 25%	Less than 5%	Yes	
Bourbon 2	City of Fort Scott	E-911	10% to 25%	Less than 5%	Yes	
Brown	whole county	E-911	Less than 10%	Less than 5%	Yes	
*Butler1	Entire county, except cities of El Dorado, Andover and Augusta	E-911	30%	Less than 5%	Yes	
Butler2	City of Augusta	E-911	Less than 10%	Less than 5%	Yes	
Butler3	City of Andover	E-911	50%	Less than 5%	Yes	
Butler4	City of El Dorado	E-911	20% to 30%	Less than 5%	Yes	
Chase	no 911 in county	N/A	N/A	N/A	N/A	
Chautauqua	whole county	D-911	10% to 25%	Less than 5%	Yes	
Cherokee	whole county	E-911	Less than 10%	Less than 5%	Yes	
Cheyenne	whole county	D-911	30% to 35%	Less than 5%	No	has not occurred
Clark	whole county	Basic 911	25% to 30%	Less than 5%	Yes	
Clay	whole county	E-911	10% to 25%	Less than 5%	Yes	
Cloud1	City of Concordia plus all of 243 prefix outside the city limits.	D-911	Less than 10%	Less than 5%	Yes	
Cloud2	Jamestown and all of 439 prefix outside city limits	D-911	Less than 10%	Less than 5%	Yes	
Cloud3	Glasco and all of 568 prefix	Basic 911	Respondent didn't know	Respondent didn't know	No	
Cloud4	City of Clyde and all of 446 prefix	Basic 911	Respondent didn't know	Respondent didn't know	No	
Cloud5	Miltonvale and 427 exchange.	Basic 911	Respondent didn't know	Respondent didn't know	No	
Coffey	whole county	E-911	Less than 10%	Less than 5%	Yes	
Comanche	whole county	D-911	25%	Less than 5%	Yes	
Cowley1	Southern half of Cowley county	E-911	30%	Less than 5%	Yes	
Cowley2	Northern half of Cowley County	E-911	Less than 10%	Less than 5%	Yes	
Crawford	whole county	E-911	32%	Less than 5%	Yes	
Decatur	whole county	D-911	Less than 10%	Less than 5%	Yes	
Dickinson1	Herington Exchange (includes parts of Dickinson, Marion and Morris Cos.)	Basic 911	Less than 10%	Less than 5%	Yes	
Dickinson2	whole county except the Herington Exchange	E-911	10% to 25%	Less than 5%	Yes	
Doniphan1	City of Highland	Basic 911	Less than 10%	Less than 5%	Yes	
Doniphan2	No 911 service yet - currently taxing to generate revenue to install system countywide	No 911	No 911 wireless	No 911 wireless	N/A	
Douglas1	whole county except University of Kansas campus	E-911	30%	Less than 5%	Yes	

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County	Monthly fee: residential	Total fees CY 1997	Total fees CY 1998	Balance end CY 1997	Balance end CY 1998	Use of surplus	Has your 911 system been reviewed for Year 2000 compliance?	What was the conclusion of that review?
Allen	\$0.75	\$60,348	\$10,038	\$18,722	\$17,470	Rolls over for next year	Yes	Compliant
Anderson	\$0.75	\$36,255	\$41,774	\$52,841	\$60,479	System upgrades	N/A	N/A
Atchison	\$0.75	\$65,675	\$66,408	\$70,960	\$92,044	Equipment purchases	Yes	Currently upgrading
Barber	\$0.75	\$28,082	\$29,125	\$29,015	\$58,140	System upgrades	Yes	Under review
Barton	\$0.75	\$139,326	\$137,817	\$163,250	\$82,643	System upgrades	Yes	Currently upgrading
Bourbon 1	\$0.75	\$26,524	\$27,070	\$19,639	\$3,331		Yes	Currently upgrading
Bourbon 2	\$0.75	\$39,985	\$40,400	\$26,038	\$61,653	Maintenance and upkeep	Yes	Compliant
Brown	\$0.75	\$47,993	\$46,135	\$10,646	\$27,461	Equipment purchases	Yes	Compliant
*Butler1	\$0.75	\$140,000	\$140,000	\$0	\$0		No	Not tested
Butler2	\$0.75	\$36,280	\$29,659	\$37,447	\$60,677	System upgrades	Yes	Compliant
Butler3	\$0.75	\$24,754	\$26,155	\$24,757	\$10,612	Rolls over for next year	Yes	Under review
Butler4	\$0.65	\$48,654	\$49,314	(\$6,799)	\$9,068		Yes	Compliant
Chase	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chautauqua	\$0.50	\$17,328	\$18,232	\$17,328	\$18,275	System upgrades	Yes	Compliant
Cherokee	\$0.50	\$60,252	\$60,979	\$60,829	\$71,362	System upgrades	Yes	Currently upgrading
Cheyenne	\$0.75	\$13,000	\$13,000	\$8,931	\$21,195	Maintenance and upkeep	Yes	Compliant
Clark	\$0.75	\$12,065	\$12,728	\$31,923	\$37,538		N/A	N/A
Clay	\$0.75	\$39,248	\$41,211	\$12,942	\$26,798	Equipment purchases and system upgrades	Yes	Compliant
Cloud1	\$0.75	\$29,870	\$24,810	\$31,931	\$54,389	Equipment purchases	Yes	Currently upgrading
Cloud2	\$0.75	\$2,164	\$2,902	\$7,251	\$11,169	It continues to build up. Their calls go to Concordia, but they don't pay Concordia for 911 service. Their only expense is \$38/mo. to the phone company.	Yes	Currently upgrading
Cloud3	\$0.00	\$0	\$0	\$0	\$0		N/A	N/A
Cloud4	\$0.75	\$1,012	\$5,148	(\$80)	\$4,231	Equipment purchases	N/A	N/A
Cloud5	\$0.00	\$0	\$0	\$0	\$0		N/A	N/A
Coffey	\$0.50	\$25,263	\$19,661	\$19,831	\$12,044	Maintenance and upkeep	Yes	Under review
Comanche	\$0.75	\$10,713	\$11,144	\$16,531	\$2,678	Equipment purchases	Yes	Compliant
Cowley1	\$0.75	\$153,000	\$156,000	\$137,000	\$187,000	System upgrades	Yes	Compliant
Cowley2	\$0.75	\$0	\$0	\$0	\$0	To pay back SW Bell financing for new equipment, and then to buy new equipment to stay current. Savings will go to tandem trunking.	Yes	Currently upgrading
Crawford	\$0.46	\$107,285	\$121,466	\$46,873	\$49,502	surplus is spent on pagers and radios for the volunteer fire department	Yes	Compliant
Decatur	\$0.75	\$17,715	\$17,843		\$18,884	System upgrades	Yes	Compliant
Dickinson1	\$0.75	\$0	\$2,050	\$0	\$2,050	Equipment purchases and system upgrades	N/A	N/A
Dickinson2	\$0.65	\$61,841	\$63,153	\$125,859	\$123,429	System upgrades	Yes	Currently upgrading
Doniphan1	\$0.00	\$0	\$0	\$0	\$0		N/A	N/A
Doniphan2	\$0.75	\$33,339	\$35,241	\$52,595	\$81,341	Addressing and equipment purchases	N/A	N/A
Douglas1	\$0.75	\$429,801	\$450,479	\$61,000	\$388,702	Equipment purchases	Yes	Compliant

County	Area covered	Type of 911	What % of 911 calls do you receive from cellular phones?	What % of cellular 911 calls do you receive from public safety officials?	Do you accept 911 cellular calls originating from other counties?	If not, why not?
Douglas2	University of Kansas campus	E-911	Less than 10%	Less than 5%	No	The campus 911 has no connectivity to wireless phone systems.
Edwards	whole county	D-911	Less than 10%	Less than 5%	Yes	
Elk	no 911 in county	N/A	N/A	N/A	N/A	
Ellis	whole county	E-911	30.40%	Less than 5%	Yes	
Ellsworth	whole county	E-911	10% to 25%	Less than 5%	Yes	
Finney	whole county	E-911	10% to 25%	Less than 5%	Yes	
Ford	whole county	E-911	10% to 25%	Less than 5%	Yes	
Franklin	whole county	E-911	Less than 10%	Less than 5%	Yes	
Geary	whole county	E-911	35%	Less than 5%	Yes	
Gove	No 911 service yet - currently taxing to generate revenue to install system countywide	No 911	No 911 wireless	No 911 wireless	N/A	
Graham	whole county	D-911	Less than 10%	Less than 5%	No	no cell tower in county
Grant	whole county	E-911	10% to 25%	Less than 5%	Yes	
Gray	whole county	E-911	10% to 25%	Less than 5%	Yes	
Greeley	whole county	D-911	10% to 25%	Less than 5%	Yes	
Greenwood	Eureka and surrounding areas - 583 prefix. Currently assessing 911 tax to expand services countywide	D-911	Less than 10%	Less than 5%	Yes	
*Hamilton	whole county	D-911	10% to 25%	Less than 5%	Yes	
Harper	whole county	E-911	10% to 25%	Less than 5%	Yes	
Harvey	whole county	E-911	Less than 10%	Less than 5%	Yes	
Haskell	whole county	D-911	Less than 10%	Less than 5%	Yes	
Hodgeman	whole county	D-911	50%	Less than 5%	Yes	
Jackson	whole county	E-911	10% to 25%	Less than 5%	Yes	
Jefferson	whole county	E-911	Less than 10%	Less than 5%	Yes	
Jewell	whole county	D-911	Less than 10%	Less than 5%	Yes	
Johnson	whole county (8 PSAPs)	E-911	30% to 40%	Less than 5%	Yes	
Kearny	whole county	E-911	Less than 10%	Less than 5%	No	no cell tower in county
Kingman	whole county	E-911	Less than 10%	Less than 5%	Yes	
*Kiowa	whole county	E-911	Less than 10%	Less than 5%	No	no cell tower in county
Labette 1	whole county except for City of Parsons	E-911	Less than 10%	Less than 5%	Yes	
Labette 2	City of Parsons (funded through the county)	E-911	Less than 10%	Less than 5%	No	No tower - all wireless goes into the county PSAP
Lane	whole county	E-911	Less than 10%	Less than 5%	Yes	
Leavenworth	whole county (3 PSAPs)	E-911	30%	Less than 5%	Yes	
Lincoln	whole county	E-911	Less than 10%	Less than 5%	Yes	
Linn	No 911 service yet - currently taxing to generate revenue to install system countywide	No 911	No 911 wireless	No 911 wireless	N/A	
Logan	whole county	E-911	40%	Less than 5%	Yes	
Lyon1	whole county, except City of Emporia	E-911	Less than 10%	Less than 5%	Yes	

County	Monthly fee: residential	Total fees CY 1997	Total fees CY 1998	Balance end CY 1997	Balance end CY 1998	Use of surplus	Has your 911 system been reviewed for Year 2000 compliance?	What was the conclusion of that review?
Douglas2	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Edwards	\$0.75	\$16,940	\$16,828	\$21,852	\$20,178	Equipment purchases and system upgrades	Unknown	Unknown
Elk	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ellis	\$0.75	\$145,144	\$143,557	\$104,934	\$120,799	System upgrades	Yes	Currently upgrading
Ellsworth	\$0.75	\$30,846	\$30,841	\$48,236	\$56,739	Equipment purchases and system upgrades	Yes	Compliant
Finney	\$0.75	\$137,696	\$141,536	\$73,975	\$143,085	System upgrades	Yes	Compliant
Ford	\$0.75	\$123,081	\$123,081	\$219,859	\$278,884	System upgrades	Yes	Under review
Franklin	\$0.75	\$63,553	\$91,988	\$163,951	\$179,720	Rolls over for next year	No	Not tested
Geary	\$0.75	\$100,000	\$100,000	\$20,000	\$20,000		Yes	Currently upgrading
Gove	\$0.75	\$6,711	\$21,728	\$4,448	\$16,238		N/A	N/A
Graham	\$0.75	\$16,704	\$16,727	\$22,110	\$34,329	System upgrades	Yes	Currently upgrading
Grant	\$0.25	\$13,926	\$14,955	\$107,803	\$122,601	System upgrades	Yes	Currently upgrading
Gray	\$0.75	\$30,000	\$30,000	\$0	\$0		Yes	Compliant
Greeley	\$0.00	\$0	\$0	\$0	\$0		No	Not tested
Greenwood	\$0.75	\$35,809	\$36,293	\$96,627	\$20,631	System upgrades	No	Not tested
*Hamilton	\$0.50	\$9,593	\$13,393	\$926	\$10,897	Rolls over for next year	No	Not tested
Harper	\$0.75	\$31,550	\$32,142	\$83,936	\$89,414	Maintenance and upkeep	No	Not tested
Harvey	\$0.40	\$77,754	\$80,257	\$0	\$0		Yes	Compliant
Haskell	\$0.75	\$9,000	\$9,000	\$0	\$0	System upgrades	Yes	Compliant
Hodgeman	\$0.00	\$0	\$0	\$0	\$0		Unknown	Unknown
Jackson	\$0.75	\$48,282	\$50,417	\$30,000	\$35,432	Maintenance and upkeep	Yes	Compliant
Jefferson	\$0.75	\$58,817	\$58,817	\$2,990	\$31,269	System upgrades	Yes	Currently upgrading
Jewell	\$0.75	\$16,618	\$17,000	\$12,131	\$22,000	System upgrades	No	Not tested
Johnson	\$0.16	\$762,509	\$800,852	\$740,756	\$1,121,444	They are building up funds for new wireless technology. This is part of a plan developed metro-wide.	Yes	Compliant
Kearny	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Kingman	\$0.75	\$35,483	\$37,088	\$16,201	\$12,646	Rolls over for next year	No	Not tested
*Klowa	\$0.50	\$38,000	\$38,000	\$16,000	\$0	System upgrades	Yes	Currently upgrading
Labette 1	\$0.75	\$103,174	\$104,728	\$141,671	\$159,351	Rolls over for next year	Yes	Compliant
Labette 2	\$0.75	\$0	\$0	\$0	\$0		Yes	Compliant
Lane	\$0.75	\$10,573	\$12,435	\$0	\$0		Yes	Under review
Leavenworth	\$0.75	\$228,426	\$234,184	\$409,170	\$538,244	The surplus will be used for consolidation of 2 PSAPs	Yes	Compliant
Lincoln	\$0.75	\$16,332	\$16,558	\$24,789	\$29,441	Y2K upgrades	Yes	Currently upgrading
Linn	\$0.75	\$39,476	\$36,000	\$49,612	\$88,572		N/A	N/A
Logan	\$0.75	\$15,307	\$15,523	\$18,147	\$16,845	System upgrades	Yes	Compliant
Lyon 1	\$0.75	\$47,937	\$42,576	\$69,417	\$86,599	Rolls over for next year	Yes	Currently upgrading

