Contents

Tennessee's 911 System: Functionality and Funding Adequacy

Emergency 911 services are integral to public safety in the United States—people rely on calling 911 when they have an emergency requiring a quick response. As telecommunications technology continues to rapidly evolve, 911 systems nationwide must keep pace with the changes and upgrades. Tennessee is considered a national 911 leader and continues to respond to changes to maintain its effective and award-winning system. It is currently transitioning to an internet-based system called Next Generation 911 (NG911). To help emergency communications districts (ECDs) upgrade and address concerns about the changes, the General Assembly passed Public Chapter 795, Acts of 2014, replacing the 911 funding system that relied on state and local fees to fund 911 services with a flat statewide fee on all types of telecommunications services and a new method for distributing funds. The Act also directed the Tennessee Advisory Commission on Intergovernmental Relations to study nine questions, including

- one dealing with consolidation:
  - whether there is a need or benefit to consolidate emergency communications districts or public safety answering points;
- one dealing with Tennessee Emergency Communications Board (TECB) membership:
  - whether the board membership of the state emergency communications board should be amended to include other stakeholders such as telecommunications providers, emergency communications districts that dispatch, and other interested parties;
- one dealing with providers' registration requirements:
  - whether there is a need or benefit for the providers of communications services to register with the board prior to providing service;
- one dealing with providers' service interruption reporting requirements:
  - whether there is a need or benefit for providers of communications services to notify the board when there is a known service interruption; and
- five dealing with funding:
  - whether a flat-rate communications services surcharge is the best manner in which to fund 911 system costs, or whether such costs should be funded by a percentage surcharge or a different source, such as water service, electric power service, or state general funds or local taxes;

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- whether the 911 surcharge is generating more revenue than necessary to implement the purpose of this act and can be reduced to the benefit of communications consumers;
- whether the 911 surcharge is generating adequate revenue to cover the costs of the services, equipment, maintenance, and improvements needed to provide a uniform, stable, and effective statewide 911 system;
- whether there is a need or benefit for the board to have the ability to raise the 911 surcharge rate should there be a financial reason to do so; and
- whether the expansion of 911 system functionality resulting from implementation of IP (internet protocol)-based next generation 911 technology has increased or decreased costs for emergency communications districts.

The Act requires the Commission to report its conclusions to the joint committee on government operations on or before September 15, 2017.

Consolidation

The Tennessee Emergency Communications Board (TECB) agrees with Tennessee's emergency communication district (ECD) directors that the decision to consolidate or not should be a local one.

Tennessee's 911 system is operated locally by 100 emergency communications districts. Each district has one or more call centers, known as public safety answering points (PSAPs), designated to receive 911 calls and route them, either by dispatching, transferring, or relaying, to emergency services personnel. Eighty-three districts have one PSAP, and 17 have more than one. Although district or PSAP consolidation could possibly result in cost savings and improved service, there is no guarantee that it will. Largely because they believe local knowledge is critical to effective 911 service, Tennessee's ECD directors are generally not supportive of district consolidation but are more supportive of PSAP consolidation. In fact, many districts in Tennessee have already consolidated PSAPs or services or are working towards it. However, directors emphasize that the decision to consolidate or not should be a local one; the TECB agrees. Although the TECB encourages both PSAPs and ECDs to consolidate and offers financial support up to $150,000 to each ECD to assist with district, not PSAP, consolidation, it does not support mandatory consolidation. The TECB determines the amount of financial support provided to each district on a case-by-case basis after a site visit and analysis.

Encouraging but not requiring ECD and PSAP consolidation is consistent with recommendations in several reports, including previous Commission reports. For example, the Communications Security, Reliability, and Interoperability Council, an advisory committee of the Federal Communications Commission (FCC) that makes recommendations to the FCC about telecommunications security and reliability, advises in its 2010 report, *Key Findings and Effective Practices for Public Safety Consolidation*:

"Incentivizing consolidation will bring more benefit and eliminate more challenges than mandating a consolidation."

Other states offer a few examples of consolidation and attempted consolidation, both voluntary and required. Two counties in Pennsylvania are currently voluntarily consolidating their 911 centers, and they expect to eventually save millions of dollars. Four states—Oregon, Maine, Indiana, and Illinois—have tried to require PSAP consolidation but have had mixed success. In 2001, Oregon passed a law requiring all PSAPs to consolidate into one PSAP per district or county, but local opposition led to a repeal of the requirement just two years later. In 2003, Maine set a maximum number of primary PSAPs, but because towns maintained their own dispatch centers, few savings resulted, and more calls were transferred, which leads to increased response times and potential for error. More recently, Indiana and Illinois also passed laws requiring PSAP consolidation. In Indiana there can be no more than two PSAPs per county, while in Illinois, PSAPs are required to either combine into two per ECD or reduce the number of PSAPs in an ECD by half, whichever is greater. The district has to file a consolidation plan or waiver request with the state, and the state 911 administrator has to approve it. Though consolidations have moved forward in these states, there has also been some resistance from local districts.

Because of variation in local jurisdictions and the mixed success of mandated consolidation in other states, ECDs and PSAPs should not be required to consolidate. But similar to recommendations by the Commission in its previous reports, the **TECB should continue its education efforts on the potential benefits of ECD and PSAP consolidation and continue to encourage ECD consolidation, when the local jurisdictions find it makes sense, through the reimbursement of associated costs.**

The TECB should continue its education efforts on the potential benefits of ECD and public safety answering point (PSAP) consolidation and continue to encourage ECD consolidation, when the local jurisdictions find it makes sense, through the reimbursement of associated costs.

