

**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

**PERFORMANCE AUDIT REPORT
JANUARY 2006**

To The Fiscal Committee Of The General Court:

We have conducted an audit of the Department of Safety, Bureau of Emergency Communications' (BEC) management of the State's enhanced 911 (E-911) system to address the recommendation made to you by the Legislative Performance Audit and Oversight Committee. We conducted our audit in accordance with the standards applicable to performance audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to provide a reasonable basis for our findings and conclusions. Accordingly, we have performed such procedures as we considered necessary in the circumstances.

The purpose of the audit was to determine if New Hampshire's E-911 system finances and operations were efficiently and effectively managed by the BEC. The audit period includes State fiscal years 2000-2005.

This report is the result of our evaluation of the information noted above and is intended solely for the information of the BEC and the Fiscal Committee of the General Court. This restriction is not intended to limit the distribution of this report, which upon acceptance by the Fiscal Committee is a matter of public record.

Office Of Legislative Budget Assistant

January 2006

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**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

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ABBREVIATIONS	
ALI	Automatic Location Identification
ANI	Automatic Number Identification
BEC	Bureau Of Emergency Communications
CY	Calendar Year
CAD	Computer-Aided Dispatch
E-911	Enhanced 911

EMD	Emergency Medical Dispatch
FCC	Federal Communications Commission
LBA	Office Of Legislative Budget Assistant
NAEMD	National Academy Of Emergency Medical Dispatch
NENA	National Emergency Number Association
NTSP	Network Telephone Service Provider
PSAP	Public Safety Answering Point
PUC	Public Utilities Commission
RSA	Revised Statutes Annotated
SFY	State Fiscal Year
VoIP	Voice Over Internet Protocol

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**STATE OF NEW HAMPSHIRE
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SUMMARY

Purpose And Scope Of Audit

This audit was performed at the request of the Fiscal Committee of the General Court consistent with the recommendation of the joint Legislative Performance Audit and Oversight Committee. It was conducted in accordance with generally accepted government auditing standards applicable to performance audits. The purpose was to determine if the Bureau of Emergency Communications (BEC) efficiently and effectively manages the New Hampshire enhanced 911 (E-911) system's finances and operations. We examined the performance and financial management of the E-911 system.

Background

New Hampshire's E-911 system provides citizens and visitors to the State a nationally known telephone number for reporting emergencies to law enforcement, fire, and medical responders. All calls to 911 within the State are routed to a single public safety answering point (PSAP) located at the Department of Safety in Concord, which receives calls 24 hours a day, seven days a week. Emergencies requiring police and fire response are immediately transferred and released to the appropriate local dispatch agency. For medical emergencies, the caller is asked about the nature of the emergency, the PSAP calls the appropriate emergency medical responder, and then remains on the line providing appropriate emergency medical instructions while waiting for the medical responder to arrive.

In September 2003, Chapter 319:98 Laws of 2003 placed the BEC within the Department of Safety. Prior to that, the Bureau was administratively attached to the Department of Administrative Services and overseen by the E-911 Commission. Since the Bureau was transferred to the Department of Safety, the E-911 Commission's responsibilities changed from coordinating and implementing the E-911 system to advising the Commissioner of Safety on pertinent issues.

The BEC is funded by a surcharge on each telephone line and wireless number. RSA 106-H:9, I establishes the E-911 funding mechanism, stating the system shall be funded through a surcharge levied upon each residence and business telephone exchange line, each individual wireless number, and each semi-public and public coin and public access line. Although 911 was originally developed for wireline telephones, increased use and popularity of wireless phones have resulted in an ever increasing number of wireless 911 calls. Wireless phones present new technological and policy issues for 911 systems, in part because location and phone number information was not originally available for wireless 911 calls.

In its effort to develop and improve emergency communications in the State, RSA 106-H:11 allows municipalities to petition the BEC for equipment "which will facilitate or expand the enhanced 911 capability of a dispatch office." The Bureau provides dispatching technology and mapping services to municipalities. At the request of a municipality, the Bureau installs and maintains remote computer-aided dispatch systems at local dispatch centers that display the information collected by telecommunicators.

Results In Brief

Our audit presents 16 observations with recommendations. Two observations address problems with how the BEC has handled contracts, seven observations address financial operations, four observations deal with reporting, and three observations are made primarily to entities outside the Bureau. We also present six other issues and concerns, which were not developed into formal observations, yet we consider noteworthy. In commenting on this report, the BEC concurred with 15 observations and recommendations. The Bureau's overall response to the report is found in Appendix A, while detailed responses to individual observations and recommendations follow each observation.

Continue Effective PSAP Oversight

The PSAP operations are closely monitored to provide efficient and life-saving service to the public. Telecommunicators are given extensive training and are continuously monitored on every shift by supervisors, and medical emergency calls are subjected to further quality review. Telecommunicators, supervisors, and other BEC personnel we spoke with all agree the Bureau quickly responds to emergency calls facilitating timely local responses. The quality of BEC's operations is also recognized by the National Academy of Emergency Medical Dispatch accreditation of the PSAP. However, PSAP operations are hampered by 1) an inadequate and partially functioning call data system and 2) the relatively high turnover rate of telecommunicators (36 percent in State fiscal years 2003-2005), caused in part by the stressful nature of the job.

Improve Contract Procurement Practices

We found the BEC's overall handling of its contracts for telephone network services and its database of telephone numbers and street addresses to be improper in some instances and poorly managed in others. A 2003 audit identified the million-dollar-a-year network and database contract extension had not been approved by the Governor and Council and recommended the Bureau immediately review its negotiation position. Two years later we find the same condition exists. In fact, there has not been a new agreement, let alone a contract, between the Bureau and vendor since December 2004. The Bureau has not been able to negotiate a five-year contract, but instead has extended the existing contract annually. We note part of the problem facing BEC management and the E-911 Commission has been the less than desirable cooperation and responsiveness of the vendor. By not entering into a five-year contract with its vendor, the BEC has paid more for network services under month-to-month pricing and a new fully equipped PSAP in Laconia has remained unused since the end of 2002, while equipment at the Concord PSAP goes unrepaired.

Improve Management Of Surcharge

We identify a number of areas where the BEC can improve its handling of surcharge payments, some of which would require Legislative changes. The Bureau's collection and tracking of surcharge payments is deficient. Currently, the Bureau does not have administrative rules requiring a standardized reporting document to be submitted with monthly surcharge payments.

In addition, the Bureau is not consistently tracking payments from wireless and wireline companies, thereby inaccurately reporting payments. Statutorily, the Bureau is unable to set and collect a surcharge on users of new communication technologies, such as Voice over Internet Protocol (VoIP), that have or will have access to the E-911 system. We also determined the BEC cannot collect an additional fee from companies that make late payments without the Legislature granting this authority.

Develop And Implement Reimbursement Rules

We found the BEC faces a potentially significant financial liability with the implementation of cost recovery for wireless companies. While this requirement has been in place since 1997, very little was done to implement it until 2004. Inadequate planning and lack of administrative rules have resulted in repeated false starts and an unclear reimbursement process. We note a 2003 audit identified a number of administrative rules needed to be adopted.

Improve Reporting

We found the BEC's required annual reporting could be improved. Only three reports have been produced during the past six years. We also found an example of an annual report not being submitted to a required recipient. In addition, the reports contained information the E-911 Commission had determined to be confidential. Because of the due date of the report, the Bureau cannot supply complete fiscal year data for useful oversight by government leaders. In addition, the Bureau could improve its method for distributing and identifying its progress for mapping communities to aid in locating callers. The Bureau has fully mapped individual addresses for 35 percent of the State's communities, while other communities are in various stages of data collection.

Other Issues And Concerns

We identified a number of topics for the BEC's, the E-911 Commission's, and the Legislature's information and consideration, without making any specific recommendations. These topics include:

- Surcharge Limits,
- Interest Income,
- Busy Message For 911 Callers,
- Telecommunicators' Turnover Rate,
- Review PSAP Staffing, and
- Awareness Of E-911 Expenditures.

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RECOMMENDATION SUMMARY

Observation Number	Page	Legislative Action May Be Required	Recommendation	Agency Response
1	23	Yes	Review handling of contract negotiations and provide regular updates.	Concur
2	25	No	Follow State contracting procedures by obtaining Governor and Council approval for service contracts.	Concur
3	27	Yes	Require the BEC to formally document surcharge determination.	Concur
4	28	No	Promulgate administrative rules establishing a surcharge reporting form and procedures.	Concur
5	29	No	Institute internal policies and procedures to improve surcharge revenue tracking and conduct greater management oversight of revenue collections.	Concur
6	30	Yes	Seek legislation allowing the Bureau to charge late fees.	Concur
7	31	Yes	Seek legislation to identify which E-911 system users should be assessed a surcharge.	Concur
8	32	No	Adopt rules to implement cost recovery for wireless providers.	Concur
9	33	Yes	Seek legislation to allow the BEC to establish unique rates for different types of user technologies.	Concur
10	35	No	Ensure annual reports are produced and properly filed in accordance with State law.	Concur
11	36	Yes	Seek legislation to change reporting date.	Concur

Recommendation Summary

Observation Number	Page	Legislative Action May Be Required	Recommendation	Agency Response
12	36	No	Improve handling of confidential information.	Concur
13	37	No	Regularly publish mapping progress.	Concur
14	41	No	Governor should independently appoint two E-911 Commission members.	No Comment
15	42	Yes	Review how statements of financial interests are handled.	Concur
16	44	Yes	Make necessary statutory changes.	Concur

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OVERVIEW

On May 21, 2003, the Fiscal Committee approved a recommendation made by the Legislative Performance Audit and Oversight Committee to conduct a performance audit of New Hampshire's enhanced 911 (E-911) system. At the direction of the latter Committee, the audit was deferred until other audits were completed. We therefore held an entrance conference on September 3, 2004 with the Department of Safety.

SCOPE, OBJECTIVES, AND METHODOLOGY

This performance audit was conducted in accordance with generally accepted government auditing standards applicable to performance audits and accordingly included such procedures as we considered necessary in the circumstances.

Scope And Objectives

We designed our audit to answer the following question – **Are New Hampshire's E-911 system finances and operations efficiently and effectively managed?** The audit covers State fiscal years (SFY) 2000-2005.

Methodology

We reviewed and analyzed various documents such as program operation standards, policies and procedures, State statutes, administrative rules, federal laws and regulations, annual reports, E-911 Commission meeting minutes, national standards, audits of other states' E-911 systems, and news articles. We conducted interviews with Bureau of Emergency Communications (BEC) management, administrative employees, telecommunicators, supervisors, Commission members, employees in the technical support and mapping units, and representatives from other State agencies.

We compared New Hampshire E-911 laws with those from the other 49 states. We reviewed various documents relating to contracts between the Bureau and its network telephone service provider (NTSP). We also reviewed the Bureau's cost recovery and surcharge payment files.

BACKGROUND

New Hampshire's E-911 system provides citizens and visitors to the State an easily remembered telephone number for reporting emergencies. Police and fire emergencies are immediately transferred to the appropriate local dispatch center or agency. For medical emergencies, the caller is asked about the nature of the emergency, the public safety answering point (PSAP) calls the appropriate emergency medical responder, and then remains on the line providing appropriate emergency medical instructions over the phone while waiting for the medical responder to arrive.

Wireline 911

Basic wireline 911 has been in existence since 1968 when the first call was made in Alabama. With basic 911, calls are routed to a PSAP, providing only a voice connection requiring the call taker (i.e., telecommunicator) to obtain information from the caller regarding both the nature and the location of the emergency. While providing a universal number to connect people to a PSAP, basic 911 does not provide a way to identify the caller's location or callback number.

E-911 overcomes the limitations of basic 911 by providing the PSAP a callback number and location information. The automatic number identification (ANI) delivers the callback number to the PSAP. In addition, for billing purposes, telephone companies associate each telephone number with the subscriber's name and address. This information, called automatic location identification (ALI), is maintained in a database and is transmitted to the PSAP along with the caller's telephone number. This permits immediate dispatch of first responders and reduces errors in reporting location of the emergency.

Wireless 911

Although 911 was originally developed for wireline telephones, increased use and popularity of wireless phones have resulted in an increasing number of wireless 911 calls. According to a 2003 BEC report, an estimated 33,000 of 64,000 calls (52 percent) received during a two-month period were placed from wireless phones. Wireless phones presented new technological and policy issues for 911 systems, in part because ANI and ALI data (i.e., location and phone number information) was not available for wireless 911 calls. Responding to calls without this information strains PSAP resources as additional time, effort, and personnel are needed to identify the caller's location, which delays dispatching first responders.

Federal Role

Concerns related to the increasing number of wireless 911 calls lacking callback numbers and caller locations led the Federal Communications Commission (FCC) in 1996 to adopt rules requiring wireless carriers (i.e., commercial mobile radio service providers) to provide the same level of functionality as wireline 911 service. The rules:

- established a schedule for wireless carriers to implement basic and E-911 services,
- proposed two phases for implementing E-911,
- set accuracy requirements, and
- outlined the PSAP role.

Phase I required that by April 1998 or within six months of a request from a PSAP, whichever is later, wireless carriers were to provide the PSAP with the wireless phone number of the caller and the location of the cell site receiving the call. Phase II requires more precise location information, specifically the latitude and longitude of the caller, be transmitted to the PSAP by October 2001 or six months after a request from a PSAP, whichever is later.