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County	Area covered	Type of 911	What % of 911 calls do you receive from cellular phones?	What % of cellular 911 calls do you receive from public safety officials?	Do you accept 911 cellular calls originating from other counties?	If not, why not?
Lyon2	City of Emporia; also dispatches ambulance and rescue to entire county	E-911	Less than 10%	Less than 5%	Yes	
Marion	whole county	E-911	30%	Less than 5%	No	This 911 system has selective routing. They only get calls originating from Marion County.
Marshall	whole county	E-911	Less than 10%	Less than 5%	Yes	
McPherson	whole county	E-911	Less than 10%	Less than 5%	Yes	
Meade	whole county	E-911	10% to 25%	Less than 5%	Yes	
Miami	whole county	E-911	10% to 25%	Less than 5%	No	has not occurred
Mitchell	whole county	D-911	Less than 10%	Less than 5%	Yes	
Montgomery 1	Independence, Cherryville, Havanna, Elk City	E-911	50%	Less than 5%	Yes	
Montgomery 2	Coffeyville, Liberty, Tyro, Dearing, South Coffeyville, Oklahoma	E-911	10% to 25%	Less than 5%	Yes	
Montgomery 3	City of Caney, parts of Montgomery and Chautauqua County	D-911	Less than 10%	Less than 5%	Yes	
Morris	whole county	E-911	Less than 10%	Less than 5%	Yes	
Morton	whole county	D-911	33%	Less than 5%	Yes	
Nemaha1	the whole county, except the City of Sabetha	D-911	10% to 25%	Less than 5%	Yes	
Nemaha2	The City of Sabetha	D-911	Less than 10%	Less than 5%	Yes	
Neosho 1	whole county	E-911	Less than 10%	11% to 15%	Yes	
Neosho 2 - Chanute Info	The 911 system covers the entire Neosho County - the funding system is divided between the county and the city of Chanute	E-911	Less than 10%	11% to 15%	Yes	
Ness	whole county	D-911	Less than 10%	Less than 5%	Yes	
Norton	whole county	E-911	40%	Less than 5%	Yes	
Osage	whole county	E-911	30%	Less than 5%	Yes	
Osborne	whole county	E-911	Less than 10%	Less than 5%	No	no cell tower in county
Ottawa	whole county	E-911	10% to 25%	Less than 5%	Yes	
Pawnee	City of Lamed	Basic 911	10% to 25%	Less than 5%	Yes	
*Phillips	whole county	D-911	Less than 10%	Less than 5%	Yes	
Pottawatomie1	City of Wamego	D-911	10% to 25%	Less than 5%	Yes	
Pottawatomie2	whole county except city of Wamego	E-911	30% to 40%	Less than 5%	Yes	
Pratt	whole county	E-911	10% to 25%	Less than 5%	Yes	
Rawlins	whole county	D-911	30% to 35%	Less than 5%	No	has not occurred
Reno	whole county	E-911	10% to 25%	5% to 10%	Yes	
Republic	whole county	E-911	28.40%	Less than 5%	Yes	
Rice	whole county	E-911	30% to 40%	Less than 5%	Yes	
Riley	whole county	E-911	25% to 26%	Less than 5%	Yes	
Rooks	whole county	E-911	10% to 25%	Less than 5%	Yes	
Rush	whole county	E-911	Less than 10%	Less than 5%	No	no cell tower in county
Russell	whole county	E-911	Less than 10%	Less than 5%	Yes	
Saline	whole county	E-911	10% to 25%	Less than 5%	Yes	

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County	Monthly fee: residential	Total fees CY 1997	Total fees CY 1998	Balance end CY 1997	Balance end CY 1998	Use of surplus	Has your 911 system been reviewed for Year 2000 compliance?	What was the conclusion of that review?
Lyon2	2% of basic monthly service charge	\$45,033	\$40,634	\$25,484	\$4,301		Yes	Currently upgrading
Marion	\$0.75	\$56,523	\$58,275	\$79,469	\$100,471	System upgrades	Yes	Compliant
Marshall	\$0.75	\$50,093	\$50,931	\$82,949	\$85,624	System upgrades	Yes	Under review
McPherson	\$0.75	\$131,799	\$128,836	\$56,563	\$78,482	Y2K upgrades and maintenance and upkeep	Yes	Currently upgrading
Meade	\$0.75	\$20,119	\$19,985	\$26,520	\$17,944	Operating costs	Yes	Compliant
Miami	\$0.75	\$113,000	\$84,000	\$69,000	\$95,000	System upgrades	Yes	Compliant
Mitchell	\$0.75	\$32,639	\$33,222	\$30,936	\$57,520	Equipment purchases	Yes	Currently upgrading
Montgomery 1	\$0.69	\$73,393	\$122,120	\$34,923	\$87,912	Equipment purchases	Yes	Compliant
Montgomery 2	\$0.48	\$52,722	\$53,906	\$34,179	\$55,148	Maintenance and upkeep	Yes	Compliant
Montgomery 3	\$0.00	\$0	\$0	\$0	\$0		No	Not tested
Morris	\$0.60	\$29,750	\$25,958	\$22,082	\$14,050	Equipment purchases and operating costs	No	Not tested
Morton	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Nemaha1	\$0.00	\$0	\$0	\$0	\$0		No	Not tested
Nemaha2	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Neosho 1	\$0.75	\$31,217	\$59,452	\$267	\$6,913	System upgrades	Yes	Currently upgrading
Neosho 2 - Chanute Info	\$0.40	\$10,673	\$5,975	\$24,080	\$22,322		Yes	Currently upgrading
Ness	\$0.75	\$0	\$17,964	\$0	\$0	Rolls over for next year	No	Not tested
Norton	\$0.75	\$18,904	\$24,771	\$110,514	\$72,676	System upgrades	Yes	Compliant
Osage	\$0.75	\$62,950	\$65,410	\$46,549	\$38,703	Rolls over for next year	Yes	Compliant
Osborne	\$0.75	\$22,606	\$22,960	\$19,336	\$13,732	Rolls over for next year	Yes	Compliant
Ottawa	\$0.75	\$26,385	\$27,047	\$5,129	\$7,149	Y2K upgrades and operating costs	Yes	Compliant
Pawnee	\$0.75	\$25,500	\$23,123	\$52,200	\$38,000	System upgrades	N/A	N/A
*Phillips	\$0.60	\$23,639	\$24,090	\$0	\$1,779	Equipment purchases and operating costs	No	Not tested
Pottawatomie1	\$0.36	\$9,522	\$10,038	\$18,722	\$17,470	Rolls over for next year	Yes	Under review
Pottawatomie2	\$0.75	\$61,000	\$61,000	\$58,000	\$58,000	Maintenance and upkeep	Yes	Compliant
Pratt	\$0.75	\$47,048	\$49,549	\$30,466	\$37,199		Yes	Compliant
Rawlins	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Reno	\$0.75	\$260,000	\$260,000	\$618,818	\$650,000	System upgrades	Yes	Under review
Republic	\$0.75	\$28,000	\$28,000	\$54,883	\$19,325	System upgrades	Yes	Compliant
Rice	\$0.70	\$46,019	\$48,682	\$66,195	\$75,824	Equipment purchases	Yes	Currently upgrading
Riley	\$0.50	\$170,000	\$170,000	\$315,000	\$389,000	Y2K upgrades	Yes	Considering upgrading
Rooks	\$0.75	\$27,484	\$27,817	\$877	\$322	Y2K upgrades	Yes	Currently upgrading
Rush	\$0.75	\$18,580	\$19,294	\$24,461	\$31,370	System upgrades and maintenance and upkeep	Yes	Under review
Russell	\$0.75	\$40,638	\$46,421	\$18,619	\$12,762		Yes	Currently upgrading
Saline	\$0.75	\$250,335	\$251,013	\$505,748	\$674,892	System upgrades and maintenance and upkeep	Yes	Under review

County	Area covered	Type of 911	What % of 911 calls do you receive from cellular phones?	What % of cellular 911 calls do you receive from public safety officials?	Do you accept 911 cellular calls originating from other counties?	If not, why not?
Scott	whole county	E-911	Less than 10%	Less than 5%	Yes	
Sedgwick	whole county	E-911	10% to 25%	Less than 5%	Yes	
Seward	whole county	E-911	10% to 25%	Less than 5%	Yes	
Shawnee	whole county	E-911	10% to 25%	Less than 5%	Yes	
Sheridan	whole county	E-911	25% to 40%	Less than 5%	Yes	
Sherman	whole county	E-911	35% to 40%	Less than 5%	Yes	
Smith	whole county	E-911	10% to 25%	Less than 5%	Yes	
Stafford	whole county	Basic 911	25%	Less than 5%	Yes	
Stanton	whole county	D-911	Less than 10%	Less than 5%	Yes	
Stevens	whole county	E-911	10% to 25%	Less than 5%	Yes	
Sumner1	whole county, except the city of Mulvane	E-911	Less than 10%	Less than 5%	Yes	
Sumner2	City of Mulvane	E-911	Less than 10%	Less than 5%	Yes	
Thomas	whole county	E-911	10% to 25%	Less than 5%	Yes	
Trego	whole county	E-911	45%	Less than 5%	Yes	
Wabaunsee	whole county	D-911	Less than 10%	Less than 5%	Yes	
Wallace	no 911 in county	N/A	N/A	N/A	N/A	
Washington	whole county	E-911	10% to 25%	Less than 5%	Yes	
Wichita	whole county	Basic 911	Less than 10%	Less than 5%	No	no cell tower in county
Wilson 1	No 911 service yet - currently taxing to generate revenue to install system countywide	No 911	No 911 wireless	No 911 wireless	N/A	
Wilson 2	City of Neodesha	E-911	Less than 10%	Less than 5%	No	They are not equipped to receive any cellular calls.
Wilson 3	City of Fredonia	Basic 911	Less than 10%	Less than 5%	Yes	
Woodson	whole county	D-911 and Basic 911	Less than 10%	Less than 5%	Yes	
Wyandotte	whole county	E-911	10% to 25%	Less than 5%	Yes	

County	Monthly fee: residential	Total fees CY 1997	Total fees CY 1998	Balance end CY 1997	Balance end CY 1998	Use of surplus	Has your 911 system been reviewed for Year 2000 compliance?	What was the conclusion of that review?
Scott	\$0.75	\$26,068	\$25,746	\$56	\$25,338	Equipment purchases	Yes	Under review
Sedgwick	\$0.57	\$1,697,178	\$1,739,992	\$137,331	\$277,257	Equipment purchases	Yes	Currently upgrading
Seward	\$0.75	\$83,809	\$85,465	\$173,334	\$225,230	Equipment purchases	Yes	Currently upgrading
Shawnee	\$0.75	\$805,896	\$822,643	\$647,586	\$636,619	Equipment purchases and system upgrades	Yes	Currently upgrading
Sheridan	\$0.75	\$12,966	\$13,234	\$1,713	\$2,055		Yes	Compliant
Sherman	\$0.50	\$22,133	\$23,555	\$1,016	\$13,529	Rolls over for next year	Yes	Compliant
Smith	\$0.75	\$21,877	\$24,156	\$12,118	\$20,160	System upgrades and maintenance and upkeep	Yes	Compliant
Stafford	\$0.75	\$22,489	\$22,848	\$38,300	\$15,352	Equipment purchases	N/A	N/A
Stanton	\$0.00	\$0	\$0	\$0	\$0		No	Not tested
Stevens	\$0.00	\$0	\$0	\$0	\$0		Yes	Compliant
Sumner1	\$0.75	\$102,000	\$102,000	\$26,198	\$21,100		Yes	Currently upgrading
Sumner2	\$0.75	\$19,393	\$20,102	\$26,894	\$18,140	Rolls over for next year	Yes	Currently upgrading
Thomas	\$0.75	\$41,416	\$42,439	\$30,841	\$22,480	maintenance and upkeep	Yes	Compliant
Trego	\$0.75	\$17,208	\$17,689	\$25,181	\$14,405	Rolls over for next year	Yes	Compliant
Wabaunsee	\$0.65	\$24,134	\$24,661	\$36,536	\$39,554	System upgrades and signage	Yes	Currently upgrading
Wallace	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Washington	\$0.75	\$31,456	\$28,271	\$61,127	\$59,054	System upgrades, maintenance and upkeep, and signage	Yes	Currently upgrading
Wichita	\$0.00	\$0	\$0	\$0	\$0		N/A	N/A
Wilson 1	\$0.75	\$0	\$32,679	\$0	\$32,670		N/A	N/A
Wilson 2	\$0.75	\$12,513	\$12,744	\$20,735	\$26,500	Rolls over for next year	Yes	Compliant
Wilson 3	\$0.00	\$0	\$0	\$0	\$0		N/A	N/A
Woodson	\$0.75	\$0	\$6,164	\$0	\$6,164	System upgrades	No	Not tested
Wyandotte	\$0.75	\$677,342	\$693,600	\$717,754	\$0	System upgrades	Yes	Under review



PERFORMANCE AUDIT REPORT

Reviewing the 911 Emergency Phone Systems in Kansas, Part II: Federal Mandates and Organizational Structure

A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas

99-13.2

HOUSE UTILITIES

DATE: 1-12-00

ATTACHMENT 2

Legislative Post Audit Committee

Legislative Division of Post Audit

THE LEGISLATIVE POST Audit Committee and its audit agency, the Legislative Division of Post Audit, are the audit arm of Kansas government. The programs and activities of State government now cost about \$8 billion a year. As legislators and administrators try increasingly to allocate tax dollars effectively and make government work more efficiently, they need information to evaluate the work of governmental agencies. The audit work performed by Legislative Post Audit helps provide that information.