Tennessee Emergency Communications Board Membership

The TECB has authority to exercise operational and financial oversight over ECDs and establish technical and operational standards. The board's membership is outlined in Tennessee Code Annotated, Section 7-86-302, and is comprised of nine members. Five of the nine members are required to be ECD directors or board members—currently the five districts represented on the board all not only take calls but also dispatch emergency responders. The other four required members are one city and one county government representative, the Comptroller of the Treasury or designee, and one member who is not associated with ECDs. Other states require other groups of stakeholders on their boards, including service providers and dispatchers.

Opinions about who should serve on the board are mixed. Twenty-seven of 71 (38%) ECD directors who responded to a 2016 Commission survey did not agree that board membership should be changed to include other stakeholders. Seventeen (24%) agreed that the membership should be changed to require other stakeholders such as ECDs that dispatch; although districts that dispatch are currently represented on the board, their representation is not required. Some service providers have said they would like provider representation on the board, but in interviews, some ECDs directors said they think providers would have a conflict of interest. TECB staff thinks the board is working well with the current membership but did not take a position on new members. **There is no consensus recommendation on changes to board membership.**

State law already requires telecommunications service providers to register with the state, so an additional registration requirement is not necessary.

Providers' Registration Requirements

State law already requires telecommunications service providers to register with the state, so an additional registration requirement is not necessary. In 2012, the state passed the Kelsey Smith Act requiring wireless telecommunications service providers to disclose call location information at the request of an investigative or law enforcement officer and requiring the Department of Commerce and Insurance to obtain contact information from all wireless providers. The Department of Commerce and Insurance designated the TECB, which is a division of the Department, as the organization to receive the information. To comply with the law, the TECB established rules requiring all wireless providers to submit contact information to the TECB for the purpose of facilitating requests from law enforcement agencies for call location information.

Further, as required by Public Chapter 1047, Acts of 2016, which was effective July 1, 2017, all telecommunications service providers began remitting the state 911 fee to the Department of Revenue (DOR). All communications service providers who connect to 911 register with the state before providing service because the new law requires the DOR to establish registration procedures similar to the procedures that apply under the Retailers' Sales Tax Act. That Act requires people conducting business in the state to provide the name under which they will be doing business and their business location to the DOR, but it does not require them to indicate their type of business or whether they provide 911 service. The TECB staff and ECDs agree that it is important for all service providers to register with the state to ensure they are able to connect to 911. Now they are required to do so.

Providers' Service Interruption Reporting Requirements

During a large AT&T service interruption in March 2017, TECB staff first learned about the outage when districts started notifying them nearly 30 minutes after it occurred. AT&T released a statement notifying the public

two hours later. Although in some cases AT&T and other providers are required to report disruptions affecting 911 facilities to the Federal Communications Commission and PSAPs, they are not required to report them directly to the state, and in this instance, AT&T did not.

Service providers have mixed opinions about whether they should be required to report service interruptions to the state, but TECB staff says that if they were notified about service interruptions, they could automatically reroute calls to a PSAP's administrative lines or a neighboring district, depending on what the PSAP prefers. They could also work with the district, and possibly the Tennessee Emergency Management Agency (TEMA), to notify the public that 911 in that area is down and provide alternate emergency numbers. In response to the Commission survey, 67 of 71 (94%) ECD directors said they support the idea. While no states specifically require providers to report service interruptions to their 911 board, six do require them to report outages to state public utility boards or commissions. **Because TECB would be able to better assist ECDs when interruptions occur if they knew about them sooner, telecommunications service providers should be required to notify the TECB when there are service disruptions.**

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Funding

The five remaining questions that Public Chapter 795 requires the Commission to study relate to 911 funding, with the issues including alternatives to the flat-rate fee model, the adequacy of revenue—including whether the single-rate fee amount could be decreased without hurting service, who should have the authority to make rate increases, and the effect of NG911 implementation on district costs. Prior to 2015, the 911 system in Tennessee was funded with a combination of local and state fees collected and remitted to the ECDs, the TECB, and DOR by the service providers. Local governments set their own wireline rates up to allowable maximum amounts set in statute, and the state had authority to establish a statewide fee on wireless and internet-based phone service, known as voice-over-internet protocol (VoIP). Increases in the wireless fee could be determined by the TECB but had to be ratified by a joint resolution of the General Assembly.

Public Chapter 795, Acts of 2014, effective January 1, 2015, replaced the local and state rates with a statewide $1.16 fee on all telecommunications service that can connect with 911. The TECB distributes revenue from the flat fee to the ECDs in an amount "equal to the average of total recurring annual revenue the district received from distributions from the board and from direct remittance of 911 fees for fiscal years 2010, 2011, and 2012," which includes both the state wireless fee and the local wireline fees. The law includes a provision that the distribution to any ECD will not be less that the amount of revenue it received in fiscal year 2012. Districts with

wireline rates less than the allowable local fee before July 1, 2011, could request an increase in their base funding amount. Every district that was not charging the maximum rate by that date—55 districts—requested and received an increase that was effective July 1, 2016. Public Chapter 795 mandates that the TECB give at least 50% of any revenue in excess of its annual fiscal requirements, including the base amount distribution, to the ECDs. The TECB exceeded this in 2015 and 2016, distributing 100% of the excess revenue. Excess revenue is distributed to districts in an amount equal to each district's proportionate share of the base funding.