When the FCC adopted wireless E-911 rules it assumed wireless carriers would use a network-based solution to meet Phase II requirements; however, advancements in location technologies allowed the development of handset-based solutions. A network-based solution uses a triangulation technique using the nearest cell towers to locate a caller while a handset-based solution uses a global positioning system chip placed in the handset to determine a caller's location. Additionally, wireless carriers can employ a hybrid solution requiring changes to the network and handsets. In 1999, the FCC revised its rules requiring wireless carriers choosing a handset solution to adhere to stricter accuracy requirements. Handset-based solutions must provide accurate location information within 50 meters for 67 percent of calls and 150 meters for 95 percent of calls. Network-based solutions must be accurate within 100 meters for 67 percent of calls, and 300 meters for 95 percent of calls. Hybrid solutions must meet the handset-based accuracy requirements.

The FCC also set an October 2001 deadline for wireless carriers choosing a handset solution; requiring at least 95 percent of all newly-activated digital handsets provide ALI. As the deadline approached, each of the six large national wireless carriers requested and were granted waivers because the technology was not ready for implementation. There are no federal deadlines for PSAPs to deploy equipment capable of receiving and utilizing Phase II data or to request this information from wireless carriers. Implementing nationwide wireless E-911 service therefore depends upon the efforts of both PSAPs and wireless carriers which has resulted in delays in some parts of the country. New Hampshire's PSAP currently receives Phase I information from wireless carriers (cell site and callback number) and is receiving Phase II data from most carriers.

Oversight Of E-911

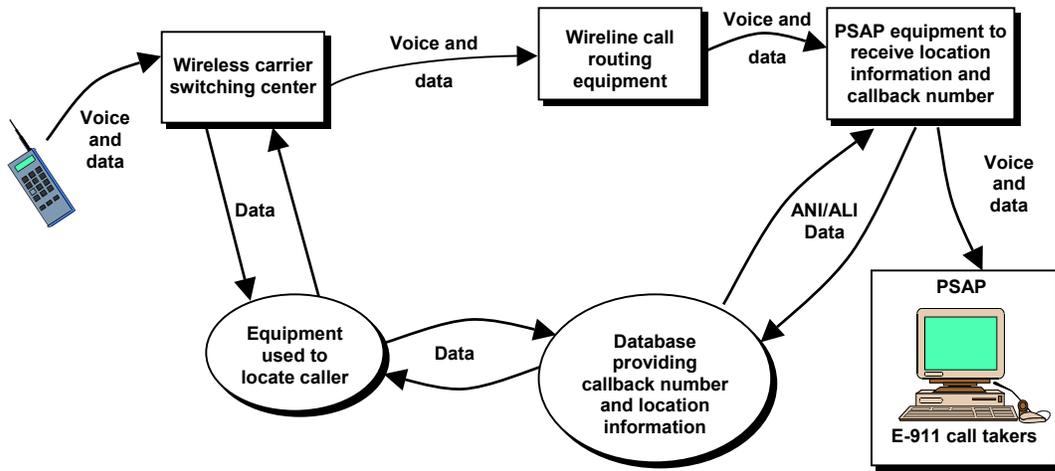
No single organization has complete authority or oversight over E-911. The FCC has authority to regulate wireless carriers. State public utility commissions have a great deal of regulatory authority over wireline companies including intrastate service rates, but federal law exempts wireless carriers from rate regulation. PSAPs are traditionally governed by state or local authorities because of their emergency response function. As a result, there are more than 6,000 PSAPs nationwide, and administration and funding at the state, county, or municipal level varies.

Figure 1 shows the wireless E-911 infrastructure involves three different entities: wireless carriers, wireline companies, and PSAPs; who must interconnect and install equipment for wireless E-911 calls to work.

Congress passed the Wireless Communications and Public Safety Act of 1999 after recognizing the uneven implementation of wireless E-911. The Act established 911 as the universal emergency telephone number and called on the FCC to encourage and support state efforts to deploy a comprehensive end-to-end communications infrastructure and programs based on coordinated statewide plans. According to a November 2003 Government Accountability Office report, nearly 65 percent of PSAPs across the country have implemented Phase I, but only 18 percent have implemented Phase II with at least one wireless carrier providing location information.

Figure 1

Simplified Phase II Wireless E-911 Call



Source: U.S. Government Accountability Office 2003.

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NEW HAMPSHIRE E-911 MANAGEMENT AND ORGANIZATION

A 1991 Legislative committee, created to study the feasibility of implementing a statewide enhanced 911 (E-911) system, concluded there was a need for such a system. The committee recommended a centralized system due to the recurring and nonrecurring costs, ease of staffing, uniformity of call handling and ease of quality assurance, and minimizing interference with autonomy of local dispatch centers.

In 1992 the Legislature enacted RSA 106-H, which established the E-911 system to provide a statewide emergency telephone number, develop and improve communication procedures and facilities, and reduce the response time to emergency calls. RSA 106-H also created an E-911 Commission responsible for coordinating and overseeing statewide implementation of the E-911 system, including establishing the Bureau of Emergency Communications (BEC) and the duties and qualifications of the Director. RSA 106-H:5 also made the E-911 Commission responsible for: establishing technical and operational standards for creating the public safety answering point (PSAP); preparing and submitting the BEC's operational budget and annual report; and requiring public safety agencies to submit reports and information necessary for operating E-911. The PSAP became operational on July 5, 1995.

In September 2003, Chapter 319:98 Laws of 2003 placed the BEC within what is now the Department of Safety's Division of Emergency Services, Communications, and Management. Prior to that date, the Bureau was administratively attached to the Department of Administrative Services. Since the transfer of the Bureau to the Department of Safety, the Commission's responsibilities changed from coordinating and implementing the E-911 system to advising the Commissioner of Safety on issues pertaining to E-911. Daily operations are supervised by an Assistant Director and administered by the Director of the Division of Emergency Services, Communications, and Management. General oversight is provided by the Department of Safety's Assistant Commissioner.

As shown in Figure 2, the Bureau consists of six units with 125 full-time and 11 part-time personnel. The operations unit is responsible for answering and transferring all 911 calls to the appropriate local dispatch center or public safety agency. It is comprised of 58 full-time and nine part-time telecommunicators, and is managed by 12 supervisors and one operations chief.

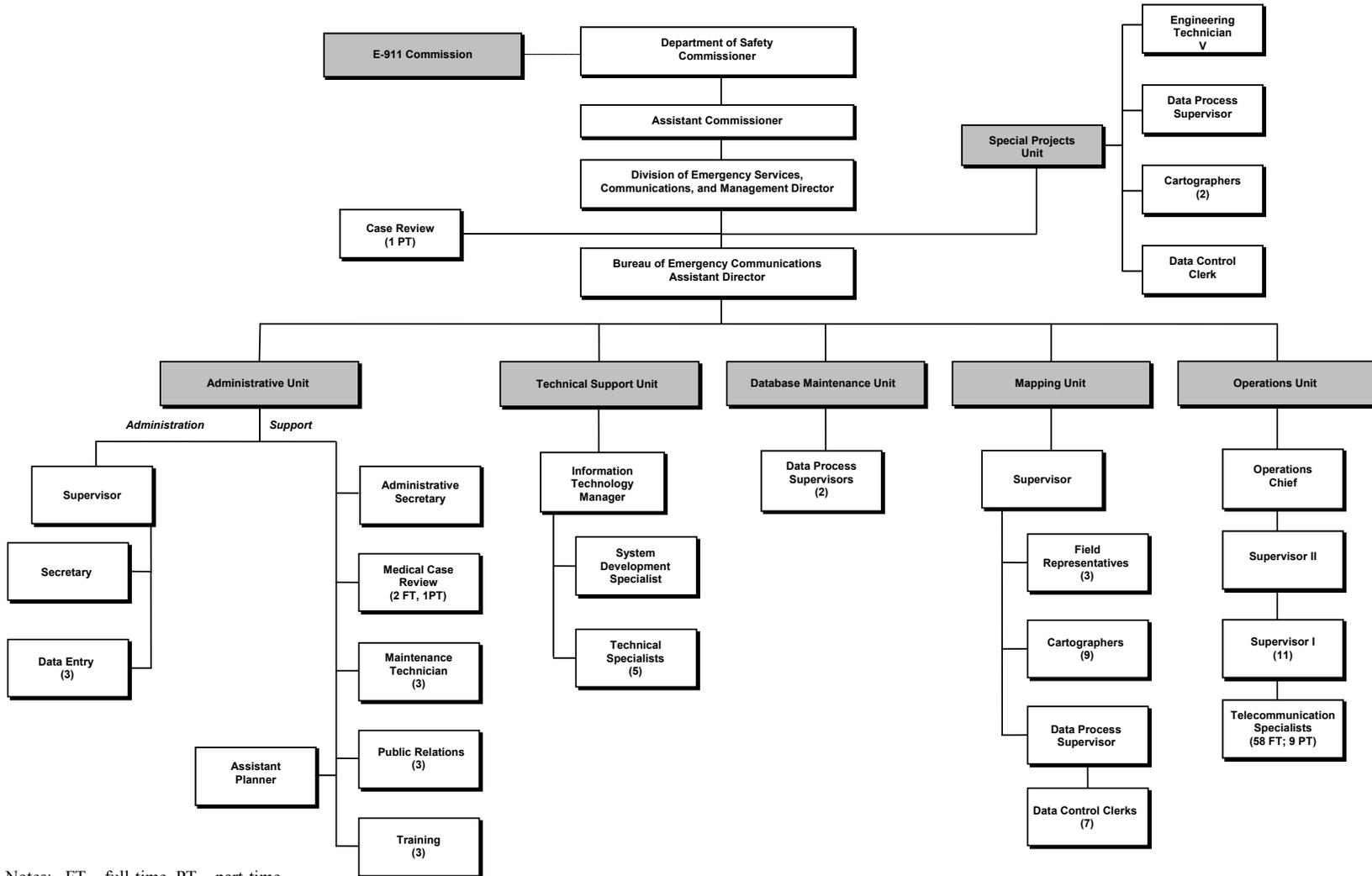
The mapping unit has 21 full-time personnel assisting municipalities around the State with developing and maintaining street addresses. This unit also creates detailed computer-based maps to assist in dispatching emergency personnel.

The technical support unit is supervised by an Information Technology Manager and consists of seven full-time employees. The unit supports the Bureau's information technology functions including maintenance, purchasing equipment, and developing and deploying new systems.

The two database maintenance unit employees report to the Assistant Director. The unit was established in preparation for the BEC taking control of the automatic location identification (ALI) database that is currently administered by a vendor.

Figure 2

**Bureau Of Emergency Communications Organization
As Of January 2006**



Notes: FT – full-time, PT – part-time.
Special Projects Unit created after the audit period.
Source: LBA analysis of Bureau of Emergency Communications data.

The administrative unit is comprised of the administrative and support sections. The administrative section has five full-time employees responsible for the day-to-day business activities such as payroll, purchasing, and inventory. The support section has 13 full-time employees and one part-time employee who are responsible for quality control of medical calls, public education, and training.

PSAP Operations

All calls to 911 within the State are routed to the primary PSAP located in Concord, which receives calls 24 hours a day, seven days a week. Emergencies requiring police and fire are immediately transferred and released to the appropriate dispatch agency while medical emergencies are kept on the line until emergency personnel arrive. Using computer aided dispatch (CAD) technology, telecommunicators answer and direct wireline and wireless 911 calls to the appropriate public safety agencies. According to BEC officials, the Concord PSAP consists of 19 CAD workstations, of which 14 were fully functioning as of June 2005. A CAD system automates dispatching and record keeping functions such as receiving calls, locating the caller, and forwarding the call. The Bureau established a backup center in Laconia, which has all the capabilities and functionality of the Concord PSAP, but the facility has not yet been placed into service.

Consistent call data for the audit period are unavailable. Table 1 shows New Hampshire’s PSAP call volume prior to equipment failure preventing the reporting of call data. Consistent call data are only available for calendar years (CY) 2000-2003. The application used to generate statistical reports on the number of calls per hour has been down for most of 2005. Bureau staff is unable to generate statistical information or create ad hoc reports. While the Bureau can get estimates from another piece of equipment, the special event logger, the call volume generated is based on the number of calls transferred to local dispatchers instead of the total number of calls into the PSAP. The Bureau reported 385,498 and 396,314 transfers for CYs 2004 and 2005, respectively. However, it has not retained printed monthly reports so we cannot present this call-volume measurement for the entire audit period. According to BEC management, the Bureau has always had trouble generating statistics; its statistical reporting capabilities were limited due to a lack of integration between systems.

Table 1

**911 Calls Received
Calendar Years 2000-2005**

	2000	2001	2002	2003	2004	2005
Total	358,705	398,562	409,317	405,515	N/A ¹	N/A ¹

Note: ¹No Bureau data available.

Source: Unaudited Bureau of Emergency Communications data.

We estimate the average number of calls per day between CYs 2000 and 2003 was approximately 1,075 calls. In 2003, the BEC estimated 49 percent of the calls it received were wireline while 51 percent were wireless. All call data were aggregated to find the average time it takes the Bureau to answer and transfer a call. According to the BEC, on average, the time between the initial receipt of the call and transfer to the local agency varied from 12 seconds to 44 seconds depending on the type of call (i.e., police or fire) and the type of phone from which the call originates. The BEC estimated 12 seconds for a wireline fire call, 14 seconds for a wireline police call, 31 seconds for a wireless fire call, and 44 seconds for a wireless police call. According to BEC management, since 2003 all wireless providers have become compliant with Phase II requirements. Therefore, it is likely these wireless transfer times have shortened.