We conduct our audit work in accordance with applicable government auditing standards set forth by the U.S. General Accounting Office. These standards pertain to the auditor's professional qualifications, the quality of the audit work, and the characteristics of professional and meaningful reports. The standards also have been endorsed by the American Institute of Certified Public Accountants and adopted by the Legislative Post Audit Committee.

The Legislative Post Audit Committee is a bipartisan committee comprising five senators and five representatives. Of the Senate members, three are appointed by the President of the Senate and two are appointed by the Senate Minority Leader. Of the Representatives, three are appointed by the Speaker of the House and two are appointed by the Minority Leader.

Audits are performed at the direction of the Legislative Post Audit Committee. Legislators or committees should make their requests for performance audits through the Chairman or any other mem-

ber of the Committee. Copies of all completed performance audits are available from the Division's office.

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August 19, 1999

To: Members, Legislative Post Audit Committee


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Senator Lana Oleen, Vice-Chair
Senator Anthony Hensley
Senator Pat Ranson
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Senator Ben Vidricksen

This report contains the findings, conclusions, and recommendations from our completed performance audit, *Reviewing the 911 Emergency Phone Systems in Kansas, Part II: Federal Mandates and Organizational Structure*.

The report also contains appendices showing the structure of 911 in a sample of other states and a list of who is in charge of 911 in all Kansas counties.

The report includes several recommendations for the Legislature or the Governor to ease implementation of Enhanced 911 for wireless phone calls and to strengthen 911 operations across the state. We would be happy to discuss these recommendations or any other items in the report with any legislative committees, individual legislators, or other State and local officials.


Barbara J. Hinton
Legislative Post Auditor

EXECUTIVE SUMMARY
LEGISLATIVE DIVISION OF POST AUDIT

**Question 1: What Will it Cost to Meet FCC Requirements
Regarding Wireless Telephones, and What Options Exist
For Recovering Those Costs?**

The FCC has issued regulations promoting Enhanced 911 services for people who call 911 on wireless phones. page 2
Currently, when an individual calls 911 from a wireless phone, the public safety answering point that receives the call has no way to know the person's phone number or location. New FCC regulations will correct this situation in a two-phase process. Phase I requires wireless phone companies to provide the answering point with the caller's phone number and the phone number of the communication tower that received the signal, within six months of being asked to do so. Phase II requires wireless phone companies, by October 1, 2001, to provide the caller's location, in latitude and longitude, within 125 meters (about 400 feet). However, in both cases the wireless companies must provide the information only if the answering point requests it and is capable of receiving the information transmitted to it, and if there is a cost recovery system in place to reimburse wireless phone companies for the costs they incur in providing the information.

The costs of implementing Phases I and II will depend on the equipment currently in use and on the choices made in trying to meet the FCC's requirements. page 4
There are multiple strategies for addressing the Phase I requirements, and industry reports indicate that each option could have different costs for each 911 answering point, local phone company, and wireless phone company. Further, the strategy each one chooses for Phase I also can affect the subsequent cost of implementing Phase II.

Because no one has compiled any cost estimates, we couldn't determine what it might cost Kansas taxpayers to provide Enhanced 911 for wireless phone users. page 6
We had hoped to review and analyze counties' cost estimates for meeting FCC requirements. However, in our visits to counties we found some officials were only vaguely aware of the requirements. The furthest along was Johnson County, which has begun talking with phone companies and is building up a reserve of tax moneys in anticipation of significant expenses in the future. Still, no one had a clear idea of how the requirements would be implemented or of how much they would cost. The costs could be significantly higher if all the parties involved don't work together to adopt common solutions.

Although the FCC didn't mandate any particular method for recovering the costs of providing Enhanced 911 service to wireless users, other states have relied on a tax on those users. page 8
Kansas currently doesn't have a cost recovery system for paying for Phases I and II improvements to the 911 system. Of the 30 states that have developed such a system, all have imposed a tax on wireless phone users—most often a uniform statewide tax.

Conclusion..... page 11
Recommendation..... page 12

**Question 2: Does the Current Structure of the 911 System
Result in Inefficiencies, Higher Costs, or Other Problems
For the Citizens of Kansas?**

In Kansas, 911 Services are wholly under the control of cities and counties, without any central oversight or advisory body to help coordinate the provision of 911 services. page 13
Currently, 83 of 105 Kansas counties have consolidated emergency reporting and dispatching functions—including 911 services—for virtually all local units of government in the county. However, no 911 answering points in Kansas serve more than a one-county area, and there is no central oversight or advisory body in the State that might encourage such consolidation or help coordinate the provision of 911 service Statewide. Most other states we reviewed had similar local control structures, although 6 of 14 had some type of Statewide oversight or advisory body to assist in planning or provide guidance to local programs.

Kansas' current structure for its 911 system may result in some inefficiencies and higher costs. page 14
A 1998 performance audit of 911 in Texas estimated that more than \$14 million could be saved on duplicate equipment if the number of answering points in that state were reduced from 570 to 155. In the 14 Kansas counties that haven't consolidated the dispatch functions for their public safety agencies, each answering point has its own 911 system, equipment, and personnel. Economies of scale could result in greater cost-efficiencies for 911 services—both within counties that haven't consolidated their reporting and dispatching functions, and across county boundaries. For instance, counties without 911 service might be able to acquire that service at a fraction of the equipment cost if they would join dispatching functions with another county that has 911. A central coordinating body over the State's 911 systems could promote efficiencies and improve communication among various 911 answering points.

Whether real or perceived, some barriers exist that tend to limit localities' willingness to consolidate 911 services in spite of the potential benefits. page 18
Consolidating 911 systems within or across counties should offer cost savings on equipment, however many factors work against consolidation. It is politically difficult, requiring agreement among numerous officials with different interests and constituencies, and requiring governing bodies to give up some degree of local control. It's also operationally difficult, because each jurisdiction has different financial capabilities and different policies on how they want to respond to different types of calls. In addition, answering 911 calls is a small part of what most dispatch centers actually do.

Business practices at the State's 911 answering points generally appeared to be adequately designed to prevent inefficiencies, higher costs, and other problems. page 21
The recent Texas audit also identified a number of poor business practices that led to waste and abuse of tax moneys, such as inadequate tax collection practices, lack of competitive purchasing processes, and poor performance management systems. In reviewing 911 operations in six counties we found that tax receipts typically were received on a timely basis, major purchases were

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made using competitive bids, and spending was overseen by political bodies, typically county commissions. Officials generally were able to identify specific purchases they planned to make with the reserves of 911 tax moneys they had generated. Although 99% of the 911 tax moneys spent by the six counties in 1998 were for purposes allowed by State law, lack of clarity in the law lead us to question whether future spending planned by three counties goes beyond uses intended by the Legislature.

Conclusion: page 27

Recommendations: page 27

APPENDIX A: Scope Statement page 29

APPENDIX B: Structure of 911 in a Sample of Other States page 33

APPENDIX C: Responsibility for 911 in Each Kansas County page 39

APPENDIX D: Agency Responses page 43

This audit was conducted by Cindy Lash, Sonja Erickson, Robin Kempf, and Kate Watson. Randy Tongier was the audit manager. If you need any additional information about the audit's findings, please contact Ms. Lash at the Division's offices. Our address is: Legislative Division of Post Audit, 800 SW Jackson Street, Suite 1200, Topeka, Kansas 66612. You also may call (785) 296-3792, or contact us via the Internet at: LPA@lpa.state.ks.us.

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Reviewing the 911 Emergency Phone Systems In Kansas, Part II: Federal Mandates and Organizational Structure

A recent Federal Communications Commission (FCC) order requires wireless phone companies, under certain conditions, to provide wireless phone users with improved emergency phone service known as Enhanced 911. A bill was introduced in the Kansas Senate during the 1999 session to extend the current 911 tax on hardwired phone lines to wireless phones to help pay for these improvements. That bill raised broader questions about how well the 911 emergency phone systems are functioning in Kansas.

Part I of this audit, *Identifying the Current Status*, was issued in April 1999. It provided information about each county, including the types of 911 service available, the tax rates charged, annual revenues, carryover balances, and Year 2000 readiness of 911 equipment. Part II addresses the following questions:

- 1. What will it cost to meet FCC requirements regarding wireless telephones, and what options exist for recovering those costs?**
- 2. Does the current structure of the 911 system result in inefficiencies, higher costs, or other problems for the citizens of Kansas?**

To address the first question, we reviewed the FCC's order, interviewed an official at the FCC, met with representatives of local and wireless phone companies, and reviewed a major study on this topic recently released by the state of Washington. We also calculated the amount of revenue that could be generated by extending the current 911 tax to cover wireless phones, and reviewed how other states are generating revenues to fund the improvements required by the FCC order.

To address concerns about the structure and operation of the 911 phone systems in Kansas, we contacted a sample of other states to see how their systems were organized. We also visited 911 centers in six counties—Bourbon, Franklin, Johnson, Pawnee, Saline, and Sedgwick—and interviewed representatives of Leavenworth and Butler Counties about their intra-county consolidation efforts.

In conducting Part II of this audit, we followed all applicable governmental auditing standards set forth by the U.S. General Accounting Office. The complete text of the audit request on 911 approved by the Legislative Post Audit Committee is shown in Appendix A.

What Will It Cost To Meet FCC Requirements Regarding Wireless Telephones, and What Options Exist for Recovering Those Costs?

The Federal Communications Commission (FCC) has issued regulations requiring wireless phone companies, under certain conditions, to provide Enhanced 911 phone services for wireless phone users. Enhanced 911 service for wireless calls would give dispatchers at public safety "answering points" needed information on the location and phone number of the person making the call. The regulations envision that Enhanced 911 for wireless phones would be implemented in two phases. Wireless phone companies haven't had to provide these services yet in Kansas because none of the underlying conditions have been met.

Because no one has compiled any cost estimates, we couldn't determine what it might cost taxpayers to provide Enhanced 911 for wireless phone users in Kansas. However, the costs are expected to be very high, especially for Phase II. Using national cost data, the State of Washington has estimated its costs over the next several years could be at a minimum \$68 million for Phases I and II. In Kansas, such costs ultimately will depend on equipment, software, and other choices local officials make. In the absence of a coordinated response, however, and given some officials' uncertainty about how to proceed, costs could be significantly higher if all the parties involved don't work together to adopt common solutions. Other states that have established systems for recovering these costs have chosen some type of surcharge on wireless phone users; most have opted for a uniform statewide tax. These and other findings are described in the following sections.

The FCC Has Issued Regulations Promoting Enhanced 911 Services for People Who Call 911 on Wireless Phones

In 1996 and 1997, the FCC issued regulations to help ensure that someone who uses a wireless phone gets the same level of 911 service as someone who makes a 911 call over a phone line that's "hardwired" into a business or residence. The regulations have two general goals.

The first goal is to secure access to 911 for all callers. To meet this goal, the FCC requires wireless phone companies to do the following:

- Transmit all 911 calls. A wireless phone company can't refuse to transmit a wireless 911 call, even if the person making the 911 call isn't that company's customer.
- Transmit wireless 911 calls made by hearing and speech impaired callers through text telephone devices (TTY).

These two requirements generally are regarded as having been accomplished, and aren't examined further in this report.

The second goal is to promote Enhanced 911 service for people who call 911 on a wireless phone. An Enhanced 911 system provides information about the caller to the public safety "answering point" when the call is received. For a call over a hardwired phone line, the caller's name, address, and telephone number are immediately displayed on a computer screen. That information helps dispatchers to quickly know where to send emergency personnel. The challenge facing wireless phone calls is that wireless phones aren't tied to a permanent location represented by an address. Currently, when someone calls 911 using a wireless phone, no information is available to the dispatcher about the call or the caller.

The FCC's regulations set up a two-phase process for implementing Enhanced 911 for wireless phones. That process can be described as follows:

PHASE I: Within 6 months after being asked to do so, a wireless phone company must be able to transmit the following information to a 911 answering point:

- the phone number of the wireless phone (so a dispatcher can call that number back if the call is disconnected)
- the location of the cell tower that received the phone's signal (so the emergency call taker can get a general sense of the caller's location)

PHASE II: Unless it gets a waiver from the FCC, a wireless phone company must be able to transmit the following information to an answering point by October 1, 2001:

- the location of the person making a 911 call on a wireless phone, by latitude and longitude, within 125 meters (about 400 feet) of the caller's actual location.

It's important to know, however, that wireless phone companies have to comply with these requirements **only** under the following conditions:

- **If** a 911 answering point requests it
- **And if** the answering point is capable of receiving the information transmitted to it
- **And if** there's a cost-recovery system in place to reimburse wireless phone companies for the costs they will incur in providing these services

The FCC currently is reviewing the deadlines for Phase I and Phase II to determine whether they are reasonable.

To date, Phase I hasn't been implemented anywhere in Kansas. As described below, none of the prerequisites have been met:

- Officials we spoke with in the wireless phone industry told us no answering point had asked them to provide Enhanced 911 services for people who call from wireless phones.
- We're not aware of any answering points that would be capable of receiving information transmitted to it. To meet the Phase I requirements, both wireless and local phone companies must be able to transmit—and 911 answering points must be able to accept—20 digits of information (the phone numbers of the wireless phone the caller is using and of the tower that received the call). The current equipment used in the six counties we visited—including Johnson and Sedgwick, the two most populous counties in Kansas—can only receive a maximum of 10 digits. Although we can't know for sure, it seems highly unlikely that any of the other counties would have the equipment they'd need to receive 20 digits.
- **No cost recovery system** has been put in place specifically for reimbursing wireless phone companies for the costs they'll incur in developing and providing Enhanced 911 service for wireless phone calls. (There are no statutory provisions that would prevent the current 911 tax on hardwired phone lines from being used to pay these costs. However, it's unlikely the revenue that could be generated is sufficient, which would hinder implementation.) SB 63 and HB 2399, both of which were introduced during the 1999 legislative session, would allow local units of government to tax wireless phone customers up to 75¢ a month. This revenue could help finance the cost of implementing Enhanced 911 service for wireless phone calls.