The Flat-Fee Structure

Almost every state uses a fee similar to Tennessee's on telecommunication services to fund 911.

Almost every other state uses a similar fee on telecommunication services to fund 911, setting fees at the state or local level, or both. Like other 911 funding methods, the telecommunication service fee has advantages and disadvantages. The main advantages of using the flat-fee method are that it is easily understood, acceptable to policy makers, and used almost universally. One disadvantage is that the model could become ineffective as technology changes.

Similar to Tennessee's previous system, some states have tiered fee systems, setting fees at both the state and local levels, instead of one statewide fee. Four of the 22 states that have statewide 911 fees set by their state legislatures give local governments the authority to add local fees to the state fees. Eleven states have fees set by both the state and local governments. For example, wireless rates could be set by the state while local governments set wireline rates. In its 2006 report *Emergency Challenge: A Study of E-911 Technology and Funding Structure in Tennessee*, the Commission suggested allowing ECDs to use local surcharges to fund operations "above and beyond the minimum standards funded by the state fee." However, although this model gives local jurisdictions more discretion to adjust their rates, it creates more complexity and variation across the state. In Tennessee, service providers prefer a statewide flat fee to a hybrid system because it is easier for them to collect and remit payments.

A few states use funding methods other than charging a fee on communications services such as a universal service fund, sales tax revenue, fees added to property tax bills, special property tax levies, and fees added to utility bills. Vermont is the only state that uses a universal service fund (USF), which is funded by a universal service surcharge on retail telecommunications services, in lieu of dedicated 911 fees. However, one study by Vermont's Enhanced 9-1-1 Board suggests that the state look at alternative funding methods because the current one is not raising sufficient revenue to meet needs. The other methods are used in other states in addition to charging a 911 fee on telecommunications services

or are used in very limited cases on a local basis. These methods have their own issues. For example, a few local governments in Kentucky have added a flat fee to water bills, but in one county the fee was challenged in court. The Kentucky Court of Appeals held there is no relationship between the fee and the benefit received, and therefore the fee is not a valid user fee. Like the telecommunications fee, these methods each have their advantages and disadvantages related to revenue generation, ease of implementation, fairness and equity, legality, and long-term funding stability of the method. **There is no compelling argument to replace the current flat fee on telecommunications services with another structure.**

Funding Adequacy

Commission staff estimates show that the new flat-rate system was distributing more recurring revenue to the ECDs than the old two-tier system would if it had still been used in fiscal year 2016. Under the old system, an estimated $70,994,669 would have been generated, after providers retained their administrative fees, from wireline, wireless, and VoIP fees statewide and distributed to the ECDs, excluding non-recurring distributions such as grant funds. This is approximately $10,824,608 less than what ECDs actually received from the flat rate that year through the base and excess distributions. However, determining whether the flat fee generates adequate revenue for the state 911 system remains a complex question. It depends on whether you consider just funds from the fee or from all revenue and whether you include depreciation and other expenses like dispatch services when looking at district costs.

Like the telecommunications fee, alternative funding methods each have their advantages and disadvantages related to revenue generation, ease of implementation, fairness and equity, legality, and long-term funding stability of the method.

Although Tennessee law clearly states that 911 revenue can only be used for 911 purposes, there is disagreement over what services or functions "911 purpose" should include, particularly whether or not the fee should cover dispatch. The TECB has authority to establish standards for acceptable uses of revenue, and in 2003, it created revenue standards outlining required, permissible, and prohibited uses of 911 revenue. ECDs are allowed to pay for dispatch, but only after they meet all required expenses, such as paying for equipment. They are funded primarily by revenue from state 911 fees, but they can also receive—and often rely upon—funds from federal, state, and local government sources including the issuance of bonds. They can also receive funds from private sources.

Views on who should provide and pay for dispatch vary. Some ECD directors agree with the National Emergency Number Association (NENA) that 911 and dispatch service and funding are intertwined, while others, including representatives from the University of Tennessee Municipal Technical Advisory Service (MTAS), the County Technical Assistance Service (CTAS), and the National Association of State 911 Administrators (NASNA), say that dispatch and 911 are distinct functions and should

be funded separately. Both MTAS and CTAS take the position that 911 fees should not pay for dispatch and encourage and support agreements between ECDs and local governments to pay for dispatch. After taking all of this, as well as the continued investment in new technology and equipment by the state and the ECDs, into account, **it does not appear that the fee amount should be reduced.**

It does not appear that Tennessee's current 911 fee amount should be reduced.

In fiscal year 2016, 46 districts reported supplementing TECB distributions with revenue from other local government contributions. Forty-three of 72 (60%) ECD directors responding to the Commission survey did not agree that the base funding distribution was adequate for their district, 16 (22%) agreed, and 13 (18%) were neutral. And in interviews and survey responses, some directors said that in addition to cutting expenses, they are using reserve funds to operate and balance budgets and, as a result, don't have sufficient reserves set aside for future equipment upgrades and replacements. According to 2016 audit data, even when the excess distributions made by the TECB are added to the base amount, 64 of the 100 districts would be unable to cover their operating expenses and depreciation without additional local government funding. The inability of some districts to cover all their expenses with fee revenue may be because some fund more things than others. For example, some districts pay for dispatch and others don't, and districts' investments in new technology vary by district and from year to year.