A major component of the E-911 system is emergency medical dispatching (EMD). EMD consists of three parts: triaging the call to determine the appropriate response level, providing pre-arrival instructions, and quality assurance. Each CAD workstation is equipped with specialized EMD software and a flip chart card set as a backup resource. This software provides standardized case entry questions, key questions to ask the caller, and post-dispatch and pre-arrival instructions specific to each situation. The telecommunicator notifies and relays pertinent information to the appropriate dispatch agency and then continues providing medical instructions based on protocol until the responding agency arrives.

Funding

BEC operations are funded by a surcharge on each telephone line and wireless number. RSA 106-H:9, I establishes the E-911 funding mechanism stating the system shall be funded through a surcharge levied upon each residence and business telephone exchange line, each individual wireless number, and each semi-public and public coin and public access line. The surcharge is collected by wireline and wireless providers and remitted to the Bureau, where the revenue is passed through to the State Treasurer and credited to a non-lapsing dedicated fund. The revenue cannot be used for any purposes other than development and operation of E-911 services. State law requires a review of the surcharge amounts after the budget has been approved or modified. If appropriate, new tariffs or rate schedules shall be filed with the Public Utilities Commission (PUC) reflecting the new surcharge amount for wireline users. Because wireless users are not regulated by the PUC, the wireless surcharge rate is simply set by the Bureau. The current monthly wireline surcharge of \$0.42 was established in 1995 and in 1997 the same was instituted for each wireless number.

Table 2 summarizes the Bureau's revenues and expenditures for State fiscal years (SFY) 2000-2005. Expenditures were higher than telephone surcharge revenues collected for five of the six years. Revenues increased 31 percent between SFY 2000 and 2005 while expenditures increased 17 percent during the same period. The available E-911 fund balance decreased 41 percent from \$2.1 million in SFY 2000 to \$1.2 million in SFY 2005. The E-911 fund balance at June 30 averaged 21 percent of expenditures for the period SFY 2000-2005, and ranged from a low of 16 percent in SFY 2005 to a high of 33 percent of expenditures in SFY 2000.

Table 2**Revenues And Expenditures
SFY 2000-2005**

	2000	2001	2002	2003	2004	2005
Revenues						
Telephone Surcharge For 911	\$ 5,601,446	\$ 6,097,092	\$ 6,340,268	\$ 6,981,804	\$ 7,092,635	\$ 7,332,902
Available Balance At July 1	<u>2,789,045</u>	<u>2,062,117</u>	<u>1,242,255</u>	<u>1,234,579</u>	<u>1,485,958</u>	<u>1,286,390</u>
Total Spending Authority	<u>\$ 8,390,491</u>	<u>\$ 8,159,209</u>	<u>\$ 7,582,523</u>	<u>\$ 8,216,383</u>	<u>\$ 8,578,593</u>	<u>\$ 8,619,292</u>
Expenditures						
Salaries	\$ 2,043,264	\$ 1,746,226	\$ 1,798,381	\$ 1,979,638	\$ 2,855,134	\$ 2,997,553
Overtime	177,223	265,456	176,859	106,512	17,901	49,623
Full Time Temporary	187,401	707,532	924,369	1,189,747	487,713	477,884
Benefits	801,328	1,004,514	1,251,832	1,522,310	1,477,229	1,778,288
Current Expenses	618,514	409,695	285,887	436,159	389,328	302,274
Equipment--New/Replacement	651,010	181,369	208,843	148,743	31,898	87,185
Indirect Costs	5,000	5,000	56,794	102,256	97,673	97,785
Consultants	3,758	4,690	2,490	2,875	-	200
Transfers To Other State Agencies	2,500	2,500	2,500	2,500	-	-
Travel	34,129	24,035	21,213	11,716	11,721	14,718
Public Relations	19,412	85,073	43,597	21,677	46,897	18,982
Remote ANI/ALI	410,640	254,814	54,982	112,211	53,915	49,644
System Development	650,186	1,371,605	491,710	637,170	667,839	119,613
Network & Database Maintenance	699,346	830,000	988,982	422,500	1,120,114	1,379,159
Training	<u>24,663</u>	<u>24,445</u>	<u>39,505</u>	<u>34,411</u>	<u>34,841</u>	<u>33,431</u>
Total Expenditures	<u>\$ 6,328,374</u>	<u>\$ 6,916,954</u>	<u>\$ 6,347,944</u>	<u>\$ 6,730,425</u>	<u>\$ 7,292,203</u>	<u>\$ 7,406,339</u>
Available Balance At June 30	\$ 2,062,117	\$ 1,242,255	\$ 1,234,579	\$ 1,485,958	\$ 1,286,390	\$ 1,212,953

Source: LBA analysis of Statements of Appropriation.

Accreditation And Quality Assurance

The BEC has been accredited by the National Academy of Emergency Medical Dispatch (NAEMD) since 1999 and is currently in the process of re-accreditation, which requires formal documentation and description of twenty areas of Bureau operation. These areas include: documentation of 25 example case review tapes and completed case evaluation records; submission of continuing dispatch education schedules, topics, and attendance records; and current NAEMD certification of all personnel authorized to process emergency medical calls.

Each call the PSAP receives is recorded and evaluated on the basis of in-house and, if applicable, NAEMD standards. For non-medical calls, such as police or fire, supervisors are required to review at least one call from each telecommunicator per shift. Medical assistance calls are randomly reviewed by a quality assurance team, which evaluates 60 to 70 medical cases per week and produces monthly compliance reports. Each reviewed call receives a score based on the telecommunicator's compliance with NAEMD accreditation standards. The level of compliance required to meet NAEMD standards is 90 percent or greater, but the Bureau requires

telecommunicators to maintain a score of at least 95 percent. Telecommunicators consistently failing to meet the standard are removed from active status and given additional training.

Support To Municipalities

In carrying out its mission to develop and improve emergency communications in the State, the BEC provides technology and mapping services to municipalities. At a municipality's request, the Bureau installs and maintains remote CAD systems at local dispatch centers. RSA 106-H:11 states municipalities may petition the Bureau for equipment that will facilitate or expand the E-911 capability of a dispatch office. The Bureau is required to review any application to determine if the equipment requested will work with BEC equipment. To date the Bureau has granted all requests.

The BEC provides, maintains, and retains ownership of its hardware, software, and equipment. The remote CAD system provides ANI/ALI data (i.e., location and phone number information), geographic information system mapping capabilities, and EMD status summary notification to 71 local dispatch centers or emergency response agencies that are staffed 24 hours a day. An additional 15 dispatch centers maintain their own CAD systems capable of receiving ANI/ALI information and EMD summaries from the PSAP. Oddly, the State Police, also an agency within the Department of Safety, does not have the capability to receive ANI/ALI and mapping data, nor has the State Police asked the BEC to provide CADs for troop dispatch centers. Instead, the State Police rely solely on E-911 telecommunicators to tell them the pertinent information.

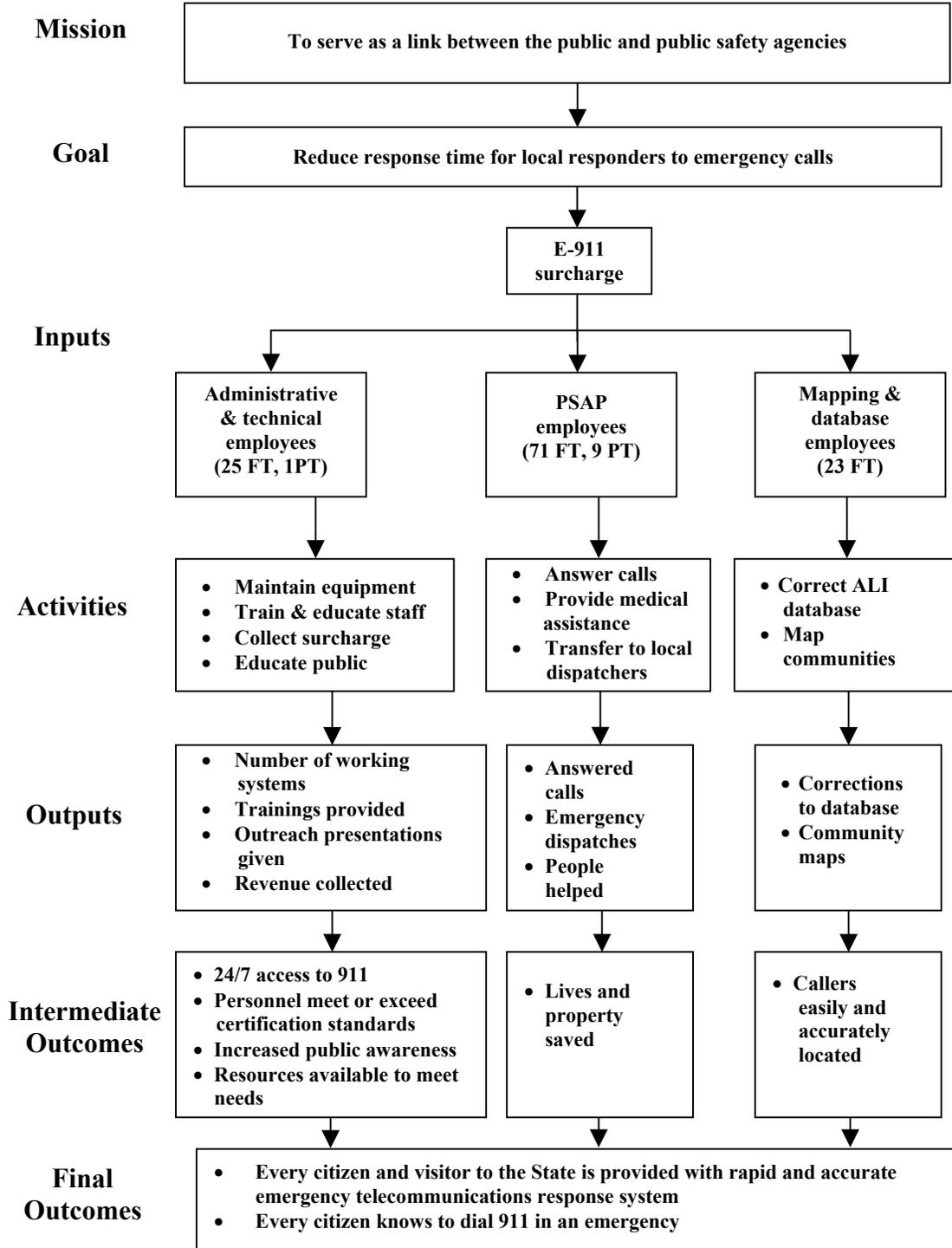
The BEC's mapping unit assists municipalities with developing and maintaining street addresses and creates detailed computer-based maps to assist with emergency response. RSA 106-H:10, I encourages municipalities to provide and maintain a verified master street address guide and verified street address guide to the Bureau for use in developing and maintaining an ALI database. Bureau personnel collect and verify address and location data to create maps. These maps are then used at telecommunicators' workstations and at remote CADs at local dispatch centers. In addition, the mapping unit attempts to identify locations of telephone numbers without addresses in the ALI database. According to the Bureau, between 1998 and 2004 the mapping unit identified street addresses for 72,632 telephone lines previously lacking that information.

Logic Model

Figure 3 is a logic model we developed to assist in our understanding and analysis of the connections between the E-911 system's statutory mission, goals, activities, and their desired outcomes. Logic models illustrate the intended relationship between these components. As mentioned in our Results In Brief and Conclusion sections, the BEC's call-taking activity seems to have adequate controls in place to ensure services are provided. However, improvements need to be made in other activities that can affect the system's desired outcomes. These recommendations are addressed in the next sections of the report. Other recommendations, while not directly related to call-taking performance, are nevertheless equally important and demonstrate the need for the BEC to comply with State laws, contracting procedures, and good management practices.

Figure 3

LBA Logic Model Of The E-911 System



Source: LBA analysis of E-911 statutes and operations.

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**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

CONTRACTING

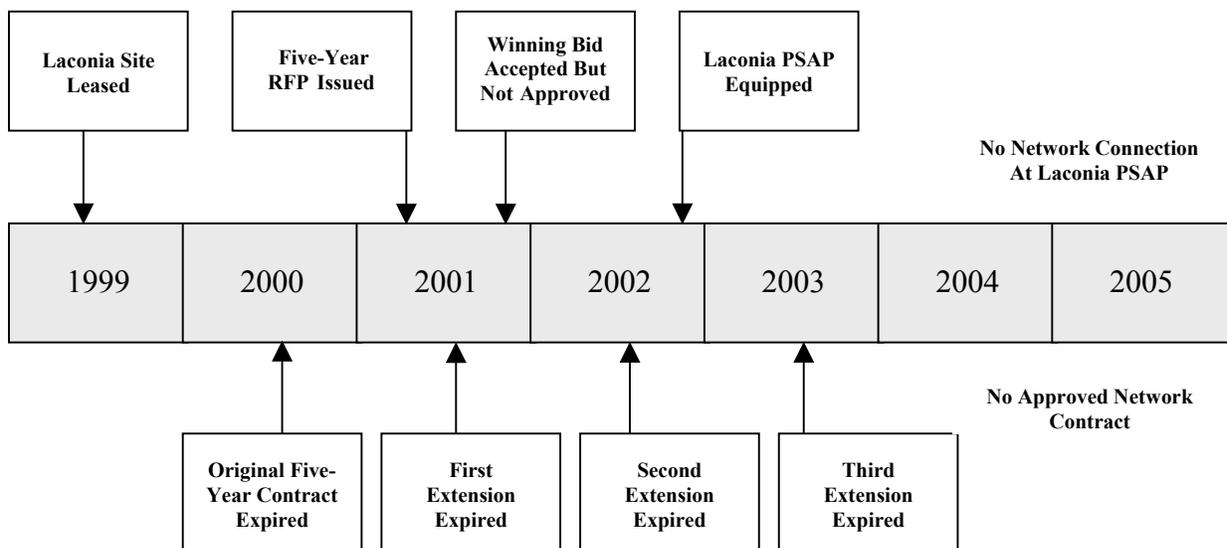
For the Bureau of Emergency Communications (BEC) to continue assisting the timely dispatch of emergency services it must rely on one vendor to provide telephone network services for the State's enhanced 911 (E-911) system. The BEC has also chosen this vendor to maintain the automatic location identification (ALI) database. Since July 2003, the BEC has paid for contracted services without the required Governor and Council approval. The BEC has failed to negotiate a long-term network contract and continues to negotiate the management of the database, resulting in a new and fully equipped call center remaining idle for three years.