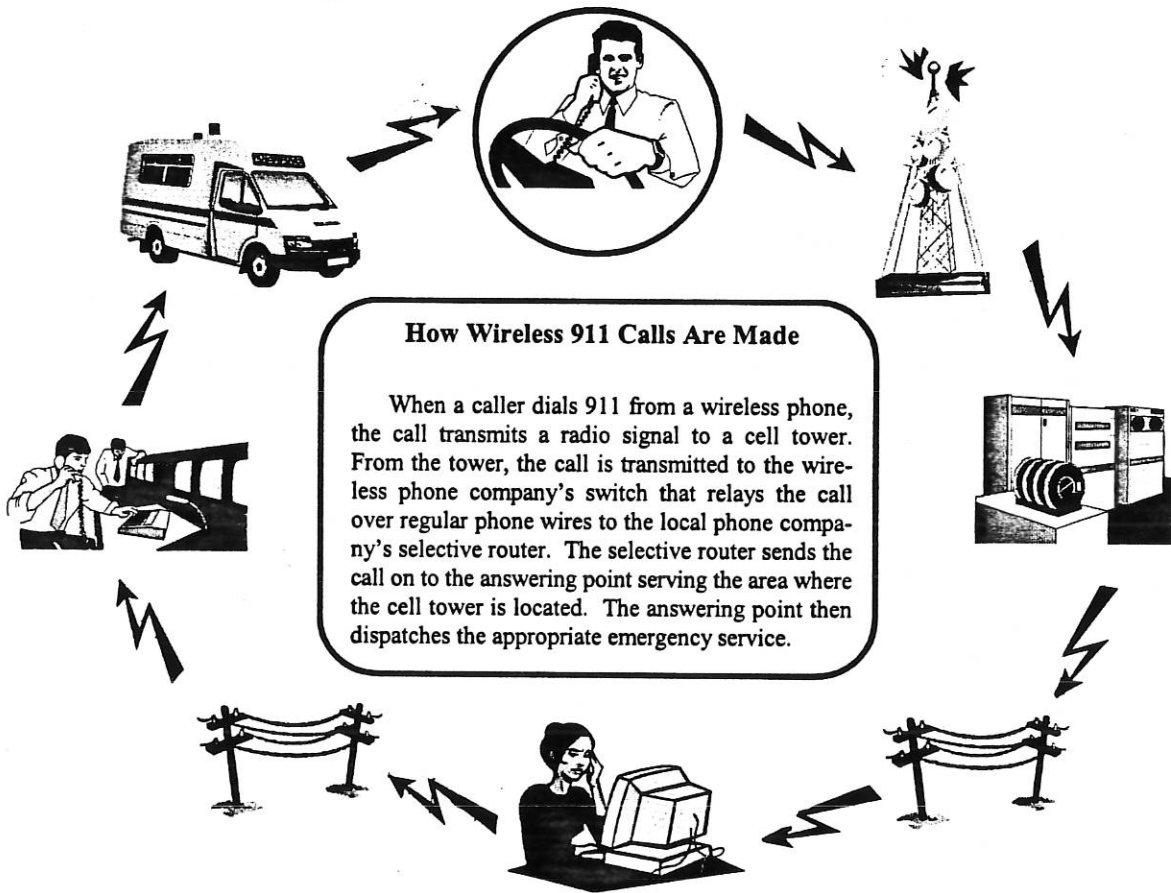
The bills didn't pass during the 1999 session, partly because of questions about the cost of providing Enhanced 911 for calls from wireless phones, and partly because legislators questioned local units' need for additional revenue beyond the current tax on phone lines. Both bills are being carried over for consideration during the 2000 legislative session.

The Costs of Implementing Phases I and II Will Depend on the Equipment Currently in Use and on the Choices Made in Trying To Meet the FCC's Requirements

As noted above, the equipment currently in place at the phone companies and the answering points in Kansas can handle a maximum of only 10 digits of information. That equipment will need to handle 20 digits to meet the Phase I requirements.

According to reports from the wireless technology industry and the Washington State Department of Revenue, the following general strategies exist for addressing this Phase I problem:

- keep the same general structure for processing and routing calls (as shown in the graphic below), but change to one of several “signaling methods” that will transmit 20 digits



- change the structure for processing 911 calls, either by adding new hardware or software to the existing system, or by bypassing the local phone companies altogether and sending calls directly from the towers to 911 answering points

Industry reports indicate that each option for implementing Phase I could have different costs for each 911 answering point, local phone company, and wireless phone company. Those costs would depend first on the hardware and software each one uses now, and then on the strategy each one adopts to be able to transmit or receive the 20 digits of information identifying 911 calls from wireless phones.

Further, the strategy each one chooses for Phase I also can affect the subsequent cost of implementing Phase II. That's because some of the hardware or software chosen

to implement Phase I can't provide the information called for in Phase II, or may be able to do so only with varying degrees of modification.

The technology currently is being developed and tested for future implementation of Phase II of the FCC's order. Phase II will require wireless phone companies to be able to provide specific data about the caller's location. The current deadline is October 2001. Two methods are being tested. One determines the caller's location using a process called "triangulation," which measures signals from multiple towers. The other uses Global Positioning Satellites (GPS) orbiting the Earth. These methods are described briefly in the box below.

Triangulation Method

When a call is made, computers attached to the cell towers measure either the time it takes a signal to reach a tower, or the angle of the signal as it reaches the tower. Readings from multiple towers are combined and the result is translated into the latitude and longitude of the caller. Once the system is in place, all wireless subscribers would have automatic location identification as long as their wireless handset could access multiple towers.

GPS Method

Global Positioning Satellites (GPS) orbit the Earth to transmit location information by latitude and longitude to a receiver in the wireless phone. When a wireless call is made, data from the GPS receiver are sent to computer equipment located at the tower and forwarded through the 911 network. This system would work only for callers whose phone contained a GPS receiver.

Both methods send the information to the appropriate answering point as latitude and longitude. To make use of these data, answering points will need software to translate latitude and longitude into addresses or other meaningful locations. In many cases, this may involve a significant mapping effort.

Because No One Has Compiled Any Cost Estimates, We Couldn't Determine What It Might Cost Kansas Taxpayers To Provide Enhanced 911 Services for Wireless Phone Users

During our visits to the answering points in six counties and our interviews with local and wireless phone company officials, we'd hoped to be able to review and analyze the cost estimates they'd prepared for meeting the FCC's requirements in this area. We had expected that each of these entities would have at least begun developing estimates for implementing Phase I, either individually or jointly, because a request to provide Enhanced 911 services for calls from wireless phones would impose fairly strict deadlines for compliance.

What we found was the following:

- During our on-site visits, responses we got about the estimated costs of implementing Phase I ranged from county officials who were only vaguely aware of the FCC requirements at all, to county officials who'd begun talking with the phone companies and were building up a reserve of tax moneys in anticipation of significant expenses in the future. Still, no one had a clear idea of how the requirements would be implemented, or of how much they would cost.
- Because 911 services are provided at the local level without any State oversight or administration, no central "authority" has begun compiling information about what it might cost to implement Phase I of the FCC order.
- Because the technology to implement Phase II still is being developed and tested, officials from the counties we visited, as well as industry officials we talked with, indicated they have no basis for developing reasonable cost estimates at this time. However, everyone involved expects that technology to be very expensive.

One wireless service provider, Sprint PCS, did agree to share its national pricing structure for providing Phase I services with us. Sprint PCS has contracted with a vendor to provide those services using three different types of equipment. Under their pricing structure wireless phone customers would, on a per-phone basis, pay a 50¢ one-time fee, plus a 15¢-20¢ monthly fee, depending on the type of equipment used. However, these fees reflect only what Sprint PCS might charge. The charge doesn't cover the cost of equipment or other things the local phone companies and answering points might need to implement Phase I. A cost-recovery system designed to cover all costs of Phase I must include these costs as well.

The costs involved in implementing the FCC's orders in Kansas could be significantly higher if all the parties involved don't work together to adopt common solutions. Most public safety answering points are served by several wireless and local phone companies. Answering points will need to work with all the phone companies in their area to decide how to implement Phases I and II, in order to keep equipment costs reasonable.

Several county officials we talked with told us they were uncertain of what they'll need to do to implement Phase I, or of how they'll do it. They haven't begun to talk with officials from the local and wireless phone companies or from nearby answering points, and may not be aware of the need to do so. To date, then, it appears that Kansas' response to these federal mandates isn't being coordinated at the local level, where 911 services are provided and administered. Without such coordination, costs could be much higher in the future.

The State of Washington recently completed a major study of how Phase I and II requirements could be met in that state. In 1998, the Washington Legislature directed its Department of Revenue to conduct a study of the most cost-effective and efficient way to implement Enhanced 911 services for wireless phone users. The Department appointed a group of more than 20 officials representing the state, cities, counties, local and wireless phone companies, and equipment vendors, who met for more than a year.

Their purpose was to examine the current 911 infrastructure in Washington State, identify the technology needed to implement Enhanced 911 under Phase I and II, determine potential costs associated with the technology, and construct a cost-recovery system for Enhanced 911.

In general, the study showed that Washington's 911 answering points currently weren't able to handle the information required to provide Phase I and II service to wireless phone users. However, they should be able to make the change soon because the equipment needed to implement Phase I is available, the wireless phone companies are prepared to provide Enhanced 911 service when the answering points request it, and there's funding available to pay for those service.

The study group wasn't able to determine an estimate of the real cost to implement Phase I in Washington because wireless phone companies would provide only national cost data. Those national cost data are based on the average amount each subscriber would need to pay for Phase I. Based on those figures, the study estimated it would cost a total of \$16.3 million for charges relating to Phase I from 1998 to 2001. However, those costs would increase at the same rate as the increase in the number of wireless subscribers. Phase II costs to answering points include the wireless phone company charges for Phase II service, mapping, and answering point equipment replacement. The costs for wireless phone company charges are not known at this time. The estimated total cost for mapping is \$1 million. The estimated cost for equipment replacement over a five-year cycle totals \$50.7 million.

Although the FCC Didn't Mandate Any Particular Method for Recovering the Costs of Providing Enhanced 911 Service to Wireless Users, Other States Have Relied on a Tax on Those Users

As part of this audit, legislators questioned what options existed for paying the costs of providing Enhanced 911 services for calls from wireless phones. Although the costs of meeting the FCC requirements aren't well determined, they're expected to be high. Without a change to the current tax system, it will take many answering points longer to pay for the new services, unless they get additional public revenue from other sources. If the current 911 tax is extended to wireless phones, answering points would

2-14

be able to pay for the new services sooner, without looking to other public revenue streams for the additional moneys.

The number of wireless phones in Kansas is growing rapidly, by an average of more than 30% annually in the last two years. As the number of wireless phones increases, it's likely calls to 911 from those phones will increase proportionally. That means an increase in 911 callers whose location can't be determined until Enhanced 911 is implemented.

Kansas currently doesn't impose a tax on wireless phone users to help recover the cost of Enhanced 911 for wireless phones. To pay for 911 services, localities are allowed by law to charge up to 75¢ per line per month for each hardwired phone line. These revenues—supplemented by other public moneys—support 911 services to callers from both hardwired and wireless phones (although callers from wireless phones receive only Basic 911-level service).

One option would be to leave the system as it is, and hope that the current revenues localities are allowed to take in through the 911 tax on hardwired phone lines—supplemented by other public revenues—would be sufficient.

Another option would be to extend the 911 tax on hardwired phone lines to wireless phones, maintaining the maximum rate that could be charged of 75¢ per line per month with local government collecting and distributing. In 1998, that could have generated a maximum of \$4.5 million in additional revenue. This figure would rise as the number of wireless phones increases.

In all, 30 states do impose a tax on wireless phones, and in most cases the tax is uniform statewide. In looking for other options, we reviewed a summary of legislation as of December 1998 for all 50 states. We also more closely examined the laws in four states—California, Colorado, Indiana and Oregon—that have begun to implement the FCC's regulations.

Here's what the 30 states with wireless cost recovery systems are doing:

- 21 of the 30 states have enacted a uniform statewide tax on all wireless users
- 6 states give their local governments the option of enacting a tax on wireless users within their boundaries (the Kansas proposals described earlier would do this)
- 2 states have both statewide and local option taxes on wireless users
- 1 state appropriates moneys from its universal service fund for wireless cost recover (those moneys are collected as a surcharge on phones)

In 1998, Hawaii did consider a cost-recovery system that would have authorized wireless phone companies to recover their costs by placing their own surcharge on their customers, but that system wasn't adopted.

Four States' Cost Recovery Systems for Enhanced 911

	California	Colorado	Indiana	Oregon
Surcharge placed on:	all intrastate calls, whether made on a wireless phone or over a hardwired phone line	hardwired phone lines and wireless phones	hardwired phone lines and wireless phones	hardwired phone lines and wireless phones
Amount of Surcharge:	.072% of the current rate of an intrastate call	not to exceed 70¢ per hardwired phone line or wireless phone	<i>hardwired phone line surcharge</i> is 3-10% of the average monthly line charge; <i>wireless surcharge</i> not to exceed \$1.00	75¢ per hardwired phone line or wireless phone
Surcharge assessed by:	the state	local governing bodies	<i>hardwired phone line surcharge</i> assessed by counties; <i>wireless surcharge</i> assessed by an advisory board	the state
Surcharge collected by:	phone companies	phone companies	phone companies	phone companies
Frequency of remitting surcharge:	monthly	monthly	<i>hardwired phone line surcharge</i> is remitted quarterly; <i>wireless surcharge</i> is remitted monthly	quarterly, with sunset date of 12/31/2001
Use of <i>wireless</i> surcharge limited to:	*state's administration costs *wireless companies' administration costs *approved installation and ongoing costs of Enhanced 911 for both wireless phones and hardwired phone lines	*wireless companies' administration costs *purchase and installation of 911 equipment *recurring phone charges *reimbursement of wireless phone companies costs arising from Enhanced 911 for wireless phones	*wireless companies' administration costs *3¢ saved for costs arising from Phase II *25¢ held to reimburse wireless phone company costs of Enhanced 911 *remainder distributed to public safety answering points based on population and call volume	*state's administration costs *wireless companies' administration costs *specific costs arising from implementation of Enhanced 911 *the balance is distributed to cities and counties on a per capita basis to cover 911 costs
Unique statutory provisions:	rate can be adjusted by a state agency within a statutory minimum and maximum	if small counties consolidate their answering points, the tax may be used to pay personnel costs related to dispatch	initial rate set at 65¢	costs are only reimbursed if the answering point submitted a 911 plan to the state and the plan was approved

We also found that only 12 of the 30 states have imposed the same taxing scheme on wireless phones and on hardwired phone lines. The other 18 states have enacted a unique taxing scheme for wireless phones. The profile on page 10 describes in more detail the legislation enacted in four states that have already begun to implement Enhanced 911 for wireless phones in their states.