When evaluating the financial health of a district, the TECB considers its net position both including and not including depreciation expenses for equipment. Under Tennessee law, "a 'financially distressed emergency communications district' is a district that, as shown by the annual audits, has a negative change in net position for a period of three (3) consecutive years." A negative change in net position means an ECD operated at a loss during that 12-month period with depreciation included as an operating expense. ECDs determined to be distressed under this criteria are subject to evaluation and supervision by the TECB. During its evaluation of the distressed ECDs, TECB staff first removes the depreciation expense from operating expenses. If after removing depreciation an ECD does not show a negative change in net position, the ECD is no longer considered distressed and is no longer under the supervision of the TECB. If after removing depreciation the change in net position is still negative, TECB staff continues its review and makes a recommendation to the board members about the financial status of the ECD. The board members then designate the ECD as either confirmed distressed or not distressed. If it is confirmed, it is under the supervision of the TECB. If it is not confirmed, the TECB will continue to assist and monitor the ECD as needed until it attains a positive change in net position in an annual audit.

For fiscal year 2016, when depreciation is not included, just six of the 100 ECDs were unable to cover expenses with revenue from all sources. But when depreciation is included, 33 ECDs did not have enough revenue to cover all expenses. Of the 33, sixteen had their first year of negative change in net position, 13 had their second consecutive year, and four had their third consecutive year. At the February 2017 TECB meeting, three of the latter four ECDs were reviewed; the fourth was reviewed at the August 2017 meeting. After the depreciation expense was removed, all four were designated not distressed by the TECB.

Even if it were deemed necessary for the state to raise the flat-fee rate, simply doing so across the board would not be a solution for all ECDs with revenue shortfalls. This is because the current distribution model, which is based on the fee revenue districts received in 2012, favors districts already receiving the greatest proportion of revenue. Using the current distribution method to create a scenario where every ECD showed a positive change in net position when including depreciation as an operating expense and including all revenue sources collected in fiscal year 2016, the fee would have to have been increased 77 cents, from $1.16 to $1.93. This increase would have generated $68,081,638 statewide, far more than the $3,558,412 needed to bring the 33 districts into a positive net position. When not including depreciation as an operating expense, six districts had a negative change in net position at the current rate of $1.16—to bring these six into a positive net position would require $553,172. But under the current distribution, the fee would have to be increased 57 cents to raise $553,172 for those six systems, bringing it to $1.73, generating $50,398,095 statewide. When excluding depreciation and considering all sources of funding, most systems don't need an increase.

For fiscal year 2016, when depreciation is not included, just 6 of the 100 ECDs were unable to cover expenses with revenue from all sources. But when depreciation is included, 33 ECDs did not have enough revenue to cover all expenses.

Keeping the current fee and using alternative distribution methods, such as distributing all the revenue based on call volume or population or maintaining the current base distribution while distributing any excess revenue based on call volume or population, also would not have ensured that all ECDs are in better financial positions. Under these models, a few ECD distribution amounts would have increased, but most would have decreased. For example, using a hypothetical call volume model to distribute the total revenue ECDs received in fiscal year 2016—from both base and excess distributions—revenue in only 11 districts would increase. The Davidson and Shelby County ECDs combined would receive 88% of the total revenue increase for these 11 districts. The distribution amounts to the other 89 districts would decrease.

The Commission suggested in its 2006 E-911 report that if local fees were insufficient to cover minimum standards, an advisory committee could look at linking distribution of the state fee to cost components developed using technology and staffing operational standards. The report

suggested that if the state fee is going to be raised, the state should first determine what 911 functions the fee should cover. This idea is similar to the state's Basic Education Program (BEP) funding formula consisting "of 45 components that have been deemed necessary for a school district to provide a basic level of education." The BEP cost components serve as the basis for calculating the level of funding for each school system but do not prescribe specific levels of expenditures for individual components. "The formula represents a continuing effort to determine the most appropriate levels of funding and the proper components for the BEP."

Building on a 2006 Commission recommendation, the TECB could tie the distribution of any additional revenue generated by rate increases to a standard set of cost components.

Building on this earlier recommendation, **the TECB could tie the distribution of any additional revenue generated by rate increases to a standard set of cost components. The cost components for providing a minimum standard of 911 services could be developed with input from the existing TECB operations and technical committees using minimum technical operating standards and should be reviewed regularly. The method would determine and distribute funding to ECDs, but ECDs would have flexibility with spending as long as they meet the minimum technical operating standards. This distribution method would only apply to excess revenue above the base amount generated by a rate increase.**

Rate Increase Authority

There is no consensus that the TECB should have authority to raise rates without state legislative approval.

The TECB can recommend a rate increase, but as under the previous law, the increase has to be ratified by a joint resolution of the General Assembly, and the TECB can still reduce the rate without ratification by the state legislature. **There is no consensus that the TECB should have authority to raise rates without state legislative approval.** Most ECD directors, 59 of 71 (83%) who responded to the Commission survey, agreed that the TECB should have rate-setting authority, arguing that the state board understands the challenges of providing 911 services and that given the authority could more quickly adjust rates if needed. But TECB staff thinks authority to approve any rate increases set by the board should rest with the state legislature, as it does under the current law, or the board should be allowed to set the rate up to a certain amount, and an increase above that amount should require legislative approval. Providers prefer the legislature set the rate, and some stipulate that if the TECB were given the authority to set it they would want to be represented on the board. Of the 29 other states that levy a statewide 911 fee on telecommunications services, state legislatures in 22 of them set their rates. Other boards set rates in seven states; of these, state-level utility boards set them in three states, and 911 boards set them in four states.