Network Contracts And The Laconia PSAP

The original technical study for establishing the E-911 system called for a disaster recovery site in addition to the primary public safety answering point (PSAP). In the late 1990s, the E-911 Commission decided to build a second PSAP to provide a backup call center in the event the Concord PSAP went down. As shown in Figure 4, the BEC began leasing an unused State-owned building on the grounds of the New Hampshire Department of Corrections' Lakes Region Facility in 1999. This building was planned not only to house a fully operational PSAP, but included office space for the mapping unit, administrative support, training, and management. Renovating the space started in 1999 and continued into 2000, at which time the mapping unit moved to Laconia from rented space in Concord. The PSAP's call center was equipped with all new computer and telecommunication equipment by December 2002.

Figure 4

**Network Contract And Laconia PSAP Timeline
Calendar Years 1999-2005**



Source: LBA analysis of contracts and E-911 Commission minutes.

Coinciding with building the new PSAP, the BEC has been in prolonged contract negotiations with its network telephone service provider (NTSP). In fact, while in negotiations for network services for the Laconia PSAP, the Bureau has extended its original network contract three times, which encompassed State fiscal years (SFY) 2001-2003. A fourth 12-month extension was attempted; the NTSP and the Commissioner of Safety signed it, but was never sent to the Governor and Council for approval. However, while it was never approved, the BEC has been operating under this contract's monthly payment agreement since July of 2003. As a result, the Bureau has been paying the NTSP for network and automatic location identification (ALI) database services without the required Governor and Council approval. We note the Bureau was made aware of this situation during our SFY 2003 financial audit of the Department of Administrative Services, yet Bureau management failed to take action by completing the contract negotiations or obtaining additional assistance to complete negotiations.

The Cost Of Negotiations

Because of the ongoing negotiations over the new network contract for the Laconia PSAP, the BEC has incurred significant additional costs for its network service through yearly contract extensions and month-to-month pricing when compared to the lower monthly cost of the proposed five-year contract as shown in Table 3. We estimate the Bureau has paid approximately \$600,000 in additional costs over the past three fiscal years by not finalizing the five-year network contract. We based this information on the dollar amount the Bureau would have paid if they had entered into the five-year contract by the beginning of SFY 2003. The monthly recurring cost of \$50,250 over three years would have totaled \$1.8 million, whereas, the actual amount the Bureau has paid is \$2.4 million.

Table 3

**Proposed Contract Cost Versus Actual Negotiated Cost
Network Service
SFY 2003-2005**

State Fiscal Years	Five-Year Proposed Monthly Cost	Number Of Months Per Period	Total Cost Of Five-Year Proposal ¹	Negotiated Monthly Cost	Number Of Months Per Period	Negotiated Cost Per Period ²
2003	\$ 50,250	12	\$ 603,000	\$ 61,655	12	\$ 739,860
2004-2005	\$ 50,250	24	<u>\$ 1,206,000</u>	\$ 69,967	24	<u>\$ 1,679,208</u>
Total			<u>\$ 1,809,000</u>			<u>\$ 2,419,068</u>
					Difference³	<u>\$ 610,068</u>

Notes:

¹Total cost to Bureau if contract was entered into in 2002 (recurring costs only).

²Actual cost to Bureau without five-year contract, paying on a month-to-month basis (recurring costs only).

³Actual minus proposed (recurring costs only).

Source: LBA analysis of BEC contracts and E-911 Commission meeting minutes.

In addition to network services, the BEC has been paying the NTSP for maintaining the ALI database on a month-to-month basis since 2002. Unlike the estimated loss the BEC incurred with the network contract extensions, the Bureau's decision not to enter into a contract for the database in 2002 has saved money as shown in Table 4. If the Bureau were to have entered into the database contract, it would have spent \$1.4 million over a three-year period. Instead, the Bureau only spent \$1.25 million, for an estimated savings of \$150,000. However, if the BEC had taken over the database from the NTSP altogether, as it was planning to do, it would have saved at least \$31,000 every month, less the cost of additional BEC staff and other resources needed to maintain the database.

Table 4

**Proposed Contract Cost Versus Actual Negotiated Cost
Database Service
SFY 2003-2005**

State Fiscal Years	Five-Year Proposed Monthly Cost	Number Of Months Per Period	Total Cost Of Five-Year Proposal ¹	Negotiated Monthly Cost	Number Of Months Per Period	Negotiated Cost Per Period ²
2003	\$ 39,050	12	\$ 468,600	\$ 42,845	12	\$ 514,140
2004-2005	\$ 39,050	24	\$ 937,200	\$ 31,006	24	\$ 744,144
Total			<u>\$ 1,405,800</u>			<u>\$ 1,258,284</u>
					Difference³	<u>\$ (147,516)</u>

Notes:

¹Total cost to Bureau if contract was entered into in 2002 (recurring costs only).

²Actual cost to Bureau without contract, paying on a month-to-month basis (recurring costs only).

³Actual minus proposed (recurring costs only).

Source: LBA analysis of BEC contracts and E-911 Commission meeting minutes.

Current Status Of Contract Negotiations

According to E-911 Commission members, BEC officials, and the NTSP officials, there have been two major disputes affecting contract negotiations. There has been no consensus between the Bureau and the NTSP on 1) the level of diversity the NTSP should be providing the E-911 system and 2) the format of the ALI data for the transfer of the database from the NTSP to the Bureau. Because of these disputes, the Laconia PSAP and its equipment continue to sit unused.

Diversity

According to a July 2002 request from the BEC to the Governor and Council for action on a contract extension while other negotiations are finalized, the E-911 Commission "has accepted the [NTSP] bid for a new five (5) year Enhanced 9-1-1 Network contract. *Pending resolution of concerns about network diversity issues* the final contract is not ready, but it is anticipated that contract negotiations will be completed by September/October 2002 [emphasis added]."

Diversity, for 911 purposes, means the ability to reroute emergency calls to the PSAP if there is a break in the communication network. For example, if the main telephone line between two cities

is cut, there is likely another route (i.e., telephone lines through other towns or cities) that calls can be transferred through. The BEC and the NTSP have disagreed as to the level of diversity the NTSP should be providing under the contract. One reason for the dispute over diversity appears to be the result of vague contract language, which allows the NTSP to define diversity on its own terms. All of the contract extensions require diversity to be provided “where available.” The BEC is interested in knowing what communities are at risk for losing their ability to contact the Bureau if telephone lines are damaged. The BEC has been unsatisfied with the NTSP’s ability to document the level of diversity provided throughout the State. E-911 Commission meeting minutes and BEC files document the NTSP representatives reporting on offices in Plymouth, Portsmouth, Raymond, Pelham, and Rye/Seabrook not meeting its own definition of diversity. According to an NTSP representative, the level of detail the Bureau wants for the whole State would be a huge undertaking.

Format Of ALI Database

The BEC plans to take control of the ALI database and maintain it without the assistance of a vendor. For a number of years, the Bureau and the NTSP have been in negotiations regarding the transfer of the data and specifically what format the data are required to be in. The NTSP has kept the ALI data in what it terms as a modified National Emergency Number Association (NENA) format, which the Bureau maintains is not a NENA standard format required under the original contract. According to the Bureau’s Information Technology Manager, the difference between the formats can result in problems in handling wireline customers’ addresses because the NTSP displays addresses in one field and the Bureau’s database breaks out the address. If data is transferred in the NTSP’s format, the Bureau runs the risk of addresses dropping out.

There is evidence the Bureau and the NTSP have been in ongoing negotiations over the transfer but problems continue to arise. In April 2005, the Bureau provided the NTSP with a project plan but the NTSP found that the document lacked sufficient detail and believed it was unable to clearly identify its role within the plan. A Department of Safety official even noted, “the letter doesn’t look like an adequately detailed and documented project plan for an effort of that magnitude.” Since then, the NTSP has come up with four options for transferring the data. After reviewing New Hampshire law, however, the NTSP found two of the options would provide incomplete records and would not meet State requirements. Both of the remaining options would have the database transformed to a standard NENA format, with the NTSP agreeing to edit street names, thoroughfares, and communities to conform to the Bureau’s database format. Both of the remaining options, however, continue to charge the BEC either \$30,000 or \$60,000 a month, even after the database is transferred. The BEC and the NTSP were still negotiating in the winter of 2005.

Observation No. 1

The Department Should Review Its Contracting Procedures

Prolonged contract discussions, disputes over prior contract language, constructing and equipping a call center without having a network contract in place, and dealing exclusively with a single network provider have all resulted in making unapproved payments, wasting BEC resources, diminishing program oversight, and reducing office morale. For approximately three years the Laconia PSAP with new equipment has been unused while Concord's PSAP equipment has reached the end of its useful life, causing telecommunication workstations and a management information system to go unrepaired. Between SFY 2000-2005, BEC management has devoted time and effort to the NTSP contracts and building a new PSAP in Laconia.

Bureau managers faced several predicaments due to unsuccessful contract negotiations. For example, they have needed to decide if the Bureau should:

- repair or replace old Concord PSAP equipment when there is new but unused equipment in Laconia,
- repair or replace a broken management information system in Concord when it purchased a new and improved system for Laconia,
- sign a new five-year contract when there are significant remaining disputes over the extent of services the NTSP should have provided the State, and
- demand control of the ALI database from the vendor that is also the only company able to supply network connection to all the PSAPs.

In addition, BEC management informed the Governor and Council, the E-911 Commission, and Bureau staff numerous times it was going to be opening the Laconia PSAP shortly, but the Bureau was waiting for network contract negotiations to finish. In an E-911 Commission meeting in August 2001, the Bureau reported they "will begin the process of hiring additional personnel to staff the Laconia Facility sometime after the first of the year." In a December 2002 meeting, the Director said the PSAP is physically ready with all equipment installed but is waiting on the contract and "some peripheral issues to be worked out." In the 2003 E-911 Commission Report to the Governor and Council, the Commission wrote the Laconia PSAP was finished and awaiting completion of contract negotiations with the NTSP.

The E-911 Commission and the Commissioner of Safety both bear some responsibility for allowing this condition to continue. Prior to September 2003, the E-911 Commission initiated building the Laconia PSAP, authorized an RFP for a five-year contract, and approved three contract extensions. We note, however, the E-911 Commission and the BEC appear to be acting with good intentions in not approving a five-year contract because concerns existed over the level of diversity the NTSP should be providing the E-911 system for public safety. The dispute over diversity appears to result from inadequate definitions of terms in the original contract allowing the NTSP to define diversity in a way differing from the BEC.

Once E-911 moved to the Department of Safety in 2003, the Commissioner became ultimately responsible for the Bureau's actions and decisions. In our SFY 2003 financial audit of the Department of Administrative Services, we recommended:

The Bureau should immediately review its negotiation position for network services. The Bureau should determine whether it should continue to negotiate based on the November 2001 RFP bid award or whether it would be more beneficial to press for a further extension of the prior contract and reissue an RFP for services. The Bureau should consider whether it is capable of completing the negotiation of the contract itself, or whether the Bureau needs additional assistance. At a minimum, the Bureau should request an extension of its original contract from Governor and Council to ensure continued service and the ability to negotiate for services without needing to rely on the current vendor's goodwill.

In its response to the 2003 audit, the Department of Safety wrote: "The E-911 Commission has always sought formal extensions in the past and that policy should have been followed in this instance." We note a fourth extension was signed by the NTSP and the Department of Safety Commissioner but never sent to Governor and Council for their necessary approval. Over two years later the Bureau still has neither a five-year contract nor a Governor and Council-approved extension. During SFYs 2004 and 2005, the Bureau made \$2.5 million in unapproved payments to the NTSP. Bureau mismanagement of contracts, even after brought to management's attention, is disconcerting.

The network provider and vendor hired to run the Bureau's ALI database is also culpable in the Bureau's predicament. BEC managers, E-911 Commissioners, and NTSP representatives reported the Bureau's frustration with the NTSP. Commission meeting minutes document continued friction between the Bureau and the NTSP. In addition, correspondence between the BEC and the NTSP further document the BEC's dissatisfaction with the company, especially with its inability to answer questions in a timely manner. One E-911 Commissioner stated the NTSP has a "take it or leave it" attitude – the company is the "only game in town" and basically has the Bureau "over a barrel."