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Model Legislation Drafted by the Wireless Industry Emphasizes Centralization

A wireless phone company and a wireless Enhanced 911 technology vendor have both drafted model legislation which would implement a statewide tax. The main points include:

- a state-wide surcharge which may be adjusted or which will expire in five years
- central administration of wireless E-911 tax moneys
- clear authority to use tax moneys to reimburse wireless carriers' and wireless E-911 vendors' costs
- central distribution of tax moneys
- a central wireless E-911 board with advisory powers only
- protection of proprietary data

A wireless phone company and an equipment manufacturer have proposed model legislation for implementing a statewide tax to fund Enhanced 911 for wireless phones (summarized in the profile box below). These companies generally support central assessment of wireless phone 911 tax moneys—such as a uniform statewide tax.

The study group formed in the state of Washington has proposed a centrally ministered state wide tax where the rates would be adjusted annually to reflect actual costs, once they are known. (Until costs are known, tax rates will be based on estimates.) The Washington report indicated a statewide tax was necessary, in part because a county-level tax wouldn't generate enough money in rural counties to fund the Enhanced 911 system for wireless phones.

Conclusion

Enhanced 911 service for wireless phone users currently isn't available in Kansas, and implementation seems to be stalled out. The 911 answering points can't request the wireless phone companies to provide the service because there's no cost recovery mechanism in place, and because the answering points don't have the equipment they'd need to accept the information if the phone companies provided it. The situation is further complicated by the fact that multiple technologies are available to meet the requirements for Phase I (and will be available for Phase II), each with different cost implications. Significant coordination will be necessary between the 911 answering points and the numerous local and wireless phone companies that serve them to ensure that citizens receive services at a reasonable cost.

The development of a cost recovery mechanism is critical to accomplishing wireless Enhanced 911. Most states that have done so to date have relied on a tax on wireless phone users. Those tax rates vary markedly (from 10¢ to \$1.00 per phone per month), possibly because no one has good information on the actual cost of meeting the FCC requirements. In addition, consideration will need to be given to the costs incurred by all parties--wireless phone companies, local telephone companies, and answering points.

The benefit to Kansas of forming a study group such as the one in Washington State would be a collaboration of the expertise needed to understand the highly technical issues involved in meeting the FCC requirements. Further, Washington's experience showed that a group composed of representatives from all stakeholders helped ensure that everyone's concerns were heard and that potential solutions for the entire state were considered.

Recommendation

In order to move forward with the implementation of wireless Enhanced 911 in Kansas, and to help ensure citizens receive this service at a reasonable price, the Legislature or the Governor should form a task force to study and develop comprehensive wireless 911 legislation that would cover such things as a cost recovery mechanism, guidelines for cost reimbursement, and the possibility of a State-level oversight body for implementation. The task force should include representatives of wireless phone companies, local phone companies, answering points, law enforcement, emergency service providers, local units of government, and state telecommunications specialists.

Does the Current Structure of the 911 System Result in Inefficiencies, Higher Costs, or Other Problems for the Citizens of Kansas?

Kansas' current 911 structure places control of the program with local units of government, without any central oversight or advisory body. In all, 14 counties in Kansas have multiple 911 answering points within the county, and no counties have consolidated their 911 dispatch centers across county boundaries. This structure may result in some inefficiencies and higher costs, which could increase as localities attempt to meet the FCC's requirements for providing Enhanced 911 services for wireless phone users. Whether real or perceived, some barriers tend to limit consolidation possibilities in spite of the potential benefits they offer.

The 911 centers in the six counties we visited generally followed adequate business practices that were designed to prevent inefficiencies, higher costs, and other problems within their centers. The statutory language relating to allowable expenses from 911 tax money is not clear, and some counties are planning future expenditures with 911 tax moneys that may be beyond what the Legislature intended that money to be used for. These and other findings are detailed below.

In Kansas, 911 Services Are Wholly Under the Control of Cities and Counties, Without Any Central Oversight or Advisory Body To Help Coordinate the Provision of 911 Services

Currently, 83 of the 105 Kansas counties have consolidated their reporting and dispatching functions—including 911 services—for law enforcement, fire, and ambulance services for all local units of government in the county. Fourteen counties have multiple public safety answering points that handle 911 calls within the county; three counties have only one answering point but have coverage in only part of the county, and five counties don't have 911 at all. No 911 answering points in Kansas currently are serving more than a one-county area.

State law gives city and county officials the authority to set up and operate their 911 systems as they see fit, within the provisions of the law. Those provisions set out such things as maximum tax rates localities can charge, limits on the use of tax revenues, and procedures for collecting and remitting 911 taxes. There's no central oversight or advisory body to help coordinate the provision of 911 services.

Kansas' structure is similar to that of many other states we reviewed, although six states do have some state-level involvement with their 911 systems. In most of the 14 mid-western and western states we reviewed, public safety answer-

ing points were centralized at the county government level. Six states had at least one multi-county group, ranging from a few counties in Nebraska and Montana to a 22-county group in North Dakota. Officials in those states told us the counties that joined together typically did so because they couldn't afford to offer 911 on their own.

Only four of the 14 states had a state-level body with any oversight responsibility. One of those states is Washington, which has established a state-level En-

Washington State Enhanced 911 Office

Washington's effort to coordinate 911 services began in 1991 with a voter referendum directing that Enhanced 911 services be in place in every county of the state for all phone lines. The referendum set up a state Enhanced 911 coordination office to facilitate local planning and

installation of such systems. Funding provisions for county and state taxes were developed to support the services, and an advisory committee was established to advise and assist the coordinator. The advisory committee also participated in a study on providing Enhanced 911 services to wireless phone users.

hanced 911 office to facilitate planning and implementation of 911 systems in counties. That office is described more fully in the profile above. Two other states had state-level advisory bodies.

Typically, the oversight bodies approved a city's or county's 911 plan, but had no control over day-to-day operations. California's oversight body had the greatest degree of control—its staff conduct annual reviews to ensure that answering points comply with technical requirements and distribute tax revenues based on their assessment of the answering point's needs. Appendix B describes the structure of the 911 programs in the 14 states in more detail, as well as consolidation efforts in those states.

Kansas' Current Structure for Its 911 System May Result in Some Inefficiencies and Higher Costs

A 1998 audit of the Texas statewide 911 system found that inefficiencies in organizational structure and operations cost taxpayers an estimated \$30 million annually, or nearly one-third of annual revenues collected for this purpose. Because Texas' 911 system evolved through local government initiatives without any central coordination, as Kansas' system has, the report concluded that criteria for establishing a 911 answering point didn't include considerations of efficiency.

At the time of the audit, Texas had 570 answering points for 911 service, and had a multi-tiered administrative structure. The report estimated that more than \$14

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million could be saved on duplicate equipment if the number of answering points were reduced from 570 to 155 (or one for every 120,000 citizens).

The Texas audit led Kansas legislators to question whether Kansas' structure also results in inefficiencies, higher costs, or other problems. To identify situations that could present opportunities for cost savings, we reviewed the data we collected from Part I and visited a sample of six counties—Bourbon, Franklin, Johnson, Pawnee, Saline, and Sedgwick—that have 13 total 911 answering points.

In those counties that haven't consolidated the dispatch functions for their public safety agencies, each answering point has its own 911 system, equipment, and personnel. For example, Johnson County has eight answering points, each fully equipped with Enhanced 911 systems, Butler County has four answering points that all offer Enhanced 911 and six other counties have at least two answering points with Enhanced 911.

A different type of example occurs in Dickinson County, which has two answering points. One is located in the Herington Police Department, and is able to provide only basic 911 services to Herington residents. The other is located in the Abilene Public Safety Communications-911 Dispatch Center. This center is able to provide Enhanced 911 service to the rest of the county. By consolidating operations, they could provide Enhanced 911 to all county residents.

Economies of scale could result in greater cost-efficiencies for 911 services—both within counties that haven't consolidated their reporting and dispatching functions, and across county boundaries. The specialized equipment needed to operate a 911 system can be fairly costly, especially as counties move toward providing Enhanced 911 service for wireless phone users. If local entities can combine their resources—especially in areas that have a fairly low volume of 911 calls—they are likely to be able to provide services more economically, or to provide services they otherwise couldn't afford.

We identified several types of situations that could present opportunities for cost savings through some sharing or consolidation agreement. Those situations are as follows:

- Counties without 911 service might be able to acquire that service at a fraction of the equipment cost. Five Kansas counties now don't have 911 service at all. If those counties arranged to combine dispatch operations with an adjacent county that already has 911 service, they could reduce their equipment costs substantially, making it more likely that those counties would have 911 service more quickly, or even at all.

Two adjacent counties—Linn and Bourbon—are good examples. Linn County has no 911 service, but is currently taxing its residents to eventually generate enough revenue to install 911 service countywide. At the end of 1998, it had nearly \$90,000 set aside. Its neighbor Bourbon County recently bought new 911 equipment for about \$60,000. In 1998, Bourbon County received an average of only seven 911 calls a day, but the equipment it purchased could handle a much larger volume of calls.

- Counties could avoid the cost of buying duplicate equipment, and could acquire more sophisticated equipment (and service) by sharing costs than they might be able to buy on their own. For example, Pawnee County recently bought complete Enhanced 911 systems (including hardware and software) for about \$60,000. This system currently serves only the City of Larned and handles about 10 calls a day, although call volume will increase somewhat when the system expands countywide in 1999. Still, the specialized 911 equipment will be used at far less than its capacity. (A total of four answering points we visited received 20 or fewer calls daily. The table on the next page shows call volume for the counties we visited.) Several counties located adjacent to Pawnee don't have Enhanced 911 service. By consolidating to share equipment with Pawnee County, those counties could upgrade to that enhanced level of service at a fraction of the cost of buying their own equipment. Further, Pawnee County could share the cost of purchasing that equipment with these other counties.

We noted during this audit that Leavenworth County officials had recently decided to pool their resources to build a joint criminal justice center. The city and county 911 operations now will be under one roof. Because of differences between the localities' salaries, procedures, and policies, officials decided that both the city and county would continue to have separate dispatch centers (and 911 answering points) for their emergency services. However, they were able to reduce costs by sharing the purchase and use of a major piece of equipment—a sophisticated computer-aided dispatch system. In addition, city and county dispatchers are being trained on and using identical consoles, which could ease any consolidation efforts in the future. Still, the city and county will have duplicate expenses for such things as 911 trunk lines coming into the building, and for 911 dispatchers.

- Some counties could share certain equipment costs without necessarily consolidating answering points. For example, Sedgwick County officials told us they'd like a radio tower in the eastern part of their county. At a cost of \$250,000 per tower, they are reluctant to proceed. However, if a nearby county such as Butler, (just East of Sedgwick) also were considering a new tower, there might be opportunities to cost share on a tower both could use.

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Description of Answering Points Visited During the Audit

County	Service Area Characteristics			No. of Agencies Dispatched			Minimum No. Dispatchers on Duty	CY98 911 Calls		% Time Spent on 911 (estimated)	
	Location	Population	Sq. Miles	Police	Fire	Ambulance		No. Calls	Calls/Capita		Calls/Day
Bourbon	entire county	15,260	648	2	10	0	1	2,587*	0.17	7	10 %
Franklin	entire county	24,768	576	5	12	1	2	32,399	1.31	89	95 %
Johnson	entire county	450,000	539	0	13	1	4	35,000	0.08	96	88 %
Leawood	city	25,000	15	1	0	0	1	7,183	0.29	20	25 %
Lenexa	city	43,000	28	1	0	0	3	25,082	0.58	69	10 %
Olathe	city	85,000	54	1	0	0	2	55,190	0.65	151	5 %
Overland Park	city	145,000	60	1	0	0	3	74,516	0.51	204	85 %
Prairie Village	city + Mission Hills	31,040	9	1	0	0	1	6,388*	0.21	18	10 %
Shawnee	city	50,000	42	1	0	0	2	17,240	0.34	47	no estimate
Sheriff	unincorporated areas + 8 cities	72,000	256	10	0	0	2	32,612	0.45	89	15 %
Pawnee	City of Larned	4,317	3	1	1	1	1	3,650*	0.85	10	25 %
Saline	entire county	51,617	750	2	4	3	2	29,243	0.57	80	25 %
Sedgwick	entire county except Mulvane & police in 3 cities	448,050	1,006	14	7	5	11	414,101	0.92	1,135	80 %

1 When Pawnee expands to countywide service in 1999, the number of calls will increase

* estimated

Consolidation studies we saw typically predicted cost savings of 5% to 12%, although no follow-up studies have been done to see if these estimated savings actually were achieved. The few studies we could find that included detailed projections over a multi-year period estimated annual savings of 5% - 12% for personnel and operating costs combined. However, we couldn't find any follow-up studies that had been done to determine whether consolidation efforts actually had resulted in the projected cost savings. In some cases, the consolidation efforts simply were too recent.