NG911 Effects on ECD Costs

Finally, Tennessee's transition to the NG911 network could affect ECDs expenses. NG911 is moving the 911 system onto the internet so in the future it will be able to receive texts, photos, videos, and other forms of data. Tennessee began moving its 911 system onto the internet-based NG911 network several years ago and anticipates completing the transition by 2018. Even though NG911 is beneficial and needed to support evolving technology, ECD directors are concerned about the uncertain costs of implementation and maintenance of NG911. New technology and forms of communication such as texting and social media will require ECDs to develop new procedures, train staff on how to respond, and store large amounts of data. National organizations, including the FCC, NENA, and the Association of Public-Safety Communications Officials (APCO), are developing guidelines and standards to help ECDs adapt to NG911 and train employees to handle text messages and other forms of data and to support and educate providers and the public. The TECB established dispatcher training regulations and created a training advisory committee to provide guidance and support and offers classes to ECDs. Future courses will likely include text-to-911 training, although there is currently not a recurring amount in the budget designated for training. ECDs can also provide their own training, but the cost is uncertain.

As of April 2017, all 142 primary PSAPs were receiving calls through NG911, and 100 were compliant, meaning they meet the state's NG911 requirements and are benefitting from network redundancy or backup systems, automatic call rerouting, and the ability to transfer calls statewide. Fifty-four ECDs are fully compliant, and 17 are partially compliant, meaning some of their PSAPs are compliant and some are not. The other 29 do not have PSAPs that are compliant yet. **Because NG911 is not fully implemented yet in Tennessee, it is unclear whether statewide implementation has substantively affected the expenses of ECDs.**

Because Next Generation 911 (NG911) is not fully implemented yet in Tennessee, it is unclear whether statewide implementation has substantively affected the expenses of ECDs.

Maintaining Tennessee's Award-Winning 911 System

Since the 1960s, when the idea of the universal emergency phone number, 911, was first recommended in the United States, the 911 system has become integrated into our communities and expectations about public safety. 911 is a critical part of public safety—it provides people with a way of reporting emergencies so emergency response agencies can assist—and when people call 911 they expect a quick response. The National Association of County Officials, in its 2017 paper *Calling 911: Funding and Technological Challenges of County 911 Call Centers*, said "The quickest way to receive assistance from public safety officials is by dialing 911." Over the years, as technology has continually evolved, 911 systems across the country have been challenged to adapt, upgrade, and pay for the changes. One key example is the upgrade to enhanced 911, or E-911, that was needed as technology transitioned from landline, also called wireline, to wireless phone service. E-911 systems provide the location of the caller and a call-back number for 911 calls from wireless phones. The next big upgrade for the 911 community is the shift from analog to digital systems, known as Next Generation 911 (NG911), to allow for new types of data exchange and communication, such as texting.

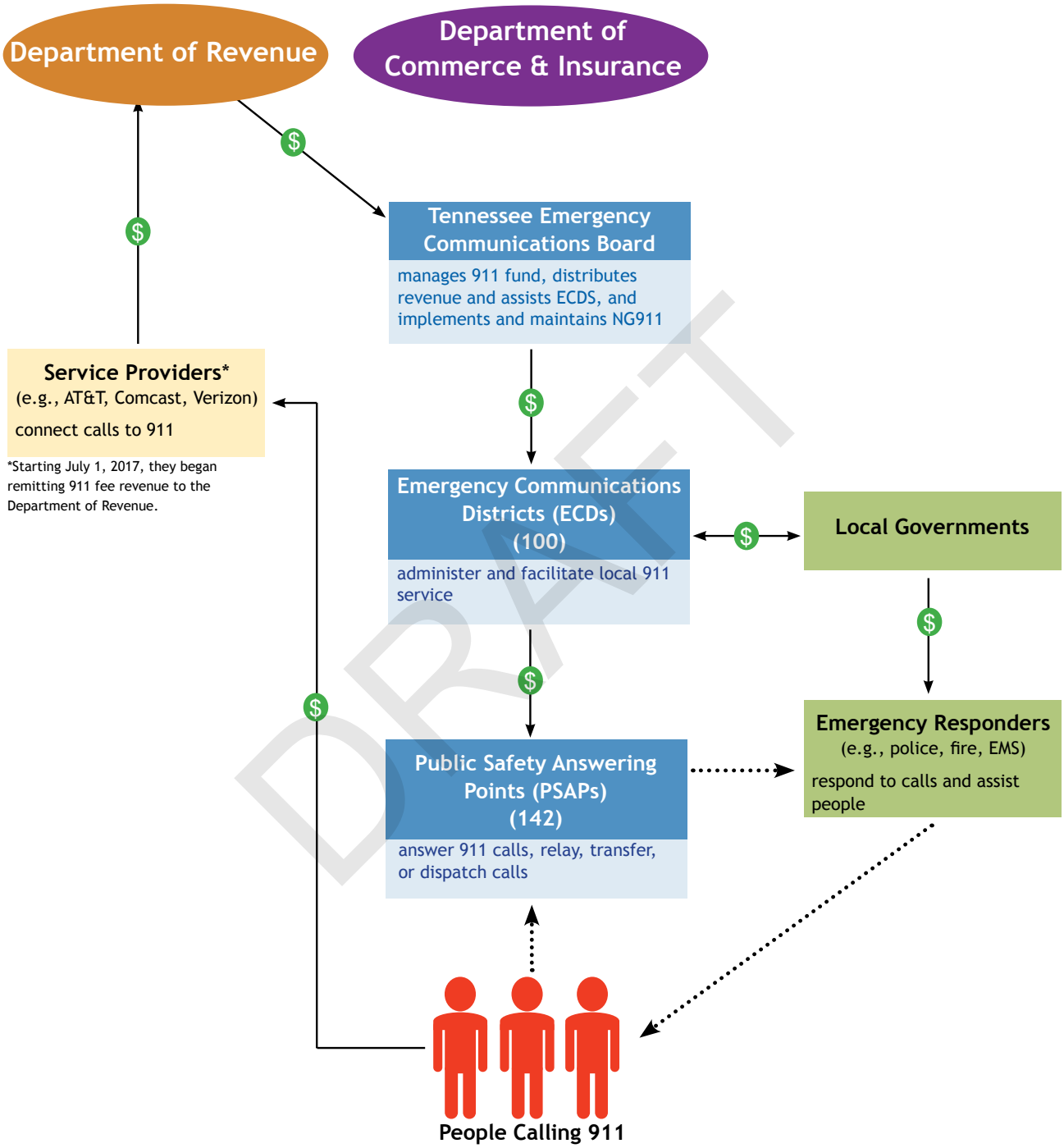
Over the years, as technology has continually evolved, 911 systems across the country have been challenged to adapt, upgrade, and pay for the changes.