Recommendations:

The Department of Safety Commissioner should review the BEC's handling of contract negotiations and the Department's failure to seek Governor and Council approval to avoid similar problems in the future.

The Fiscal Committee may wish to request regular updates from the Department of Safety on the BEC's contract negotiations and proof a new contract obtains timely Governor and Council approval.

Auditee Response:

We concur. In December 2005 the Commissioner of Safety reviewed the BEC's handling of the contract proposals and called a meeting between Commission members and the Network Service Provider (NTSP) in an effort to break the stalemate in contract negotiations. Representatives from the Attorney General's Office and the Public Utilities Commission attended as well as attorneys from the NTSP. It was agreed at this meeting to separate the issue of the network service from the issue of the database and treat them separately in order to move the process forward. Two main issues in the network service were identified: the BEC questioned the 60% increase in the cost of network service that the NTSP proposes, and the Bureau is in the process of examining information from other states in order to make an intelligent cost comparison to determine whether the pricing structure proposed by the NTSP is consistent with the services provided. Additionally, during this comparison, the Bureau will examine other states' standard languages regarding the vendor's legal liabilities. The Attorney General's representative and legal staff from the NTSP are currently attempting to find some substitute language that both the State and the vendor can accept. With regard to the database, the NTSP was unwilling to agree to contract language that would include a financial penalty if they continue to make consistent errors in the database, and denies that they should accept responsibility for follow through ensuring independent phone companies make corrections in the database when errors by those companies are detected. NTSP attorneys are reconsidering these two issues and a final meeting after which a final contract proposal should be available and a decision can be made.

Observation No. 2

Governor And Council Approval Needed For Contracts

The Department of Safety has not submitted a network and ALI database services contract to the Governor and Council for required approval since July 2003. However, the BEC has continued to make monthly payments of \$100,900 to the vendor for network and ALI database services. We discovered a fourth contract extension was signed by the vendor and the Department of Safety Commissioner in December 2003 but was not approved by the Governor and Council.

According to a March 1994 letter from the Department of Administrative Services to all agencies, contracts for services over \$5,000 require approval by Governor and Council. During SFYs 2004 and 2005, the BEC paid over \$2.4 million to the vendor without an approved contract. By paying monthly on the contract without Governor and Council approval, the Department of Safety continues to circumvent proper contracting procedures.

Recommendation:

The Department of Safety should follow State contracting procedures by obtaining Governor and Council approval for service contracts.

Auditee Response:

We concur, however as the following issues were unable to be resolved we have not yet had the opportunity to present this to Governor and Council. The contract negotiations with the NTSP have been especially troubling because we have been dealing with the company that provides the great majority of land lines, network services, and has the bulk of the telephone customers in the State of NH; therefore, they negotiate from a position of enormous strength. They have proposed a large increase in fees without providing sufficient detail to make an intelligent cost comparison. They also have not addressed, to the satisfaction of the Commission, issues of diversity which the Commission has repeatedly requested. Finally, there was a significant increase in cost for the proposed database services and concerns regarding the integrity of the current data, which resulted in the Commission opting to have the Bureau maintain the 9-1-1 database. The decision to not award the NTSP a contract for database services has increased the complexity of contract negotiations as they, still to this day from that same strong position, attempt to retain the contract. The issue remains however that database errors which remain unresolved are of concern and important to the public safety. The NTSP has stated they cannot by statute affect the database records of other phone companies. Thus inherently a portion of the required database services cannot be effectively accommodated by the NTSP. We will make every effort to resolve this issue and set in place procedures that ensure that in the future contract extensions and renewals go through the appropriate process.

**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

SURCHARGE COLLECTION AND DISBURSEMENT

An enhanced 911 (E-911) surcharge levied on wireline and wireless users provides the sole revenue source for the Bureau of Emergency Communications (BEC). As such, it is important to have adequate controls, such as administrative rules and formal procedures, in place to ensure accurate collecting, tracking, and disbursing surcharge revenue. We found no documentation of rate setting and inconsistent revenue reporting and tracking. State law does not provide for the BEC to charge different rates on existing and new communication technologies or to collect a late fee. Lastly, we found the Bureau inadequately planned for statutorily required cost recovery for wireless providers.

Observation No. 3

Document How Surcharge Rates Are Determined

RSA 106-H:9, I requires the E-911 system be funded through a surcharge levied on each residence and business telephone exchange line. The statute also requires surcharge amounts “be reviewed after the budget has been approved or modified, and if appropriate, new tariffs or rate schedules shall be filed with the public utilities commission reflecting the surcharge amount.” In our State fiscal year (SFY) 2003 financial audit of the Department of Administrative Services, we recommended the BEC periodically review the E-911 surcharge amount. At that time the BEC was unable to provide any documentation the surcharge rate had been reviewed. We wrote:

Without a documented review of the surcharge amount, including written documentation of the Bureau’s analysis, it is difficult to determine if the surcharge amount is effectively recovering the cost of services provided at a rate intended by management without creating an unnecessary financial burden on the users of the service or creating an excessive available balance to be brought forward for future years.

In the 2003 audit, the Department of Safety responded it would be a good policy to conduct formal reviews of the surcharge amount. The Department noted the E-911 Commission conducted informal periodic reviews, and felt that a formal periodic review “would have arrived at virtually the same conclusions.” In an October 2005 follow-up to the audit, the BEC wrote the rate is reviewed at every quarterly meeting of the E-911 Commission; however, “the [B]ureau has not documented as recommended by the LBA, its periodic reviews with a written analysis of the Bureau’s estimated cost services to be provided, including capital outlays, of the surcharge amount and its analysis to provide a basis for its determination of an effective surcharge amount to recover the Bureau’s cost of operations.”

We agree with the Department of Safety that it would be “good policy” for the BEC to formally review the surcharge amount. Without knowing what the BEC and E-911 Commission considered when assessing and establishing the rates the public cannot be satisfied a review was actually done or done well. Given the Bureau’s reluctance to formally document how it determines surcharge rates, the Legislature may wish to require such. We note RSA 106-H:6, VI already requires the BEC to report to the Speaker of the House, the President of the Senate, and

the Governor and Council on various topics including revenue generated from telephone subscribers, and budget and revenue projections.

Recommendation:

The Legislature may wish to require the BEC formally document surcharge determination. One way would be to amend RSA 106-H:6, VI to require the BEC to include a detailed financial analysis supporting its surcharge rates in its annual report.

Auditee Response:

We concur. The BEC will consult with the Department of Safety's Business Office, legal staff, and internal auditors in an effort to design a more formalized process for determining surcharge amounts and propose administrative rules to document it.

Observation No. 4

Establish A Surcharge Reporting Form And Procedures In Rules

RSA 106-H:9, I requires wireline and wireless telephone companies to collect a monthly surcharge from their New Hampshire customers and submit it to the BEC. The Bureau has set the same rate of \$0.42 per line for both wireline and wireless users. According to the State's accounting system, the BEC has collected over \$39 million in surcharge revenue from SFYs 2000-2005; however, the Bureau does not require companies to use a standardized reporting form for their remittances.

Starting in September 2003, the Department of Safety Commissioner became responsible for adopting rules necessary for funding the E-911 system, including rules for "billing mechanisms." Currently there are no administrative rules related to billing. The Bureau developed a standard form that some of the telephone companies use, which requests companies to submit information such as the number of lines, amount of surcharge due, reporting period, business address, tax identification number, and a signature. Currently, 14 out of 46 companies use this form because the Bureau does not require it. Other companies use their own forms or simply attach a memo to the payment, while still other companies use third-party firms to calculate and pay the surcharge for them. These third-party companies use their own forms to report payments to the Bureau.

We identified two weaknesses from our review of these various surcharge reports. First, one third-party firm that handles the E-911 surcharge for several telephone companies was filing forms at one point in time that calculated the surcharge amount based on gross sales, not on number of lines in use in the State. Second, some of the forms are missing key attributes that would be helpful in filing and tracking payments. For example, the form accompanying one company's check is missing a tax identification number and signature of owner. The tax identification number provides a unique tracking mechanism for each company from one month to the next, as many companies have similar names. Other forms lacked a reporting period, which makes the ability to track payments more difficult, especially if payments had been skipped and a company was making payments in arrears.

The Bureau is receiving forms that do not include all of the information it would like to have submitted with monthly payments. Payments may be harder to track if companies change names and the payments may be incorrect if calculated based on a standard other than number of lines. The elements of the form need to be clearly described in the Bureau's administrative rules to make sure its users understand the Bureau's needs. We have found evidence that in 1999 the BEC was drafting administrative rules that included a surcharge reporting form.

Recommendation:

The BEC should promulgate administrative rules establishing a surcharge reporting form and procedures allowing the Bureau to accurately track and check monthly surcharge payments.

Auditee Response:

We concur. We will utilize the assistance of the Department of Safety's administrative rulemaking attorney to draft rules for the Commission's consideration.

Observation No. 5

Improve Surcharge Payment Tracking

We found problems exist with how the BEC tracks and reports monthly surcharge payments. To facilitate oversight of surcharge collections and to identify missed payments, Bureau staff maintain a spreadsheet for each SFY recording the revenue each wireline and wireless company submits monthly. The spreadsheets have been used to update the E-911 Commission and even placed in the BEC's annual reports (see Observation No. 12 for issues related to releasing this information). While the spreadsheets can be a valuable management tool, we found weaknesses with the data.

We found Bureau staff inconsistently crediting companies for monthly payments on the spreadsheets. When a company remits in February surcharges collected from customers in January, the spreadsheets record a payment for the month of January. However, problems occur if a company makes a lump-sum payment covering several months and, as we found, the BEC fails to correctly allocate and credit the payments for the individual months when the surcharges were collected from customers. For instance, we found one company made a \$111,000 payment and submitted a detailed description of monthly missed payments; however, the BEC recorded it as a one-time payment. We also noted several companies have either started making payments on a certain date (without any indication of having made up missed payments) or stopped making payments without explanation. As a result of the Bureau's inconsistent data collection, BEC management and the E-911 Commission cannot be certain for which months companies have or have not submitted surcharge payments.

We observed one telephone company made an unusually high monthly payment during SFY 2002. Another document indicated the Bureau was investigating this particular payment as a potential overpayment. We noted that this payment was submitted using a non-BEC reporting

form (see Observation No. 4 for issues related to the BEC not having a required surcharge reporting form), which showed it was calculated by multiplying 42 percent of the monthly sales instead of \$0.42 per line. This payment was over \$100,000 more than previous monthly payments. The Bureau investigation of this anomaly has been inconclusive. Unless the Bureau can prove otherwise, the reporting form would indicate it is calculated incorrectly. In addition, the same amount was credited to another company in the following month on the spreadsheet, but there are no supporting documents (e.g., surcharge report, copy of a check, or deposit slip) to support this payment – it is very likely a clerical error that has gone unquestioned for three years.

Recommendation:

The BEC should institute internal policies and procedures to improve surcharge revenue tracking and conduct greater management oversight of revenue collections. In addition, the Bureau should investigate and, if necessary, reimburse any overpayments in a timely manner.

Auditee Response:

We concur. The Commissioner of Safety has asked the Business Office audit staff to examine the discrepancies that the audit has noted and recommended a method of oversight to detect and correct errors and follow up over and under payments promptly.

Observation No. 6

Seek Authority To Charge Late Fees

Current law prohibits the BEC from assessing late fees. In turn, the Bureau does not charge late fees to wireless and wireline companies that are required to remit their customers' monthly surcharge payments. RSA 541-A:22, III (c) does not allow agencies to promulgate rules requiring fees "unless specifically authorized by a statute enforced or administered by an agency." The Bureau's statute does not specifically authorize it to charge a late fee.

State law requires the monthly surcharge payments from customers to be remitted by companies to the BEC. The Bureau currently is receiving some E-911 surcharge payments from companies beyond the month following the period for which they were collected. We found two companies went over a year without paying the surcharge and, as of October 2005, 11 companies were at least two months behind. As there is no penalty assessed on late payments, there is little incentive for companies to submit timely payments. By charging a late fee, the BEC may compel wireline and wireless companies to make timely remittance, thereby allowing the Bureau immediate access to revenue for funding necessary expenditures.

Recommendation:

The BEC should seek legislation allowing it to charge late fees.

Auditee Response:

We concur. We will seek legislation to identify which E-911 system users should be assessed a late fee.

Observation No. 7

Clarify Which E-911 Users Require A Surcharge

Currently, the BEC does not collect a surcharge from some users of the E-911 system. Calls made using prepaid wireless phones and Voice over Internet Protocol (VoIP) are not required to pay into the E-911 system but are still able to reach an E-911 telecommunicator when an emergency arises. As a result, wireline and traditional wireless customers are subsidizing these other users.

We identified seven states with specific statutory language regarding E-911 surcharges on prepaid wireless accounts. States such as Tennessee and Kansas establish that prepaid accounts are also subject to the E-911 surcharge. Tennessee, for example, gives wireless providers two options for collecting the surcharge from prepaid customers. The state allows providers to collect the service charge from each prepaid customer whose account balance is equal to or greater than the amount of the service charge, or to divide the total earned prepaid revenue within the reporting period by fifty dollars and multiply the quotient by the service charge amount. Kansas sets a fee in an amount equal to one percent of the retail price of all prepaid wireless service sold in the state.