Our review of the literature also indicated that consolidation efforts could sometimes result in increased costs because of the need to hire new staff. That's partly because the dispatch staff who handle 911 calls often have many additional duties. For example, at 8 of the 13 answering points we toured, officials estimated that dispatchers spent only 5% to 25% of their time on 911 calls. They also handled all radio traffic with law enforcement officers. Some also have such responsibilities as answering administrative phones, serving as the receptionist (particularly after normal business hours), monitoring cameras in building entrances or jails, checking vehicle registration and violation information for officers in the field, monitoring weather alerts, and receiving after-hours calls for emergencies with other governmental functions, such as breaks in a water main. Even if all dispatch activities were handled in a single location within or across counties, public safety agencies still would need staff to perform these duties.

A central coordinating body over the State's 911 system could promote efficiencies and improve communication among various 911 answering points. Such a body also could help address problems we identified during Part I of this audit and during our current fieldwork. Those problems include the following:

- extreme differences among local officials in their level of knowledge concerning FCC requirements
- lack of in-house expertise regarding 911 equipment
- varying interpretations of allowable uses of 911 tax moneys
- potential misuse of 911 services
- turf issues within and between counties
- gaps in 911 coverage

Whether Real or Perceived, Some Barriers Exist that Tend to Limit Localities' Willingness to Consolidate 911 Services In Spite of the Potential Benefits

Consolidating multiple 911 systems within a county—or consolidating 911 services across counties—should offer numerous benefits, including likely savings in

equipment costs. However, the decision to consolidate isn't a simple one. That's because those 911 systems usually are located within separate police, fire, sheriff, or ambulance dispatch centers. These centers provide many dispatch and other services for their own public safety agency that aren't related to 911 calls. As a result, a decision to consolidate 911 services generally would mean a decision to consolidate all dispatch services for the county.

Officials in several of the counties we visited that already had consolidated 911 services at the county level told us they experienced varying degrees of difficulty simply accomplishing that level of consolidation. They said they had no plans, and saw no need, for further efforts in that direction. A Texas official we spoke with also said that one district in Texas had formed a task force to consolidate 911 services within the district, as recommended in the Texas audit report. However, that consolidation attempt was unsuccessful because of the many difficulties encountered.

We identified two primary factors that seem to work against consolidation. These can be categorized as political and operational.

Consolidation of 911 services is politically difficult. Virtually all the literature we reviewed on actual consolidation attempts, as well as all 911 administrators we spoke with in Kansas and other states, highlighted the political difficulty of consolidating 911 services. There are two major issues:

- *It's difficult to get agreement among numerous officials with different interests and constituencies.* Consolidation requires agreement between all affected agencies and governing bodies about such issues as how the consolidated center will be funded, staffed, and administered. Coordinating sustained support is most difficult in political environments that historically have been contentious.
- *Governing bodies and agency heads want to keep local control.* The needs of individual communities vary, and service expectations may differ between jurisdictions. Keeping local control in order to adequately address those needs is important to many people.

In such a political environment, consolidation has worked best when there were one or more strong personalities pushing for it. The profile on page 20 highlights how strong personalities have affected consolidation attempts in Butler County.

Consolidation is operationally difficult. County officials we visited told us that, even if the political difficulties can be solved, several operational problems can

Consolidation Within A County Can Be Tough

Butler County has four answering points that at one time were dispatching for thirteen different emergency services. Problems with delays and coordination of services were highlighted by a deadly tornado that passed through the county in 1991. In the aftermath, a County Commissioner who felt strongly about the county's need to address emergency service problems spearheaded an effort to consolidate answering points. An advisory board was established and held a series of public meetings ending in a decision to build a Consolidated Emergency Communication Center to provide 911 services throughout the county. An agreement was reached by everyone in the county except the City of Augusta who opposed the project because they wanted to keep local control of emergency services.

Plans for the Consolidated Emergency Communication Center were under way when political support for the project began to deteriorate. There were essentially two reasons for the change: the County Commissioner who strongly supported consolidation was defeated in the 1993 elections by someone who opposed the project, and consolidation wasn't actively supported by the County Sheriff's Office. The County Commission substantially reduced the advisory board's power and eliminated the 911 budget. As a result the consolidation never took place, and the county still operates four answering points today. However, newly elected county officials indicate they are supportive of the consolidation, so there will be a renewed effort in January 2000 to try consolidation again.

arise when looking at consolidation of emergency services. Some of the barriers they cited were as follows:

- *Each jurisdiction has different financial capabilities.* For example, Overland Park officials said they were able to afford a more sophisticated computer-aided dispatching system than some of the other cities in Johnson County.
- *Each jurisdiction has different policies on how they prioritize calls and what types of calls they dispatch.* For example, one city may dispatch a police unit for a stolen car call, while another may not. Or one community may have a policy of sending an officer to assist a motorist who's locked the keys in the car, while another community may want the person to call a locksmith. Officials said it would be too difficult for dispatchers to remember the policies of all the localities, or they may not respect the service priorities of each agency involved.
- *Answering 911 calls is a small part of what many dispatch centers do.* Many dispatchers' duties aren't funded by 911 moneys, and are specific to that jurisdiction's operations.
- *Dispatchers need to have knowledge of the area.* Officials often fear that dispatchers in a large consolidated center won't be familiar with the geography of the entire area, which is essential to providing emergency service.

Although these operational difficulties are very real to the officials we talked with, Sedgwick County is an example of a county that has successfully overcome such

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obstacles to consolidate its 911 operations for numerous smaller cities or communities within the county. It has a consolidated Emergency Communications Center that handles dispatch operations for all public safety agencies except police offices in three smaller cities. It's funded by a 57¢ county tax on hardwired residential phone lines and 75¢ on business phone lines.

With a minimum staff of 11 dispatchers on duty, Sedgwick County's Emergency Communications Center handles the dispatching services for about 450,000 residents and 26 public safety agencies. It received a total of 414,000 calls in 1998, or an average of 1,135 a day. In contrast, the eight answering points in Johnson County have a minimum of 18 dispatchers on duty who handle the dispatching services for about 450,000 residents and 30 public safety agencies. They received a total of 253,000 calls in 1998, or an average of 694 per day.

Sedgwick County officials told us that dispatchers in its Communications Center have detailed but readily accessible information about each public safety agency's prioritization policies for 911 calls. During a duty shift, dispatchers have different responsibilities. Most will dispatch law enforcement officers, but in different geographic areas (for example, the northwest section of the county, or the central section of Wichita), some will dispatch fire services, and one will dispatch ambulance services.

The Kansas Highway Patrol is Consolidating Its Statewide Dispatch Operations

The Patrol has elected to close its regional dispatch centers and create a central dispatch office in Salina that will serve its officers Statewide. Officials believe this will be a better use of resources because it will provide more extensive backup for dispatchers who might formerly have been working alone in a regional office.

The Patrol has taken a number of steps to address the concern that dispatchers in a con-

solidated office won't have enough familiarity with an area to effectively support officers in the field. Specifically, dispatchers have been given extensive maps and cross-references with details such as local landmarks and streets with nicknames. In addition, many troopers' patrol cars are being outfitted with GPS devices that will allow the dispatch to identify the car's location on an electronic map, which should allow the dispatcher to give better directions..

Business Practices at the State's 911 Answering Points Generally Appeared To Be Adequately Designed To Prevent Inefficiencies, Higher Costs, and Other Problems

The recent Texas audit also identified a number of poor business practices by 911 answering points that led to waste and abuse of the programs' resources. Those problems included inadequate tax collection practices, a lack of competitive purchasing processes, and poor performance management systems. The profile above describes the Texas audit findings in more detail.

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Costly Inefficiencies Found in Texas 911 System

A 1998 audit of the Texas statewide 911 system concluded that flaws in purchasing and revenue collection cost taxpayers an estimated \$10.1 million annually.

The audit found that Texas' central administrative body, which oversees 24 regional administrative units which oversee 570 answering points, didn't require the use competitive bidding processes when purchasing equipment. The audit noted that only one of the 24 administrative units did so. Auditors applied the 40% savings achieved in that region to the other 23 regions and estimated annual savings of \$9.1 million.

The report also found that Texas hadn't maximized its 911 revenues. Auditors estimated that the impact of a state law which allowed phone companies to keep taxes they collected for 60 days, rather than remitting them to the state promptly at the end of each month, was a loss of interest income of about \$300,000 in fiscal year 1998. In addition, over half of the payments were

remitted after the 60 days allowed by statute, but neither the central administrative body nor the regional administrative units assessed late payment penalties allowed by law. As a result, Texas failed to collect more than \$700,000 in penalties that year.

Finally, the report identified numerous administrative problems to which it did not assign a cost, including the following:

- failing to have a comprehensive plan for creating street addresses for rural areas (a \$30 million program)
- accepting poorly written contracts for services
- failing to consistently report 911 revenue in accordance with generally accepted accounting principles
- lacking adequate controls over equipment
- lacking of performance measures for measuring the quality of 911 service

To determine whether the inefficiencies found in Texas were occurring in Kansas, we examined our six sample counties' revenue and expenditure practices, as well as other performance standards. We found that their business practices generally were sound. Nonetheless, in some cases the counties' interpretations of State law that limits how 911 tax moneys may be spent appears to be inconsistent with the Legislature's intent.

Tax receipts typically are received on a timely basis. State law requires phone companies to charge their customers for any emergency telephone tax imposed by local governments. The phone companies must remit the tax to the local government on a quarterly basis, and no later than 60 days after the close of the calendar quarter.

Our test work during this audit showed that nearly all the tax receipts due in 1998 in our six sample counties came in well before they were due. Only 2% of those receipts were received late (an average of 84 days late). None of the counties we visited have audited the phone companies to ensure that they are remitting the correct amounts, although Johnson County officials told us they planned to do this next year.

All major purchases are made using competitive bids, and spending is overseen by political bodies, typically county commissions. All six counties have written purchasing policies that require competitive bids for expensive items. In most cases, county commissions make the final decisions for purchases over \$2,000, although some counties require a commission's preapproval for smaller purchases as well.

In Johnson County, expenditures from 911 tax money for 911 telephone equipment is made strictly by written criteria in the interlocal agreement between all the counties in the Kansas City metropolitan area. We reviewed documentation of recent sizable purchases in each county, and found that competitive bidding had occurred.

Emergency Service Providers Make Some Calls to 911 on Cellular Phones for Free; This Misuse Could Be Curtailed by Remedies Already in Existence

One cellular service company has alleged that law enforcement officers and other emergency service providers misuse wireless 911 by using it to contact dispatchers in non-emergency situations because the call is free. The company claims it suffers because those calls may block other customers' calls, requiring the company to incur the expense of erecting more cell towers to serve everyone. In addition, the company asserts that answering points are operated inefficiently, because dispatchers are wasting time on these non-emergency calls. To explore this claim, we reviewed billing records of that company for a one-month period and asked the counties we visited whether this occurred.

The billing records showed excessive use of 911 from the wireless phones of some public entities. (The company identified the accounts paid for by public service entities, and we didn't independently verify that identification.) In the billing month we reviewed, May 1999, the records indicated more than 20 minutes of calls to 911 from individual wireless phones in ten sheriff's offices, four police departments, seven city governments, two county governments, one 911 center, and one state agency. (Also, six non-governmental accounts showed more than 20 minutes of calls to 911.) These calls occurred in 25 of the 97 counties served by the wireless company.

We determined that 25% of the total number of minutes made to 911 by this company's customers in May 1999 were logged by the identified public entities. There is no way to determine whether any of the calls were made to report an emergency or not, but it appears that

some public entities may be misusing the availability of free 911 service. Nevertheless, we can't agree with the company's conclusion that the multiple calls affects the answering points' efficiency in a significant way. We have learned in this audit that dispatchers generally spend a small percentage of time handling 911 calls, and thus, 25% of time spent on non-emergency calls from public entities would make up an even smaller percentage of a dispatcher's day.

Five of the six counties we visited told us they have verbal policies prohibiting law enforcement officers' use of 911. Although these counties did not have formal written policies on the issue, they told us this practice is either discouraged or it doesn't happen. Franklin County, which doesn't discourage officers from calling 911, told us officers will usually call if they need information on a crime from dispatchers. The information obtained in these interviews appeared to be corroborated by the billing statements. Four of the six counties we visited are served by the cellular company, and a law enforcement agency in Franklin County was the only agency of those four counties to appear on the billing statement.

We asked the cellular company's representative whether there were remedies available to prevent potential misuse. The representative acknowledged that an entity with excessive misuse of 911 could be prosecuted for theft of services. At least one successful prosecution has occurred in the past. In addition, the company could either bill the public entities for the calls or request that they curtail the calls. Taking such measures should be the first step in trying to address this issue.

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Officials in five of the six counties we visited told us they were building up a reserve of 911 tax moneys to make specific purchases, many of which won't happen for several years. In response to Part I of this audit, legislative questions were asked about some 911 answering points' sizeable carryover balances. Legislators raised concerns that the current taxes were more than these answering points needed.

To address those questions, we examined how much in 911 tax revenues each of our sample counties spent providing 911 services, and how they planned to use any tax surpluses. The profile below shows some of the most significant expenses they cited. Any delays in making these planned purchases were attributed to the lack of a county commission's approval to proceed, or to not being able to afford the purchase yet.

Counties' Plans to Use Carryover Balances of Tax Money

Five of the six counties told us they are building up a surplus of 911 tax moneys in order to make specific purchases. Some examples are shown in the following table. A range of estimated costs indicates that several counties have similar plans, but vastly different cost estimates.

Type of purchase	Estimated cost
Building a new emergency communications center (Sedgwick)	> \$3 million
Purchasing a mobile data system (Saline)	> \$1 million
Implementing Phase I FCC requirements for wireless phones (Johnson)	\$150,000
Building a new radio antenna (Saline)	\$110,000
Buying or updating the radio system (Franklin and Pawnee)	\$60,000 - no estimate avail.
Upgrading telephone equipment (Franklin)	\$55,000
Final Payments for 911 equipment bought in prior years (Pawnee and Sedgwick))	\$6,300 - \$1 million
Remodeling the dispatch and call-taker areas (Pawnee and Franklin)	\$5,000 - \$33,000
Install a geo-positioning system used to find emergency service units (Sedgwick)	no estimate avail.

Source: Interviews with county 911 administrators.