Recognizing the need for 911 service and its role throughout the state, with passage of Public Chapter 867 in 1984, the Tennessee General Assembly authorized the creation of emergency communications districts (ECDs) and a local funding mechanism. Currently, 100 ECDs serve their local jurisdictions delivering 911 services across the state, mostly covering county areas. A local board of directors governs each ECD, and although the law defines them as municipalities, the ECDs cannot levy or collect taxes[1] but could levy a surcharge or fee on telephone services to fund 911 service.[2] Each district has one or more call centers, known as public safety answering points (PSAPs), designated to receive 911 calls and route them to emergency services personnel. PSAPs also receive non-911 calls through their administrative lines. Currently there are 142 PSAPs in the state that receive 911 calls,[3] called primary PSAPs, and a number of secondary PSAPs, which are often backup centers or centers where calls are transferred from primary PSAPs.[4] Figure 1 shows the basic structure of Tennessee's 911 system.

Tennessee is recognized as a national 911 leader. In 2005, it became the third state to provide E-911 service, meaning all PSAPs in the state were

[1] Tennessee Code Annotated, Sections 7-86-105 and 7-86-106.
[2] Tennessee Code Annotated, Section 7-86-108, repealed.
[3] Email from Curtis Sutton, executive director, Tennessee Emergency Communications Board, April 4, 2017.
[4] Tennessee Advisory Commission on Intergovernmental Relations 2011.

Figure 1. Tennessee 911 System



Source: Based on information compiled by TACIR staff from interviews, Tennessee Code Annotated, the Tennessee Emergency Communications Board 2016 annual report, and Blasingame et al. 2010.

able to provide the approximate latitude and longitude and call-back number of callers from wireless and internet-based, called voice-over-internet protocol (VoIP), devices.[5] VoIP "allows callers to use a broadband internet connection, instead of traditional phone lines, to make voice calls."[6] In 2017, the state board overseeing 911 operations, the Tennessee Emergency Communications Board (TECB), received the "Outstanding 911 Call Center/Program Award" from the NG911 Institute and the 911 Education Foundation's (a non-profit subsidiary of the Industry Council for Emergency Response Technologies) inaugural "Leading the Way Award", both in recognition for its progress towards statewide implementation of its NG911 network. It also received a national award in 2016 from Esri, the leading Geographic Information System (GIS) software company, for its achievement and leadership through GIS technology and the State/Regional 911 Program Award in 2005 from the E911 Institute.[7]

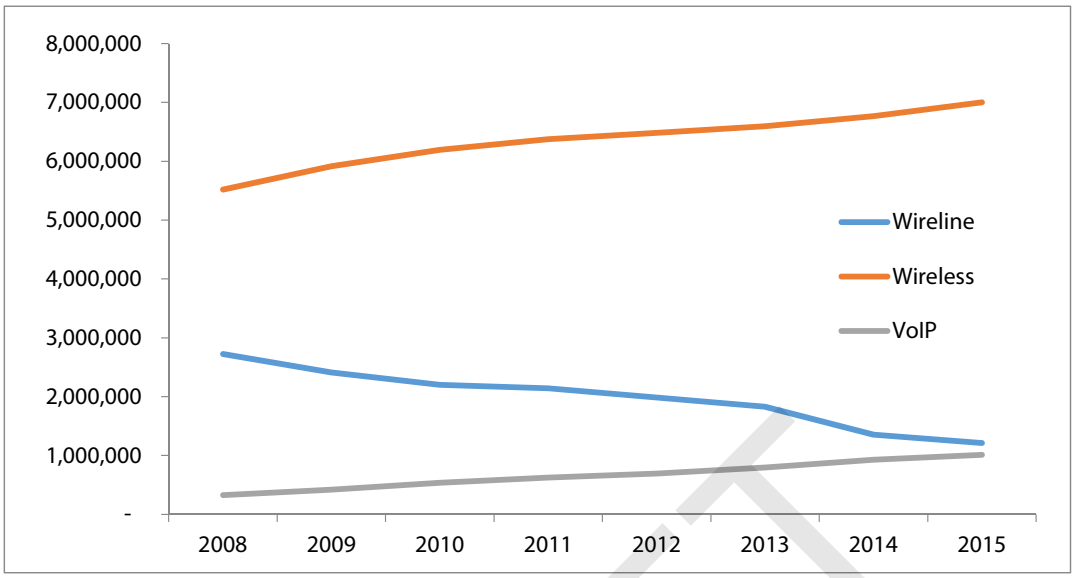
In its 2017 paper *Calling 911: Funding Technological Challenges of County 911 Call Centers*, the National Association of County Officials said 80% of emergency phone calls were made on wireless devices in 2015.