We identified one state currently in the process of requiring VoIP callers to pay into its E-911 system. Minnesota recently passed a law requiring an E-911 surcharge for packet-based telecommunications (i.e., VoIP). We also found evidence the Pennsylvania National Emergency Number Association is planning future legislation to update the current Pennsylvania 911 law by allowing “voice capable data systems” to be surcharged in the same manner as wireless and wireline phones. This legislation, however, has yet to be introduced to the Pennsylvania Legislature.

Recommendation:

The BEC should seek to amend RSA 106-H:9 to identify which E-911 system users should be assessed a surcharge.

Auditee Response:

We concur. The Bureau has obtained sponsorship and a bill has been introduced into the 2006 Legislative session to impose a surcharge on VoIP (Voice Over Internet Protocol) providers or any provider of a device that allows access to the public network. We will also attempt to amend this legislation to add a surcharge on prepaid wireless phones.

Observation No. 8

Cost Recovery Rules Needed

The BEC lacks administrative rules for reimbursing wireless providers for reasonable expenses incurred in implementing E-911 services. RSA 106-H:8 was amended in 1997 entitling wireless providers to reimbursement to the extent authorized by the Federal Communications Commission (FCC) and approved by New Hampshire's E-911 Commission. The BEC has yet to reimburse any wireless providers despite the State law being in effect for eight years. While the BEC has started the process of reimbursing wireless companies, it is doing so with insufficient planning as evidenced in the lack of written policies and procedures, administrative rules, or knowledge of how much reimbursement wireless companies are actually due. We note other states such as Virginia and Nebraska were much more proactive and required wireless companies to submit an application for cost reimbursement and be approved for cost estimates prior to implementing 911 service plans.

According to a BEC official, the New Hampshire Attorney General's Office advised the BEC the Bureau is required to reimburse wireless providers for Phase I related costs. According to a BEC official, the Bureau has been unsuccessful in its attempt to change the reimbursement law. During 2004 and 2005, the BEC initiated efforts to reimburse wireless companies. In November 2004, the Bureau began surveying wireless companies to determine how much reimbursement they would seek from the Bureau. The companies that responded to the BEC were sent a follow-up letter in February 2005 requesting additional information such as invoices from vendors, job descriptions and salary rates for recovery of labor costs, and information on specific contracts mentioned in the company's response. Most recently, in October 2005, the BEC sent another letter to the same companies requesting they provide specific reasonable expenses incurred and specific citations to FCC orders, letters or regulations that "clearly authorize reimbursement of the types of expenses associated" with the company's reimbursement request. In addition to the work the Bureau has done on its own, management has also hired a consultant to assist the Bureau in determining reasonable costs, which is explicitly allowed in RSA 106-H:8.

In response to the Bureau's letters, six of 21 current wireless providers responded with reimbursement requests totaling over \$6.4 million. One company's request alone represents 63 percent of the total. We note the cost recovery reimbursement figures given to the Bureau from each company are for different time periods, depending on when the companies submitted their information. Additionally, the Bureau is awaiting responses to the most recent letters sent to providers in October 2005.

Because the BEC will be implementing a statute that will be binding on individuals and companies outside of the agency, cost recovery for wireless companies should be established in administrative rules. In fact, RSA 21-P:14, VIII (g) requires the Commissioner of Safety to adopt rules for procedures necessary to provide for the proper administration of the BEC's statute (RSA 106-H). According to RSA 541-A:1, XV, a rule either implements, interprets, or makes specific a statute, or, prescribes or interprets agency policy, procedure or practice *binding on persons outside the agency*. While the rules do not have to identify every possible reimbursable item, they should provide the BEC and wireless companies with a framework for how

reimbursement requests will be assessed and payments made. Administrative rules would provide standardized criteria by which the BEC would request, evaluate, and approve reimbursements sought by wireless companies. Without written administrative rules the Bureau runs a risk of appearing to make arbitrary or subjective decisions.

Recommendation:

The BEC should adopt rules to implement cost recovery for wireless providers.

Auditee Response:

We concur. We will utilize the assistance of the Department of Safety's administrative rulemaking attorney and the consultant that we have employed to assist us in determining reasonable costs to draft rules for the process of reimbursement. The BEC has requested an explanation of charges from any carriers seeking reimbursement and has held public hearings for the presentation of such reimbursement request. In addition, we will continue to advocate legislative repeal of the statute that requires reimbursement because we believe such reimbursement is not required by FCC rules and constitutes an unnecessary expense to the 911 fund. The bill was re-referred and is currently pending before the Senate Finance Committee.

Observation No. 9

Seek Separate Surcharge Rates

New Hampshire's E-911 system is funded through a single surcharge levied upon each telephone line and wireless number. The surcharge is currently set at \$0.42 per line and has not been changed since 1995. RSA 106-H:9, I requires the enhanced 911 system be funded through a surcharge levied on each residence and business telephone exchange line, including each individual wireless number. The statute does not distinguish between wireless and wireline in terms of surcharge pricing.

Many states do differentiate the surcharges levied on wireline and wireless numbers, either by setting separate rates for each type of number or by giving different authorities (i.e., state, local) the right to establish the surcharge rate. For example, Rhode Island and Virginia have separate rates for wireless and wireline numbers. Rhode Island sets a monthly surcharge of \$1.00 on all residential and business lines in the state and levies an additional \$0.26 surcharge on each "wireless telecommunications instrument." Virginia established separate charges for wireless and wireline numbers by creating two separate statutes with different surcharges, different enforcement committees, and different levels of government handling the changing of the surcharge (i.e., state control over wireless, local control over wireline). Overall, 28 out of 49 states¹ differentiate the surcharges levied on wireless and wireline numbers. Two states of the 28, Missouri and Wisconsin, do not levy a surcharge on wireless numbers at all. Out of the remaining 21 states having the same set wireless and wireline surcharge, five of those states have the ability, through statute, to make the surcharges different.

¹ Vermont is excluded because it funds 911 with a universal service charge that also funds other government activities.

New Hampshire wireless and wireline numbers have the same surcharge rate but State law does not take into account wireless calls are more labor intensive. RSA 106-H:8 requires any wireless provider be entitled to reimbursement from the Bureau for reasonable expenses incurred to accomplish providing enhanced 911 service. Therefore, wireline callers may be subsidizing wireless calls. In one E-911 Commission meeting, the Bureau Director said “the cost for a wireless 9-1-1 call is higher than the cost of a wired 9-1-1 call” partially because wireless calls do not have automatic number identification and automatic location identification (ANI/ALI) information and partially because of the cost recovery the State may be facing with wireless companies. In a presentation to the E-911 Commission in December 2003, a Bureau supervisor agreed with the Director, reporting lack of ANI/ALI information for wireless calls can “add significant time to the transfer of a call.” Cost recovery is the other area affecting the surcharge on wireline and wireless numbers. An attorney from the Office of the Attorney General reported to us “cost recovery needs to be factored into the surcharge.” This attorney further explained the surcharge could be the same for all wireless carriers or could be more expensive for carriers requesting a larger reimbursement from the State.

Recommendation:

The BEC should seek legislation to allow it to establish unique rates for different types of user technologies based on Bureau-related costs of that technology.

Auditee Response:

We concur. The Attorney General will be asked for an interpretation of the present law and if it is determined that separate surcharges cannot be presently assessed, legislation will be drafted and introduced to allow for this.

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REPORTING

The Bureau of Emergency Communications (BEC) should improve its annual reporting to comply with statute. We found no reports were filed during three years of the audit period. In addition, the reports that were filed contained confidential information as well as incomplete information for the fiscal years due to the required reporting dates. We also found the BEC should report on its progress in collecting and mapping addresses in all the State's communities. A list of communities that are fully mapped for 911 purposes can be found in Appendix B.

Observation No. 10

Annual Reports Should Be Filed In Compliance With Statute

Annual reporting provides the BEC and Department of Safety management, the enhanced 911 (E-911) Commission, the Governor and Council, the Legislature, and the public with information useful for program oversight. RSA 106-H:6, VI requires the Department of Safety's Director of the Division of Emergency Services, Communications, and Management to file a written report on June 1 of each year with the Speaker of the House, the President of the Senate, and the Governor and Council. The report must include: 1) the status of development of operational standards and training programs, 2) the development of the database, 3) revenue generated from telephone subscribers, 4) budget and revenue projections, 5) the degree of coordination with municipalities, 6) the extent of public use of the service, and 7) the quality of service rendered. This report was also required to be filed by the E-911 Commission when the BEC was administratively attached to the Department of Administrative Services.

Annual reports were not filed for each year of the audit period. We obtained copies of annual reports published in 2002, 2003, and 2005, but no reports were published in 2000, 2001, or 2004, according to a BEC official. In addition, we found one required recipient of the annual reports has not received a copy of the May 8, 2005 report. According to the Secretary of State's Office, as of August 2005, the Governor and Council did not receive the Bureau's latest annual report.

Recommendation:

The Director of the Division of Emergency Services, Communications, and Management should ensure annual reports are produced and properly filed in accordance with State law.

Auditee Response:

We concur. Many changes have occurred in the past several years with legislative reorganization of E-911 functions and these reports did not receive the proper administrative attention. The required report was filed in 2005 and we will ensure that they are filed on a timely basis in the future and that all required recipients receive copies.

Observation No. 11

Change Annual Reporting Date

According to RSA 106-H:6, VI, the Director of the Division of Emergency Services, Communications, and Management is responsible for filing a report on June 1 of each year for the E-911 system with the Speaker of the House, the President of the Senate, and the Governor and Council. Although the statute requires a yearly report, there is no explicit reporting period, which has led to inconsistent reporting over the years.

Our review of the Bureau's annual reports published in 2002 and 2003 shows incomplete information was reported for those years, as the required reporting date precedes the end of the State fiscal year (SFY). For example, the 2003 report included E-911 telephone surcharge deposits from July 2002 through February 2003 while revenues and expenditures are reported from July 2002 through March 2003, leaving activities occurring during the remainder of the SFY unreported. The 2002 report showed similar partial reporting of fiscal year information. On the other hand, the report published in March 2005 is for Bureau activity during SFY 2004, which while complete, was published nine months after the close of the fiscal year.

Coordinating the reporting period with the SFY would provide comprehensive financial and operational information for report recipients. For example, E-911 financial and operational information for the period starting July 1 and ending June 30 would correspond to the SFY and can be easily compared with the operating budget and financial reports. Setting a report due date within a reasonable period after the close of the fiscal year would encourage timely and complete reporting of E-911 financial and operational information over consistent time periods.

Recommendation:

The Bureau should seek to amend State law to require a reporting date that would allow a timely and comprehensive review of the preceding SFY fiscal and operational activities of the E-911 system.

Auditee Response:

We concur. Legislation will be drafted and introduced to change the reporting date to coincide with the State fiscal year.

Observation No. 12

Improve Handling Of Confidential Information

Although our review of surcharge payment files found supporting documents had been stamped "Confidential" by BEC staff, the BEC has published detailed monthly surcharge payment information in its annual reports. One BEC official indicated the E-911 Commission generally has access to monthly surcharge information but the public does not. However, in its annual reports published in 2002, 2003, and 2005, the BEC released detailed payment information that it

normally keeps confidential. These reports are required to be distributed to the Speaker of the House, President of the Senate, and the Governor and Council, but there is no requirement these reports or any portion of them must be kept confidential. According to Secretary of State personnel, annual reports submitted to the Governor and Council are normally treated as public documents and may be obtained by members of the public.

In addition to the Bureau's regular practice of stamping surcharge-related documents "Confidential," the E-911 Commission has also spoken out on the issue of surcharge document confidentiality. At the September 6, 2002 meeting, a Commissioner questioned, "whether or not the [monthly] surcharge reports should be kept confidential." The E-911 Commission as a whole agreed that the reports should be stamped "confidential" and "do not distribute."

RSA 106-H:6, VI requires the annual report include "revenue generated from telephone subscribers." In addition, RSA 106-H:14 indicates the surcharge may not be considered a public record, stating any "information or records compiled under this chapter shall not be considered a public record for the purpose of RSA 91-A." However, BEC administrative rule Emer 402.04 makes an exception to this statute for "statistical information."

Recommendation:

The BEC needs to improve its handling of surcharge information that State law and the E-911 Commission consider confidential. In balancing business interest and its reporting requirements, the Bureau should report surcharge revenue as aggregated statistics in its public documents.

Auditee Response:

We concur. The Bureau will seek legal advice to determine whether administrative rule Emer 402.04 should be changed or repealed to comply with confidentiality requirements regarding statistical information that is released in its annual report and otherwise.

Observation No. 13

Publish Mapping Progress

Over a ten-year period, the BEC has fully mapped 83 communities, or about 35 percent of New Hampshire communities. Thousands of points along roads in these communities have been captured and given a unique street address to facilitate identifying emergency locations to frontline responders. Based on New Hampshire Office of Energy and Planning population figures, we estimate these communities contain 13 percent of the State's population. While technology has made it easier to collect address points, the mapping unit is challenged in obtaining cooperation from communities in approving points collected.

Improvements in global positioning system technology in 1999 changed the way the BEC collected address points. Instead of collecting road and address data simultaneously, the Bureau makes an initial trip through a community to map roads, then double-checks the road data with

the community officials before returning to collect specific address points along the roads such as driveways. About two-thirds of New Hampshire's communities have not had address points collected and approved by the communities. In the 83 fully mapped communities, the BEC has captured 96,103 address points and landmarks. About 92 percent of the data are address points. The BEC decided to start with those communities with the least amount of resources to perform this kind of work on their own and communities without any street numbers. The largest community fully mapped by the BEC is Merrimack, which means none of New Hampshire's major cities are fully mapped for E-911 purposes. According to BEC data, the Bureau has captured an additional 157,803 address points in 152 other communities, which are points in communities not fully mapped or where the Bureau is awaiting community approval before officially adding them to the mapping software for telecommunicators and local dispatchers.