Altogether, 99% of the tax moneys spent in 1998 by our six sample counties (about \$2.4 million) were for purposes clearly allowed by State law. State law allows 911 tax moneys to be spent for the following:

- Paying phone bills for "emergency telephone service." This term is specifically defined by law. It means a telephone system using "911" for reporting police, fire, medical and other emergency situations.
- Paying for one-time start-up charges to establish emergency telephone service

2-30

- Paying for capital improvements, equipment, or other physical enhancements to the “emergency telephone system.” This term isn’t expressly defined by law.
- Paying for road signs designed to aid in the delivery of emergency service

Based on our reviews, we questioned the appropriateness of only about \$34,000 spent by five of the six counties. The 911 tax expenditures made we questioned included:

- *architectural consulting services for a new facility* (\$15,287). Costs for the physical building where 911 calls are answered don’t appear to us to be included under the statute.
- *personnel and operating costs of a technical consulting organization* (\$13,738). Personnel costs aren’t included under the statute; nor are the costs of consultation on equipment and coordination.
- *office furniture and remodeling costs* (\$3,304). These costs aren’t covered under the statute.
- *office supplies* (\$617). General operating costs aren’t covered under the statute.
- *wireless phones and pagers for answering point staff* (\$582). Although pagers or wireless phones for emergency service providers who must respond to 911 calls would be legitimate expenses, the law doesn’t appear to us to authorize these purchases for dispatchers.
- *a projector to be used for educational programs on the proper use of 911* (\$353). This item, while related to the provision of 911 service, isn’t integral to emergency telephone service.

In every case we questioned, county officials told us they considered those expenditures allowable under the statute. It seems that there’s considerable difference of opinion about whether certain types of expenditures are allowable.

Applying the statutory language limiting 911 tax moneys to specific expenditures can be difficult, especially expenditures for equipment and capital improvements. In fact, the Attorney General has twice issued formal opinions on this statute in response to questions raised. In addition, there have been at least two informal opinions requested of the Attorney General on the same topic.

In general, expenditures for equipment and capital improvements are allowed if those expenditures are for the emergency telephone system—are closely tied to or have regular interaction with the public’s use of 911 to report emergencies. However, it’s not always clear when expenditures are for the emergency telephone system.

The Attorney General's opinion issued in 1990 determined that purchases of equipment used to receive and record emergency calls or to relay or dispatch emergency information to response units are an allowable expenditure. Examples are 911 computer monitors and printers, radio antennas, pagers for emergency response units, and computer-aided dispatch systems. That same opinion concluded that items such as office furniture or equipment which do not interact with the system as a whole and which do not directly contribute to the common purpose of the 911 system may not be purchased with 911 tax moneys.

The opinions don't address expenditures to acquire buildings. It's not exactly clear whether such expenditures are for the emergency telephone system. However, it seems to us that such expenditures are more similar to expenditures for office furniture (which aren't allowable) than to expenditures for electronic equipment that's an integral part of the 911 system. For that reason, we question the allowability of the following instance we saw:

- Sedgwick County plans to build and equip a new emergency communications center paid wholly with 911 tax moneys. The new facility is estimated to cost at least \$3 million. Any portion of that expenditure for the building seems a questionable use of 911 tax moneys.
- Saline County is considering using 911 tax moneys to purchase mobile data equipment for all emergency vehicles in the County. County representatives estimate the project will cost more than \$1 million. While the new equipment could allow for voiceless dispatch, it would primarily be used by law enforcement to file field reports and access the State computer.
- The Unified Government of Wyandotte County and Kansas City has issued \$6.9 million of bonds for public safety improvement, including the building and equipping a new combined police/fire/911 dispatch center. According to Government officials, 911 tax moneys will be used to repay these bonds. To the extent that such repayments finance expenditures for buildings and for non-911-related items, such use of 911 tax moneys appears questionable.

Given that the counties we visited have a variety of interpretations of the statutory limitations, the law really needs to be clarified so local governments have a better understanding of the Legislature's intent regarding 911 tax moneys.

Conclusion

Kansas, like many other states, has a decentralized 911 system most frequently operated on the county level. This structure may lead to higher costs, particularly in the area of equipment, if answering points don't have sufficient 911 call volume to justify the expense of the specialized answering equipment. However, consolidation is a highly politically charged issue and there currently are few incentives for local units of governments to consolidate further.

The counties we visited employed adequate, although varied, business practices; we didn't find the types of inefficiencies reported in Texas such as poor procurement and tax collection practices. Nonetheless, it's clear that 911 isn't operated uniformly across the State. Creation of a permanent advisory board to serve as a clearinghouse of technical, procedural, and operational information would strengthen the multiple 911 systems in the State. In particular, this body could disseminate up-to-date information on FCC regulations for wireless Enhanced 911. It could also work with answering points to determine appropriate use of 911 tax moneys. The current lack of clarity in the law, combined with a lack of any centralized structure, has led some answering points to contemplate expenses that we think go beyond how the Legislature intended those moneys to be used.

Recommendations

1. In order to assist answering points in receiving information and technical advice, the appropriate legislative public safety or commerce committees should explore the possibility of creating a resource in the form of an advisory committee or technical advisor. Such a resource also could work with answering points and local government officials to help them determine if it would be in their best interest to consolidate operations with another entity.
2. To clarify legislative intent, the legislative tax or commerce committees should review statutory limitations on how 911 tax moneys can be spent and amend the statute as is determined appropriate.

APPENDIX A

Scope Statement

This appendix contains the scope statement approved by the Legislative Post Audit Committee for this audit on February 2, 1999. The audit was requested by the Senate Commerce Committee. The audit is reported in two parts. Part I, issued in April 1999, answered the first question. This report, Part II, answers the second and third questions.

2:34

SCOPE STATEMENT

Reviewing the 911 Emergency Phone System

Emergency telephone service (911) operates under the control of city and county governments. Currently, State law allows users of hardwired telephones to be billed an amount up to 75 cents per phone line per month for 911 services, while no charge is assessed against wireless (cellular) phones. A recent order of the Federal Communication Commission requires full 911 service to wireless phone users, under certain conditions. A bill introduced in the Senate to extend the 911 tax to wireless users has raised broader questions about how well the system is functioning in Kansas.

Because there is no Statewide oversight of the 911 system, legislators lack such basic information as which counties have 911 systems, what level of system they have (for example, enhanced systems identify the caller's name, address, and phone number, while the most basic systems provide no identifying information), and whether counties have a single consolidated system or whether 911 calls are directed to multiple public safety answering points. Without this basic information, it's difficult to determine whether the citizens of Kansas are well-served by the 911 system, and to make informed decisions about the need for additional taxes in this area. To address these concerns, the audit would answer the following questions:

1. **What is the current status of the 911 system in Kansas and how does that compare to other states?** Through a combination of surveys and reviews of budget information from city and county governments, we would develop an inventory of basic information such as which counties have 911 service, what level of service they have, their tax levy rate for individuals and businesses, how much they collect in 911 taxes annually, what their fund balances were at the end of the fiscal year, whether they think their systems are Y2K compliant, how many public safety answering points operate in their county, the percent of 911 calls that originate from cellular telephones, the percent of 911 wireless calls that are made by law enforcement and other public safety officials, and whether the county accepts 911 wireless calls that originate in other counties. We also would contact a sample of other states to learn how their 911 systems are structured and paid for, and compare that to Kansas. We'd conduct additional work as needed.
2. **What will it cost to meet FCC requirements regarding wireless telephones, and what options exist for recovering those costs?** We would review the FCC requirements and work with officials of local governments and wireless companies to determine, to the extent possible, the equipment costs they would incur to meet those requirements. We'd review any existing estimates, or estimate the revenues that would be generated if the State's current tax system was extended to wireless users, as envisioned by SB63. We'd also determine if those revenues would be sufficient to cover the anticipated costs of local governments and wireless companies. We would review the funding mechanisms other states have adopted to meet FCC requirements, and talk with FCC officials and other interested parties to identify other possible ways to fund wireless coverage. We'd conduct additional work as needed.

- 3 **Does the current structure of the 911 system result in inefficiencies, higher costs, or other problems for the citizens of Kansas?** We'd conduct in-depth work on a sample of counties (including large and small, consolidated and unconsolidated) that would look at such things as the cost of their equipment and whether it was purchased competitively, whether excess equipment costs are incurred in areas that have multiple public safety answering systems, whether tax money is being spent only for the purposes allowed by statute, what the county is doing to monitor 911 performance and the outcome of that monitoring, the extent to which counties audit 911 tax receipts remitted to them by the local telephone companies, and whether 911 revenues could be maximized by requiring more timely submission of tax moneys. We'd also look at the extent to which 911 is being used by local government employees to contact their central offices, how much those calls cost the system and the wireless companies, and whether the system was designed for this purpose. We'd conduct additional work as needed.

Estimated Completion Time: 12-14 weeks

To meet the Commerce Committee's need for information, this audit could be reported in two parts.

APPENDIX B

Structure of 911 in Other States

During the audit, we gathered information about the structure of 911 operations in other states. Key points of that information are summarized and presented in the body of this report. This appendix presents additional details.

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	California	Colorado	Michigan	Minnesota
Some state oversight of 911 operations?	The Telecommunications Division in the Department of General Services is responsible for technical oversight of answering points, conducting annual compliance reviews, and distributing 911 tax revenue based on the results of those compliance reviews.	No	No	No
State-level advisory entity for 911 issues?	The Telecommunications Division serves as an advisory body on technical issues for answering points.	No	No	No
State oversight of 911 funding?	The State assesses a user fee on all phone bills, hardwired and wireless, which is currently .072% of all intrastate calling charges. This money is remitted to the Department of Revenue, which puts those funds into the Telecommunication Division's account for distribution to each answering point based on what each needs to maintain its operations.	No	No	No
Tax or surcharge assessed to hardwired phone bills to fund 911?	See above.	By statute, each county can levy a surcharge of up to \$.70 for every hardwired phone line.	Each county can determine how to fund 911, but cannot use any general fund monies. They can use property taxes, or can assess a surcharge of up to 20% of the basic hardwired local phone bill, or use some combination of these things.	A telephone user fee of \$.22 per hardwired phone line.
Tax or surcharge assessed to wireless phone bills?	See above.	By statute, each county can levy a surcharge of up to \$.70 for every wireless phone.	No	A telephone user fee of \$.22 per wireless phone.
Regional consolidation of 911 operations for hardwired phone lines?	Not yet, but the Telecommunications Division is developing a strategic plan for moving toward more regionally consolidated answering points throughout the state. They will approach the legislature with the plan and hope to make consolidation a state mandate.	No	No	No
Regional consolidation of wireless 911 operations?	See above.	No	No	Wireless 911 calls are received at one of ten State Patrol communications centers around the state.

	Missouri	Montana	Nebraska	North Dakota
Some state oversight of 911 operations?	No	The Department of Administration must approve each county's plan to implement and fund its 911 system. Their regulatory authority, though, ends at this point - they don't oversee any day to day operations of individual answering points.	No	No
State-level advisory entity for 911 issues?	The State operates a 911 Service Oversight Committee, but this committee has no regulatory or oversight authority.	The Department of Administration also serves in an advisory capacity to assist counties in implementing 911 systems, and providing ongoing information.	No	No
State oversight of 911 funding?	No	All 911 tax revenue is remitted to the Department of Revenue by the phone companies. The Department puts half the money into the "Basic 911" account and the other half into the "Enhanced 911" account. The Department of Administration then distributes this to all approved 911 jurisdictions based on the number of people each serves.	No	No
Tax or surcharge assessed to hardwired phone bills to fund 911?	Counties or local governments can tax on the tariff, up to 15% of the base dial tone rate for hardwired phones, or \$.75. Most areas currently charge the maximum.	Everyone in the state pays \$.50 for every hardwired phone line they have.	Each county can assess up to a \$1.00 surcharge on every hardwired phone line, but most currently charge \$.50.	Each county can levy a surcharge of up to \$1.00 for every hardwired phone line.
Tax or surcharge assessed to wireless phone bills?	No	Everyone in the state pays \$.50 for every wireless phone line they have.	No	No
Regional consolidation of 911 operations for hardwired phone lines?	10 counties have consolidated regionally.	No	No	The North Dakota State Radio System operates as an answering point for 22 low-population counties that previously had no 911 service. It receives calls and dispatches services for all 22 counties from one location. The state's other 23 counties operate their own answering points.
Regional consolidation of wireless 911 operations?	No	No	No	911 service for wireless calls coming in from one of the 22 counties that use the State Radio System are handled at the consolidated dispatch center.

	Ohio	Oklahoma	South Dakota	Texas
Some state oversight of 911 operations?	No	No	No	The Commission on State Emergency Communications is responsible for approving 911 plans and overseeing the 75 administrative entities that have regional responsibilities for individual answering points. The State can't regulate how answering points operate on a day-to-day basis.
State-level advisory entity for 911 issues?	No	No	The Division of Emergency Management serves as a source of information about 911 issues for answering points.	The Commission on State Emergency Communications also serves as an advisory body on 911 issues for individual answering points and administrative entities.
State oversight of 911 funding?	The State, through the Department of Taxation, offers counties an excise tax credit for non-recurring costs associated with implementing a 911 system (such as network/ infrastructure building.)	No	No	The Commission distributes 911 revenue to each administrative entity, either based on their Commission-approved budgetary needs, population, or through a grant-type process, depending on the type of administrative entity involved.
Tax or surcharge assessed to hardwired phone bills to fund 911?	Counties can assess a surcharge of up to \$1.00 on every hardwired phone bill, but the highest currently assessed is \$.65.	Each county or municipality can vote whether to accept a surcharge of up to 5% of the basic phone bill for each hardwired phone line for the first year (for purchase and installation of the system) and up to 3% of the basic bill in subsequent years (for maintenance and upkeep).	Each county can levy a surcharge of up to \$.75 for every hardwired phone line.	All hardwired phone customers must pay a \$.50 service fee per line per month.
Tax or surcharge assessed to wireless phone bills?	No	No	Each county can levy a surcharge of up to \$.75 for every wireless phone line.	All wireless customers must pay a \$.50 service fee per line per month.
Regional consolidation of 911 operations for hardwired phone lines?	No	No	No	No
Regional consolidation of wireless 911 operations?	No	No	No	No

	Washington	Wisconsin
Some state oversight of 911 operations?	The State Military Department operates an E-911 Program under its Emergency Services Division which had the authority to approve or reject each county's original plan for implementing E-911, and currently monitors annual 911 operations plans.	No
State-level advisory entity for 911 issues?	The Division also serves in an advisory capacity for answering points needing information.	No
State oversight of 911 funding?	The Division monitors how answering points spend their county-assessed phone tax, and if it determines that counties need more money, then it distributes revenue from the State phone tax fund.	No
Tax or surcharge assessed to hardwired phone bills to fund 911?	Each county can vote on how much tax to assess on each hardwired phone line, up to a \$.50 maximum. The State then assesses a \$.20 tax on each hardwired phone bill.	Counties can levy a service charge for each hardwired phone line of up to \$1.00 per line per month while initial implementation (non-recurring) costs are being recovered. After that, they may levy up to \$.40 per line for recurring expenses.
Tax or surcharge assessed to wireless phone bills?	Each county can vote to assess a tax for each wireless phone line, up to a \$.25 maximum. Every county currently does.	No
Regional consolidation of 911 operations for hardwired phone lines?	No	No
Regional consolidation of wireless 911 operations?	No	No

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APPENDIX C

Responsibility for 911 in Each County

During the audit, we gathered information about the area covered by and organization responsible for each 911 operation in the State. That information is presented in this Appendix.