But while Tennessee is leading the way, technology continues to change quickly, posing a challenge to adapt to the evolution of telecommunications and fund the E-911 system. New ways of communicating, such as making calls using VoIP and texting, provide more ways to access 911 and can help improve emergency response, for example, in circumstances such as domestic violence or kidnapping where it would not be prudent for a person to talk to a call taker. However, the state and ECDs need to evolve along with the technology. Figures 2 and 3 on the following page show the trend away from wireline towards wireless and VoIP in Tennessee from 2008 to 2015. The next technology shift that the state is addressing is the implementation of the NG911 network—moving 911 to the internet to allow for other forms of communication and data sharing in addition to voice, such as text, video, and photos.

ECDs also need to plan for the future and fund equipment that can respond to rapidly emerging technologies. Since 1984, ECDs had relied mainly on revenue generated locally from 911 charges on wireline phones and some wireless revenue collected by the TECB. The clear trend away from wireline to wireless service raised concerns about the revenue sources and the need to update the funding mechanism to help districts continue to provide reliable and effective 911 services.[8] To address concerns and help districts respond to challenges, the General Assembly passed Public Chapter 795, Acts of 2014, which changed the two-tier method for funding the 911 system by creating a flat statewide fee and a new method for distributing funds to

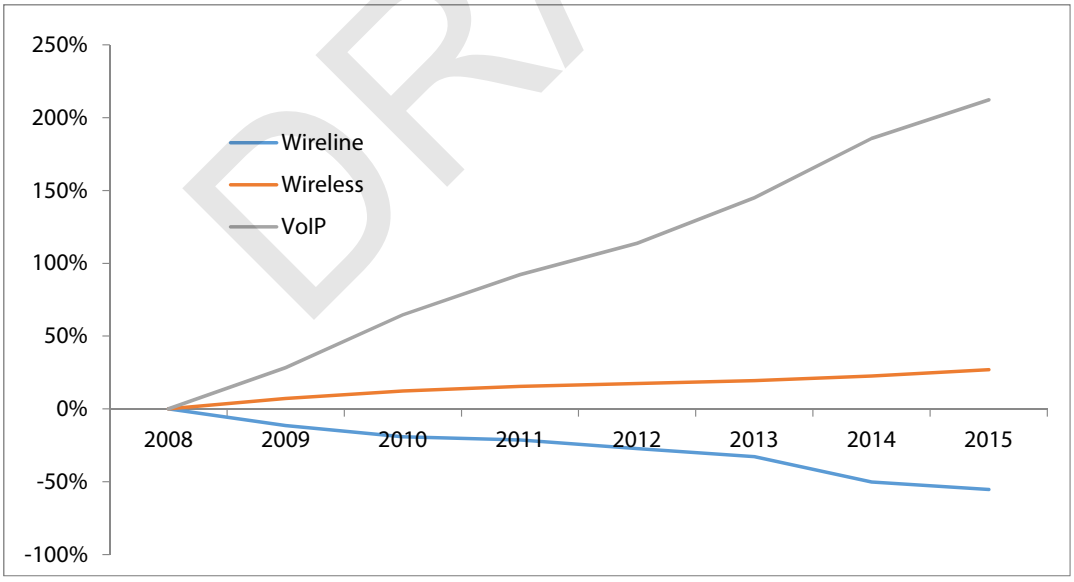
[5] Blasingame et al. 2010.
[6] The Colorado Legislative Council 2017.
[7] Emails from Curtis Sutton, executive director, Tennessee Emergency Communications Board, March 23 and April 2, 2017. See also https://www.tn.gov/commerce/news/49051; http://www.tn.gov/news/49953; and http://www.tn.gov/commerce/news/43527.
[8] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2017.

Figure 2. Number of Wireline, Wireless, and VoIP Subscribers in Tennessee, 2008-2015



Source: Commission staff created the graph based on FCC data. Federal Communications Commission "Local Telephone Competition Reports" and "Voice Telephone Services Reports". See https://www.fcc.gov/general/local-telephone-competition-reports and https://www.fcc.gov/voice-telephone-services-report.