Identifying and changing street names is a part of the mapping process that can cause confusion for the Bureau's mapping unit. Reaching agreement with communities on street names can be challenging; not all residents or community officials want to change street names. However, according to a BEC official, the town of Swanzey lost a suit after failing to change a street name it used more than once. In responding to what became a fatal fire, the town's fire department went to the wrong street with the same name.

Also problematic is the BEC working alone to collect address points and then not receiving a community's final approval. The longer it takes to receive this approval, the more likely the BEC will need to go out and remap. The Bureau's work is not complete after a community has been fully mapped. Communities need to regularly update information as new roads and buildings are constructed. According to BEC data, all but three of the fully mapped communities are actively providing updated information to keep address information current.

To avoid critical delays in emergency response times, the BEC needs to increase the number of communities that are fully mapped. By publishing its progress with mapping communities for emergency response purposes, the Bureau will better inform the public and community leaders on their community's status. In doing so, the Bureau should simplify its status categories for the public. While the Bureau's current status classifications are accurate for management purposes (e.g., road data accepted, road data not accepted, accepted road data currently updating addressing, address data not accepted, maintenance, maintenance not active, centerline, centerline accepted road data, outside data, and no data), it can be unduly confusing for those not knowledgeable about the Bureau's mapping process.

Recommendation:

The BEC should regularly publish which communities are and are not fully mapped to better inform the public. The BEC could provide current data on its website, in its annual report, and in press releases.

Auditee Response:

We concur. We will begin posting periodic updates of mapping progress on our website and seek other means of making this information available as well.

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RECOMMENDATIONS TO OTHER ENTITIES

The following observations are primarily for entities outside the Bureau of Emergency Communications (BEC), yet the identified weaknesses affect the BEC and the Enhanced 911 (E-911) Commission. We found positions on the E-911 Commission need to be filled and a better job has to be done ensuring Commissioners file the required statements of financial interest. Although the BEC has completed its move to the Department of Safety, we found some statutes have yet to be updated.

Observation No. 14

Additional Appointments To The E-911 Commission Needed

The E-911 Commission should consist of 16 members nominated by the Governor with approval of the Executive Council, but two members have never been appointed. RSA 106-H:3 established a 13-member E-911 Commission in 1992 to develop and oversee New Hampshire's E-911 system. The Commission was expanded in 1999 to add a representative of the disabled community and again in 2003 by adding the Commissioner of the Department of Administrative Services and a representative of the mobile telecommunications carriers industry. However, no Governor has ever nominated anyone to the Commission representing the disabled community or the mobile telecommunications carriers industry.

Without appointed representatives from all stakeholder groups envisioned by the Legislature, New Hampshire's E-911 function is deprived of the voice and perspective of these groups.

Recommendation:

The Governor should promptly nominate a representative of the disabled community and a representative of the mobile telecommunications carriers industry for approval by the Executive Council to comply with RSA 106-H:3. To facilitate the appointment, the E-911 Commission may wish to recommend a list of qualified individuals for these vacant seats.

Governor's Office Response:

After consultation with the Office of the Secretary of State, the recorder of appointments approved by the Governor with consent of the Executive Council, I concur with the observation of the Office of the Legislative Budget Assistant, Audit Division, that two vacancies exist on the E-911 Commission and that the Governor should nominate a representative of the disabled community and a representative of the mobile telecommunications carriers industry for approval by the Executive Council to comply with RSA 106-H:3. The N.H. Manual for the General Court, No. 59, 2005 and the Secretary of State's on-line "redbook" do not list vacancies for these positions on the E-911 Commission. It is my understanding that their office will be adding this vacancy information to the on-line "redbook."

The following steps will be taken to ensure that these vacancies will be filled as soon as possible.

This office will conduct outreach to appropriate individuals and organizations to solicit recommendations for qualified individuals to consider for these vacancies. This outreach will be conducted by December 15, 2005. Responses to this outreach will be requested by December 29, 2005.

Applications for Appointments to Boards and Commissions will be mailed to individuals who are requesting consideration for appointment by the first week in January. Applications will be received and screened by the third week in January. The goal of this office is to bring a nomination for each of these vacancies on the E-911 Commission to the Executive Council by February 22, 2006 or sooner.

Auditee Response:

The Bureau has no comment on this recommendation as it is within the province of the Governor and the Legislature.

Observation No. 15

Improve Statements Of Financial Interest Compliance

E-911 Commission members are required to file annual statements of financial interest. There appears to be confusion among members as to how to complete the statements and some members have failed to file, as shown in Table 5. When required to identify which calendar year the form is for, some members enter the current year, some enter the previous year, some enter both years, and others leave it blank. While the statute requires information for the prior calendar year, the form itself is not clear in what should be entered.

RSA 21-G:5-a requires members of Executive branch boards and commissions to file a written statement of financial interest by July 1 of each year. The statement should contain the name, address, and type of organization or business in which the member served in a professional or advisory capacity and from which income over \$10,000 was earned during the preceding calendar year. If a member chooses not to file a statement, said member, according to statute, shall not “be allowed to enter into or continue the member's duties.”

The issue of E-911 Commission members not filing statements of financial interest or incorrectly completing the form is not an isolated incident. In other audits, we found similar problems with statements. We also note there is no outside oversight of which board, commission, committee, and authority members are not in compliance with RSA 21-G:5-a. While the Office of the Attorney General provides guidance and the Office of the Secretary of State prescribes and collects the form, neither Office monitors who has and has not properly filed.

**Statements Of Financial Interest Filed By E-911 Commissioners
Calendar Year 2000-2004**

Folder Year	2000	2001	2002	2003	2004
Number Of Members Filing (Out Of 10)	9	5	6	0	6

Source: LBA analysis of statements of financial interest filed.

According to a 1998 letter from the Office of the Attorney General to the LBA, “the statute’s language imposes a legal obligation on each member to file, and a duty on the chair of each body to ensure that each member files, the required statement.” Filing these statements is important because RSA 21-G:5-a, II prevents board or committee members from entering into or continuing the member’s duties, unless the member has filed a statement of financial interest with the Office of the Secretary of State. As a result, allowing members to serve without filing statements of financial interest has the potential to unnecessarily subject their decisions to challenges.

Recommendations:

The Legislature may wish to review RSA 21-G:5-a in response to the continued confusion of this law and how it has been implemented.

The BEC should develop internal policies and procedures to ensure commission members properly file their statements of financial interest. The chairperson should bar any member from performing duties after July 1 until a statement is filed with the Secretary of State.

The Secretary of State or the Office of the Attorney General should review instructions pertinent to the financial interest form for clarity.

Secretary of State Response:

We do not concur that the Secretary of State should review instructions pertinent to the financial interest form for clarity. The Secretary of States office is charged with prescribing and filing the forms when submitted. This office has no duty to review the forms for completeness or enforce RSA 21-G:5-a for compliance. The Secretary of State has a policy of requesting the Legislature to statutorily describe the forms and instructions to be filed in this office. The instructions on the RSA 21-G:5-a form are derived from the statute, as is the form itself. Any clarification of the statute, instructions or the form itself should be decided by the Legislature.

Office Of The Attorney General Response:

We do not concur to the extent that the draft observation suggests that the Office of the Attorney General or the Secretary of State, through reviewing or rewriting instructions will meaningfully resolve the identified problem of non-compliance.

We support the recent decision by the Secretary of State to transition to a system of electronic reporting. The transition to electronic reporting will likely start with campaign finance reports, however, the initial stages of system design suggest it will be developed to accommodate other reporting, which could include RSA 21-G:5-a reports in the future. One benefit of an electronic reporting system is that it can be programmed to be interactive. The system is expected to be capable of providing easy access to the relevant provision of a statute or other guidance linked to the exact spot where the related information is required. For those who are subject to the reporting requirement and who maintain an e-mail address, it is expected that the system will also have the ability to send reminder notices.

Should the legislature choose to establish a mechanism other than internal policies and reminder systems within the entities, such as the E-911 commission, with a duty to report, an electronic filing system will make the process of determining who has failed to fulfill his or her reporting obligations more efficient.

We concur with the recommendation that all departments and commissions have an ethics training and review program that includes annual training or refresher training. That training should include reviewing reporting requirements and ideally would be held annually just prior to the financial disclosure deadline so that the trainer could assist with practical questions as the commissioners complete their disclosure forms.

Auditee Response:

We concur. The Governor's Office recently provided an ethics briefing by the Deputy Attorney General at a Department heads meeting and the Commissioner of Safety subsequently issued an e-mail advisory to all Division Directors regarding compliance with RSA 21-G. The BEC will ask that in the future the Commissioners submit their ethics disclosures through BEC administration so that they can be examined for completeness.

Observation No. 16

Amend Statutes To Reflect The BEC Transfer To The Department Of Safety

The E-911 Commission and the BEC were established in 1992, with the BEC administratively attached to the Department of Administrative Services. Chapter 319:98, Laws of 2003 transferred the E-911 system and the BEC to the Department of Safety. Although Chapter 319:98 also transferred all “existing rules, statutory responsibilities, regulations, ...” some existing statutes were not amended to reflect this transfer. Statutes needing correction are:

- RSA 21-I:13, VIII allows the Commissioner of the Department of Administrative Services to assign or reassign E-911 personnel with the concurrence of the Bureau of Emergency Communications.
- RSA 21-I:13, XII requires the Commissioner of the Department of Administrative Services to provide clerical support to the E-911 Commission and the Bureau of Emergency Communications.
- RSA 106-H:6, II requires the Director of the Division of Emergency Services, Communications, and Management to prepare and submit a budget for the Division's operations to the Commissioner with the advice of the Commission for inclusion in the Department of Administrative Services budget.

Subsequent to the Bureau's transfer from the Department of Administrative Services to the Department of Safety in 2003, there is no longer a need for direct Department of Administrative Services responsibility for E-911 personnel or administrative issues.

Recommendations:

The Legislature should consider:

- **amending RSA 21-I:13, VIII by deleting the second sentence which solely deals with the BEC;**
- **repealing RSA 21-I:13, XII; and**
- **amending RSA 106-H:6, II by deleting the clause "which shall be included in the department of administrative services budget, with the advice of the commission."**

Auditee Response:

We concur. Apparently the referenced legislative changes were overlooked when the BEC was transferred to the Department of Safety. We will draft legislation reflecting these recommendations.

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OTHER ISSUES AND CONCERNS

In this section we present issues and concerns we encountered during our audit not developed into formal observations, yet we consider noteworthy. The Bureau of Emergency Communications (BEC) and the Legislature may consider these issues and concerns deserving of further study or action.

Most States Have Surcharge Limits

New Hampshire's surcharge rate for wireless and wireline users is set by the BEC. However, unlike most states, New Hampshire's rate can be set at any level. We found 48 other states had a statute or rules that either placed a maximum limit on surcharges or simply set a specific rate on either wireless or wireline numbers. For example, states such as Oregon and Arizona have their surcharge rate set by statute of \$0.75 and \$0.37, respectively. Other states, such as Delaware and Colorado are able to set rates up to a statutory level of \$0.60 and \$0.70, respectively. While the BEC has not increased surcharge since 1995, the Legislature may wish to consider adding statutory control over surcharge rates similar to those typically found in other states.

State Retains Interest From BEC's Non-Lapsing Fund

According to RSA 106-H:9, I enhanced 911 (E-911) surcharge revenue can only be spent on "the development and operation of enhanced 911 services." However, interest earned on the BEC's non-lapsing fund is not retained by the fund, but is deposited in the State's general fund. In fact, unless specifically stated otherwise in statute, it is common practice for interest earned on agencies' funds to be deposited in the general fund. Letting the State keep interest generated with the E-911 balance may or may not be the intent of the Legislature. The BEC's current statute does not specify the Bureau should keep interest income; therefore, the BEC may wish to seek statutory amendment to retain interest earned on its non-lapsing fund.

Unsure If Message For Busy Telephone Lines Is Functional

We have obtained conflicting and inconclusive information on whether the Concord public safety answering point (PSAP) has a functioning message for callers when the telephone lines are busy. Some telecommunicators and supervisors believe there is no message for callers who call during high volume times and have to wait for a telecommunicator to finish with an existing call. According to a BEC Information Technology Manager, the system is capable of having such a message but he does not know if it is operational. In fact, he has never heard it and does not know how to test it without intentionally overloading the system. The Assistant Director stated when the system was originally installed, this feature was active and told callers they have reached 911 and to stay on the line. He believes it is still operational and callers will receive the recorded message.

The Bureau was unable to prove if they have a functioning call-waiting message. Such a utility would seem to be essential in keeping callers seeking emergency assistance on the line. The Bureau may wish to further investigate this issue until it is satisfied it has a functioning message to retain callers.

High Turnover Rate

The turnover rate for the BEC's telecommunicators (a.k.a. telecommunication specialists) is very high compared to other State jobs and to similar positions throughout the nation. For the last six State fiscal years (SFY), the BEC's telecommunication specialist classification has been one of the top five positions in the State with the highest turnover rate². For the past three SFYs (2003-2005) the turnover rate has been 36 percent. While the BEC is not surprised at the turnover rate due to the position's relatively low pay and high stress levels, an E-911 Commissioner noted the turnover rate is equivalent to national rates. However, a May 2005 Association of Public-Safety Communications Officials study reported the national turnover rate is 17 percent and the Northeast's rate is eight percent.