County	Area covered	Entity Responsible for 911
Allen	Allen County	Iola Police Department
Anderson	Anderson County	Garnett City Police Department
Atchison	Atchison County	Atchison Police Department
Barber	Barber County	Barber County Sheriff's Department
Barton	Barton County	Barton County Communications
Bourbon	Bourbon County	City of Fort Scott Fire Department
Brown	Brown County	Brown County Sheriff's Department
Butler1	Butler County, except Cities of El Dorado, Andover and Augusta, and Fire District #2	Butler County Emergency Communications Center
Butler2	City of Augusta and Fire District #2	Augusta City Police Department
Butler3	City of Andover	Andover Police Department
Butler4	City of El Dorado	El Dorado Police Department
Chase	No 911	N/A
Chautauqua	Chautauqua County	Chautauqua County Sheriff's Office
Cherokee	Cherokee County	Cherokee County Sheriff's Office
Cheyenne	Cheyenne County	Cheyenne/Rawlins County Emergency Management
Clark	Clark County	Clark County Sheriff's Department
Clay	Clay County	Clay County Sheriff's Department
Cloud1	Cities of Concordia and Jamestown	Concordia Department of Public Safety
Cloud2	City of Glasco	Nicol Nursing Home
Cloud3	City of Clyde	Parkville Nursing Home
Cloud4	City of Miltonvale	City of Miltonvale
Coffey	Coffey County	Office of Emergency Preparedness
Comanche	Comanche County	Comanche County Sheriff's Department
Cowley1	Southern half of Cowley County	Arkansas City Police Department
Cowley2	Northern half of Cowley County	Winfield Police Department
Crawford	Crawford County	Crawford County Sheriff
Decatur	Decatur County	Decatur County Sheriff's Office
Dickinson1	Dickinson County, except City of Herington	City of Abilene Public Safety Communications - 911 Dispatch Center
Dickinson2	City of Herington	Herington Police Department
Doniphan	City of Highland	Highland Police Department
Douglas1	Douglas County, except University of Kansas campus	Douglas County Emergency Communications
Douglas2	University of Kansas campus	University of Kansas Police Department
Edwards	Edwards County	Edwards County Sheriff's Department
Elk	No 911	N/A
Ellis	Ellis County	Hays Police Department
Ellsworth	Ellsworth County	Ellis County Sheriff's Office
Finney	Finney County	Garden City Police Department
Ford	Ford County	Ford County Emergency Services
Franklin	Franklin County	Franklin County Sheriff's Department
Geary	Geary County	Junction City Police Department
Gove	No 911	N/A
Graham	Graham County	Graham County Sheriff's Department
Grant	Grant County	Grant County Law Enforcement Center
Gray	Gray County	Gray County Emergency Service
Greeley	Greeley County	Greeley County Sheriff's Office
Greenwood	City of Eureka and surrounding areas (583 prefix)	Greenwood County Sheriff's Department
Hamilton	Hamilton County	Hamilton County Sheriff's Department
Harper	Harper County	Harper County 911 Communications
Harvey	Harvey County	Harvey County Communications Center
Haskell	Haskell County	Haskell County Sheriff's Department

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County	Area covered	Entity Responsible for 911
Hodgeman	Hodgeman County	Hodgeman County Sheriff's Department
Jackson	Jackson County	Jackson County Sheriff's Office
Jefferson	Jefferson County	Jefferson County Communications
Jewell	Jewell County	Jewell County Sheriff's Department
Johnson1	Johnson County: fire and emergency medical services only	Johnson County Emergency Communications Center
Johnson2	Johnson County, except Cities of Shawnee, Prairie Village, Mission Hills, Overland Park, Olathe, Lenexa, Leawood: law enforcement only	Johnson County Sheriff's Office
Johnson3	City of Shawnee: law enforcement only	Shawnee Police Department
Johnson4	Cities of Prairie Village and Mission Hills: law enforcement only	Prairie Village Police Department
Johnson5	City of Overland Park: law enforcement only	Overland Park Police Department
Johnson6	City of Olathe: law enforcement only	Olathe Police Department
Johnson7	City of Lenexa: law enforcement only	Lenexa Police Department
Johnson8	City of Leawood: law enforcement only	Leawood Police Department
Kearny	Kearny County	Kearny County Sheriff's Department
Kingman	Kingman County	Kingman County Law Enforcement Center/911 Office
Kiowa	Kiowa County	Kiowa County Sheriff's Department
Labette1	Labette County, except City of Parsons	Labette County Sheriff's Department
Labette2	City of Parsons	Parsons Police Department
Lane	Lane County	Lane County Sheriff's Office
Leavenworth1	Leavenworth County, except City of Leavenworth and Fort Leavenworth	Leavenworth County Sheriff's Department
Leavenworth2	City of Leavenworth	Leavenworth Police Department
Leavenworth3	Fort Leavenworth	Fort Leavenworth Military Police
Lincoln	Lincoln County	Lincoln County Sheriff's Office
Linn	No 911	N/A
Logan	Logan County	Oakley Police Department
Lyon1	Lyon County, except City of Emporia: law enforcement and fire services only	Lyon County Sheriff's Department
Lyon2	Lyon County: ambulance and rescue services only; City of Emporia: law enforcement and fire services	Emporia Police Department
Marion	Marion County	Marion County Sheriff's Department
Marshall	Marshall County	Marshall County Sheriff's Department
McPherson	McPherson County	McPherson County Emergency Management
Meade	Meade County	Meade County Sheriff's Office
Miami	Miami County	Miami County Sheriff's Office
Mitchell	Mitchell County	Mitchell County Law Enforcement Center
Montgomery 1	Cities of Independence, Cherryville, Havana, and Elk City	Independence Police Department
Montgomery 2	Cities of Coffeyville, Liberty, Tyro, and Dearing	Coffeyville Police Department
Montgomery 3	City of Caney	Caney Police Department
Morris	Morris County	Morris County Sheriff's Department
Morton	Morton County	Morton County Sheriff's Department
Nemaha1	Nemaha County, except City of Sabetha	Nemaha County Sheriff's Department
Nemaha2	City of Sabetha	City of Sabetha Police Department
Neosho	Neosho County	Neosho County Emergency Communications
Ness	Ness County	Ness County Sheriff's Department
Norton	Norton County	Norton County Sheriff's Department
Osage	Osage County	Osage County Sheriff's Department
Osborne	Osborne County	Osborne County Sheriff's Department

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County	Area covered	Entity Responsible for 911
Ottawa	Ottawa County	Ottawa County Emergency Management
Pawnee	As of 5/18/99, City of Larned	City of Larned
Phillips	Phillips County	Phillips County Sheriff's Department
Pottawatomie1	Pottawatomie County, except City of Wamego	Pottawatomie County Sheriff's Department
Pottawatomie2	City of Wamego	City of Wamego Police Department
Pratt	Pratt County	Pratt Law Enforcement Center
Rawlins	Rawlins County	Cheyenne/Rawlins County Emergency Management
Reno	Reno County	Hutchinson Police Department
Republic	Republic County	Republic County Communications
Rice	Rice County	Rice County Sheriff's Department
Riley	Riley County	Riley County Police Department/Riley County Emergency Management
Rooks	Rooks County	Rooks County Emergency Management
Rush	Rush County	Rush County Sheriff's Department
Russell	Russell County	Russell County 911/Russell Police Department
Saline	Saline County	Salina Police Department
Scott	Scott County	Scott County Sheriff's Department
Sedgwick	Sedgwick County	Sedgwick County Emergency Communications
Seward	Seward County	Liberal/Seward County Emergency Communications
Shawnee	Shawnee County	Shawnee County Consolidated Emergency Communications Center
Sheridan	Sheridan County	Sheridan County Sheriff's Department
Sherman	Sherman County	Sherman County Communications and Emergency Management
Smith	Smith County	Smith County Sheriff's Department
Stafford	Stafford County	Stafford County Sheriff's Department
Stanton	Stanton County	Stanton County Sheriff's Department
Stevens	Stevens County	Stevens County Sheriff's Department
Sumner1	Sumner County, except City of Mulvane	Sumner County E-911 Communications Center
Sumner2	City of Mulvane	City of Mulvane Police Department
Thomas	Thomas County	Thomas County Law Enforcement Center
Trego	Trego County	Trego County Sheriff's Department
Wabaunsee	Wabaunsee County	Wabaunsee County Sheriff's Department
Wallace	No 911	N/A
Washington	Washington County	Washington County Sheriff's Department
Wichita	Wichita County	Wichita County Sheriff's Department
Wilson 1	City of Neodesha	Neodesha Fire Department/Emergency Medical Services
Wilson 2	City of Fredonia	Fredonia Sheriff's Office
Woodson	Woodson County	Woodson County Sheriff's Department
Wyandotte	Wyandotte County	Wyandotte County Emergency Management Department

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APPENDIX D

Agency Responses

On August 13th we faxed copies of Question 2 to each of the answering points in the six counties we visited asking for corrections or clarifications about the data concerning their offices. Several officials provided oral clarifications that have been incorporated into the text. The Johnson County Sheriff's Office provided written comments related to consolidation, and that letter is provided in this appendix.

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FRED ALLEN BRAND
SHERIFF

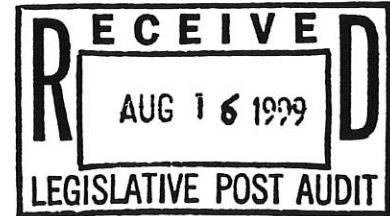
JOHNSON COUNTY SHERIFF'S OFFICE

JOHN L FOSTER
UNDER SHERIFF

COURT HOUSE

OLATHE, KANSAS 66061

791-5200



August 16, 1999

Barbara J. Hinton
Legislative Post Auditor
Legislative Division of Post Audit
Mercantile Bank Tower
800 SW Jackson Street, Suite 1200
Topeka, Kansas 66612-2212

Dear Ms. Hinton:

Thank you for the draft copy of *Reviewing the 911 Phone Systems in Kansas, Part II: Federal Mandates and Organizational Structure*. I have reviewed the section pertaining to the current structure of 911 within Kansas and I have a few comments that I would offer for your consideration.

On Page 14 and following pages in the draft report, the observation is made that the presence of multiple 911 centers within a county may result in some inefficiencies and higher costs. In particular, it was noted that Johnson County has eight answering points. A number of other factors should be included in the discussion of the efficiency and the cost of consolidating 911 answering points. Those include the immediate availability of redundant, back-up facilities for the reception of 911 calls; radio systems used by public safety agencies, and the degree of effectiveness of services provided.

911 systems are generally part of the public switched telephone network and are subject to interruptions of service when cables are cut or telephone switches go out of service. It is prudent and necessary to have additional 911 answering points available for such disruptions of 911 and general telephone service. In Johnson County, the various answering points have a secondary function of providing immediate 911 and dispatching back-up services for other answering points. Those arrangements are based upon commonality of radio systems and location.

Within Johnson County, the various police and fire jurisdictions have disparate radio systems that will not directly intercommunicate with each other, although a number of

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work-arounds are in place to coordinate multi-agency activities. Any effort to consolidate answering points would result in a multi-million dollar expense to replace existing radio systems, computer-aided dispatch systems and to add dispatch consoles into a consolidated center.

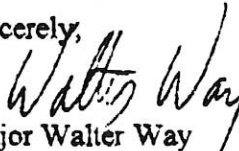
On Page 16 of the draft report, reference is made to Sedgwick County's thought about sharing a radio tower with an adjoining county in order to "achieve improved 911 service at reduced costs". As a point of clarification, 911 service is essentially the telephone system functionality that routes the call for emergency assistance to an answering point. The radio tower is needed to enhance radio communications in an area of their county and does not have a one-to-one relationship to 911 service.

The Post Audit staff did a good job of evaluating some of the barriers to consolidation in an urban area and also made the observation on Page 19 that consolidation of 911 services within a county "generally would mean a decision to consolidate all dispatch services for the county". While consolidation may present opportunities for efficiencies, it may not necessarily improve the effectiveness of service delivery in Johnson County. The numbers of calls per capita listed on Page 17 provide an indication of call volume for answering points but do not address quality of service issues that are more important in the evaluation of the performance of the answering points. A centralized service is not necessarily more effective than decentralized and locally managed service.

I would make the point that 911 and public safety dispatching services are not the same thing. 911 is essentially a telephonic service that simplifies citizen access to emergency services. In Johnson County, the majority of activity in dispatching centers do not involve 911 calls but do involve the management of police, fire and medical resources and the events in which they are providing services. I would be concerned about merging the state's interest in 911 taxation policy with the local responsibility to manage public safety service delivery to citizens.

I do plan on attending the August 26th meeting of the Legislative Post Audit Committee. Please let me know if I need to prepare any specific information for that meeting.

Sincerely,


Major Walter Way