It is difficult to say if the Bureau's turnover rate is "too high." A lot of time is spent on hiring, training, and mentoring telecommunicators. It can take many months for a new telecommunicator to become proficient at call-taking; therefore, high telecommunicator turnover puts a strain on PSAP's resources and operations. Bureau supervisors commented the supply of qualified candidates has been decreasing, adding to the problem of filling vacant positions. Based on an analysis of Division of Personnel data, between 2000 and 2005, 70 telecommunicators (54 percent of all terminated telecommunicators) left within six months. Some of the turnover may be a result of a rigorous training system that identifies newly hired telecommunicators who do not possess the needed skills and abilities. Many of the telecommunicators and supervisors we spoke to commented on the stressful nature of the work. Candidates may not fully understand this aspect of the job until they start listening and taking calls from distressed people. It is better to determine early on if new telecommunicators can handle the job as it is in the public's interest for the Bureau to have fully competent telecommunicators answering emergency calls.

The Association also released an "Effective Practices Guide and Staffing Workbook" in August 2005 containing information regarding practical suggestions for hiring, retention, employee satisfaction, and employee recognition. The Bureau may wish to consider researching the hiring and retention area. Included in this workbook is a suggestion to make both pay and retirement benefits comparable to other public safety personnel. As of November 2005, Bureau management has submitted documentation to the Division of Personnel attempting to increase telecommunicator pay. Beyond pay increases and other benefit issues in which the BEC has limited control, Bureau management may wish to study similar sized PSAPs with much lower turnover rates and identify hiring and training practices that could lower New Hampshire's turnover rate while maintaining a high performance level.

² This according to Division of Personnel analysis of turnover rates for classifications containing 50 or more positions.

Review PSAP Staffing

In staffing the PSAP, BEC management must always balance the Bureau's need to meet unexpected spikes in call volume with efficient use of staff resources (i.e., keeping telecommunicators reasonably busy). Staffing patterns must address the changes in call volume throughout the day, week, and months. When a new PSAP becomes operational, the improved statistics from the new telephone equipment should increase management's ability to identify staffing and operational issues requiring review. Additionally, the BEC and the E-911 Commission may want to take advantage of a recently released Association of Public-Safety Communications Officials review of E-911 staffing issues and methodology to assess the appropriateness of New Hampshire's PSAP staffing level.

Monitoring The Use Of E-911 Resources

The BEC is part of the Department of Safety's Division of Emergency Services, Communications, and Management, which requires the BEC to cooperate with other units within the Department. There is an inherent risk that E-911 resources could be used for non-911 activities. Potential misuse of resources has been nationwide problem with some states using E-911 revenue for non-911 purposes.

While we did not conclude any abuses occurred, we noted a number of issues that raise concerns.

- BEC staff has assisted the Bureau of Emergency Management with technology issues, including statewide video conferencing.
- The Department of Safety utilized the BEC's uninterrupted power supply equipment, which had the potential of becoming overloaded if the PSAP operated at full capacity. According to a BEC official, the Department is no longer utilizing the Bureau's uninterrupted power supply. Prior to this, the BEC did not allow an employee microwave to be used because of concerns of overloading the PSAP's power supply.
- The BEC purchased an emergency communication vehicle, albeit with \$200,000 in federal funds, for use by other emergency services agencies. The Director stated the vehicle was purchased through the BEC because the Bureau has the communications knowledge for the vehicle. Another BEC official commented the BEC was chosen as a neutral agency to house the vehicle, which holds equipment with which other emergency services agencies are familiar and can use.

While making these observations, we also acknowledge the BEC should not function in isolation. Cooperating with other State and local emergency-related agencies is necessary and valuable for public protection. However, the Department, the E-911 Commission, and BEC management have to be vigilant for the potential misuse of BEC resources. The E-911 Commission, even in its reduced role under the Department of Safety, can provide additional oversight by questioning BEC activities and expenditures to determine if the uses are primarily for E-911 purposes and not supplementing Department of Safety or other government functions.

Auditee Response To Section:

We feel that the audit report accurately identifies a number of other issues and concerns of the Bureau and we will carefully review these comments and attempt to address the remaining items.

**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

CONCLUSION

The Bureau of Emergency Communications (BEC) provides citizens and visitors in the State with communications to local emergency responders and provides medically related instructions over the telephone. The Concord public safety answering point (PSAP) maintains a high level of service by meeting national performance standards for emergency medical dispatch, maintaining its accreditation as an enhanced 911 (E-911) dispatch center, and continually monitoring its telecommunicators' performance. The Bureau has adequate controls over its primary function – taking and transferring emergency calls in a timely manner.

However, PSAP operations are not without problems. The telecommunicator position consistently has one of the highest turnover rates in State government according to the Division of Personnel and is significantly higher than the national rate. By all accounts the position is very stressful at times with the continuous oversight and sometimes-tragic emergency calls. Recently the BEC requested a salary review by the Division of Personnel for the telecommunicator position.

The BEC, E-911 Commission, and Department of Safety have allowed a new PSAP in Laconia to be built and equipped, and go unused since December 2002. In addition, the Concord PSAP equipment is breaking down and management has been hesitant to fix everything while waiting to move into the newly equipped Laconia PSAP. Ironically, the BEC is currently participating in building another new PSAP in Concord while its Laconia PSAP sits idle. One reason for this untenable situation is the mishandling of the telephone network contracts with the Bureau's network telephone service provider (NTSP).

The BEC's relationship and negotiations with the NTSP have been challenging during the audit period. Because of its failure to reach a five-year contract agreement, BEC management sought annual contract extensions resulting in higher costs for network services at month-to-month pricing. BEC management has decided to take control of its automatic location identification (ALI) database that, by contract, is maintained by the NTSP. According to a Bureau official, from a statistical point of view, the ALI database is quite accurate, however, BEC management believes it would do an even better job and save money if the Bureau ran it. The BEC and the NTSP have been unable to agree on transferring the ALI database. Inability to take control of this database has potentially resulted in increased costs to the Bureau. We note the NTSP is not blameless in the decisions the Bureau has made. We found documentation of the Bureau's attempts to obtain important information from the NTSP with unsatisfying results. BEC management had said it is in the NTSP's financial interest to take its time and an E-911 Commissioner commented the NTSP has the Bureau "over a barrel."

A number of our observations recommend the BEC seek or the Legislature consider changes to the E-911 statutes. We compared New Hampshire's laws and rules with other states and have concluded it is time for the Legislature to review the current laws and consider the effects new technologies are having on the E-911 system. The BEC also needs administrative rules to implement the 1997 statutory requirement to reimburse wireless companies for costs incurred to locate cell phones. In addition, the BEC needs to improve its oversight of revenue collection. The Bureau needs administrative rules for collecting fees and better procedures for tracking

Conclusion

payments. A change in law could allow the BEC to charge a late fee and also retain interest earned on its non-lapsing account balance.

STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM

APPENDIX A

DEPARTMENT RESPONSE TO AUDIT



State of New Hampshire

Department of Safety
Division of Emergency Services
Bureau of Emergency Communications
James H. Hayes Safety Building
33 Hazen Drive, Room 105
Concord, New Hampshire 03305



Richard M. Flynn
Commissioner

Bruce G. Cheney, ENP
Director

Earl M. Sweeney
Assistant Commissioner

Peter A. DeNutte, ENP
Assistant Director

January 9, 2006

Enhanced 9-1-1
Commission Members:

Chairman
Chief Douglas Aiken
NH Assoc. of Fire Chiefs

Vice-Chair
Sheriff James D. Linehan
NH Sheriff's Association

Secretary
William Wood
NH Division of EMS

Kathryn Bailey
NH Public Utilities Comm.

Marc Violette
NH Telephone Association

Jill Healey Wurm
Verizon

David Caron
NH Municipal Association

Lieutenant George Valliere
NH Police Officer

Colonel Frederick Booth
NH Dept. of Safety

Richard Bernard
Public Member

David Lang
NH Firefighter

James Valiquet
NH Assoc. of Police Chiefs

Commissioner Donald Hill
Administrative Services

Paul Szoc
NH Federation of Mutual Aids

Vacant
Representative Wireless Telephone Providers

Catherine A. Provencher, CPA
Director of Audits
Office of Legislative Budget Assistant
Audit Division
State House, Room 102
107 North Main Street
Concord, NH 03301-4951

Dear Ms. Provencher:

Thank you for the time and effort your audit team devoted to the Bureau of Emergency Communications Performance Audit Report. This audit allows us a valuable tool and opportunity to change operations as needed to better our already well developed Bureau.

We plan on thoroughly reviewing all areas highlighted by the audit team carefully to ensure they will result in better service to all affected.

We have been running a professional emergency service operation since opening the doors in July 1995. In those 10 years, we have fielded well over 4 million emergency calls for assistance, and delivered over 400 babies. We have interrupted thousands of suicide attempts, provided professional ears to those in the presence of deceased family members, and saved countless lives with high-speed transfers to responders. We have also provided instant access to professional emergency medical dispatch on medical emergencies. And, have become a nationally accredited and respected Enhanced 9-1-1 center.

In conclusion, we want to thank you and the LBA Auditors for their diligence, professionalism and recommendations that we will strive to implement. And, we will continue to look for ways to improve our efficiency.

Respectfully,

Bruce G. Cheney, ENP
Director

(603) 271-6911
Relay NH (603) 271-6609 - fax

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1-800-806-1242

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**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

APPENDIX B

FULLY MAPPED COMMUNITIES

Having accurate and detailed mapping data available for enhanced 911 (E-911) telecommunicators can reduce the response time of local emergency responders. The Bureau of Emergency Communications (BEC) mapping unit has driven over most of the State's roads using global positioning technology to create accurate road and highway maps for use by telecommunicators. The mapping unit has also collected and made available address points (i.e., building address locations) along these roads for about 30 percent of the State's communities. We define being fully mapped as communities having both road and address point data for E-911 purposes. Figure 5, on the following page, lists 83 communities that were either fully mapped by the BEC as of July 2005 (80) or we observed to be fully mapped in December 2005 (Belmont, Deering, and Milton).

When the BEC has fully mapped a community, E-911 telecommunicators not only see roads on their computer screens, but also locations of buildings along the roads. When a wireless call comes in from a fully mapped community, such as those listed below, telecommunicators may more accurately estimate a location for local responders (e.g., the caller appears to be located at 36 Pine St). However, without address points, (i.e., most of the State) telecommunicators will only be able to visually estimate a less precise location for wireless callers (e.g., the caller appears to be on Pine St. between Main St. and Cross St.).

Figure 5

Fully Mapped Communities

Acworth	Ellsworth	Nelson
Albany	Enfield	New Hampton
Alstead	Farmington	Northumberland
Alton	Fitzwilliam	Orange
Andover	Francestown	Orford
Ashland	Freedom	Pittsburg
Auburn	Gilmanton	Randolph
Bath	Grafton	Rindge
Belmont	Greenfield	Sandwich
Benton	Groton	Sharon
Brookfield	Hales Location	Shelburne
Campton	Harrisville	Stark
Canaan	Harts Location	Stewartstown
Center Harbor	Hebron	Strafford
Chatham	Hill	Stratford
Clarksville	Holderness	Sullivan
Colebrook	Jackson	Temple
Columbia	Jefferson	Thornton
Cornish	Langdon	Unity
Croydon	Lempster	Walpole
Dalton	Lincoln	Warren
Danbury	Lyman	Webster
Deering	Lyndeborough	Wentworth
Dorchester	Marlow	Whitefield
Dublin	Merrimack	Wilmot
Dummer	Milan	Windsor
Eaton	Milton	Woodstock
Effingham	Moultonborough	

Source: BEC mapping unit documentation.

**STATE OF NEW HAMPSHIRE
ENHANCED 911 SYSTEM**

APPENDIX C

CURRENT STATUS OF PRIOR AUDIT FINDINGS

The following is a summary of the status of observations applicable to this performance audit found in the Department of Administrative Services Financial Audit Report For The Fiscal Year Ended June 30, 2003. A copy of the prior audit can be obtained from the Office of Legislative Budget Assistant, Audit Division, 107 North Main Street, State House Room 102, Concord, NH 03301-4906.

<u>Prior Audit Observations</u>	<u>Status</u>		
23. The Bureau Of Emergency Communications Should Improve Its Efforts To Identify Telecommunications Providers Subject To Enhanced 911 Surcharge	●	●	●
24. Accounts Receivable Should Be Accrued When Appropriate	●	●	●
27. The Bureau Of Emergency Communications Should Periodically Review The Enhanced 911 Surcharge Amount (See Observation No. 3)	○	○	○
28. State Contracting And Procurement Requirements Should Be Adhered To (See Observation No. 2)	●	○	○
29. Authority for Purchase of Employee Uniforms Should Be Clarified	○	○	○
30. Required Administrative Rules Should Be Adopted For Enhanced 911 (See Observation Nos. 4 & 8)	○	○	○
34. The Bureau of Emergency Communications Should Resolve Its Contract Negotiations To Ensure Continued Operations (See Observation Nos. 1 & 2)	○	○	○

Status Key

Fully Resolved	●	●	●
Substantially Resolved	●	●	○
Partially Resolved	●	○	○
Unresolved	○	○	○

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