Figure 3. Percent Change of Wireline, Wireless, and VoIP Subscribers in Tennessee, Compared to 2008



Source: Commission staff created the graph based on FCC data. Federal Communications Commission "Local Telephone Competition Reports" and "Voice Telephone Services Reports". See https://www.fcc.gov/general/local-telephone-competition-reports and https://www.fcc.gov/voice-telephone-services-report.

the ECDs. The Act also directed the Tennessee Advisory Commission on Intergovernmental Relations to study nine questions, including

- one dealing with consolidation:
  - whether there is a need or benefit to consolidate emergency communications districts or PSAPs;
- one dealing with TECB membership:
  - whether the board membership of the state emergency communications board should be amended to include other stakeholders such as telecommunications providers, emergency communications districts that dispatch, and other interested parties;
- one dealing with providers' registration requirements:
  - whether there is a need or benefit for the providers of communications services to register with the board prior to providing service;
- one dealing with providers' service interruption reporting requirements:
  - whether there is a need or benefit for providers of communications services to notify the board when there is a known service interruption; and
- five dealing with funding:
  - whether the 911 surcharge is generating adequate revenue to cover the costs of the services, equipment, maintenance, and improvements needed to provide a uniform, stable, and effective statewide 911 system;
  - whether the 911 surcharge is generating more revenue than necessary to implement the purpose of this act and can be reduced to the benefit of communications consumers;
  - whether a flat-rate communications services surcharge is the best manner in which to fund 911 system costs or whether such costs should be funded by a percentage surcharge or a different source, such as water service, electric power service, or state general funds or local taxes;
  - whether there is a need or benefit for the board to have the ability to raise the 911 surcharge rate should there be a financial reason to do so; and
  - whether the expansion of 911 system functionality resulting from implementation of IP (internet protocol)-based next generation 911 technology has increased or decreased costs for emergency communications districts.

The Act requires the Commission to report its conclusions to the joint committee on government operations on or before September 15, 2017. See appendix A for a copy of the Act.

Is there a need or benefit to consolidate emergency communications districts or PSAPs?

The ECDs that deliver Tennessee's 911 system decide how they operate, as long as the districts and their PSAPs meet minimum technical operating standards. TECB's Policy 9, included as appendix B, establishes the minimum standards to "ensure continuity of 911 operations and compatibility for connectivity to the statewide next generation 911 ("NG911") infrastructure," including E-911 service, GIS mapping system capabilities, notice of outages, backup power, plans for rerouting 911 calls, and PSAP relocation. Largely because of the discretion they are allowed, the ECDs' size and operational structure, including the number of PSAPs, how they dispatch, and how they work with local governments, vary widely across the state. For example, Shelby County, the largest ECD by area, population, and call volume, has several primary PSAPs because of the size of the jurisdiction and complexity of agencies involved with emergency response. In contrast, a smaller district such as Dickson County has one PSAP that takes all 911 calls and dispatches. ECDs choose to organize their systems in a way they believe works best for delivery of 911 services in their area.[9] Eighty-three districts have one PSAP while 17 have more than one.[10]

The ECDs that deliver Tennessee's 911 system choose to organize their systems in a way they believe works best for delivery of 911 services in their area, as long as the districts and their PSAPs meet minimum technical operating standards.

Tennessee has encouraged consolidation within and among ECDs.

Since 1998, the General Assembly has encouraged, but not required, consolidation of districts and PSAPs. Tennessee Code Annotated, Section 7-86-105(b)(7), establishes the policy in statute: "It is the public policy of this state to encourage the consolidation of emergency communications operations in order to provide the best possible technology and service to all areas of the state in the most economical and efficient manner possible." The law prohibits the creation of new ECDs within the boundaries of an existing one. The TECB promotes district consolidation by offering financial assistance up to $150,000 for each consolidating district with a three district maximum. The amount of financial support provided to each district is "determined on a case-by-case basis after a site visit and analysis by the Board or its designee(s)."[11]

Overton and Pickett counties, the only ECDs that have consolidated, merged in 2001 because Pickett County ECD was financially distressed

[9] Interviews with David Alexander, director, Hardin County Emergency Communications District, February 22, 2017; and Paul McCallister, director, Dickson County Emergency Communications Board, January 9, 2017.
[10] Email from Eddie Burchell, chief of 911 technical services, Tennessee Emergency Communications Board, February 27, 2017.
[11] Tennessee Emergency Communications Board 2015.

and approached Overton County ECD. The TECB provided funds for updated equipment in a consolidated center, and according to the Commission's 2011 PSAP report, the consolidation has provided improved service for both counties because they both wanted it and worked together to achieve it.[12] However, at the May 2017 TECB meeting, the county executive of Pickett County testified that the county would like to create its own ECD separate from Overton County. He said the consolidation was never meant to be permanent and that when they consolidated, Pickett County did not have an adequate location to operate its 911 service. The county is currently building a new jail with a room to operate 911 and would like to integrate emergency communications with its other emergency services.[13] The process to create a new district is outlined in statute, which says "such action shall not threaten the financial integrity or stability or the level or quality of 911 service of the existing emergency communications district."[14]

The TECB is also supportive of consolidation of PSAPs and services, such as call taking, dispatch, and GIS mapping, within districts but believes it should be a local decision.[15] In fact, many districts in Tennessee have already consolidated PSAPs or services or are working towards it.[16] For example, Hamilton County ECD unified six of its eight PSAPs, and the director says they have better communication and great staff and service—before they unified, communication between agencies was not good.[17] Sumner County ECD is currently consolidating from seven PSAPs to one and by pooling resources is hoping to improve staff training, access better tools, and save money on operations in the future.[18] L.R. Kimball, a consulting firm that specializes in public safety and wireless communications, advises in its publication "Targeted Results for Emergency Communications Consolidation" that "consolidation should be approached on a case-by-case basis and only after the completion of a comprehensive feasibility study." Figure 4 lists some principles ECDs should consider when looking at consolidation.

Figure 4. Guiding Principles for Determining Whether Consolidation is a Good Idea

- Does your county, jurisdiction, or region have multiple emergency communications centers? Do they typically interact with each other?
- Have government officials or emergency communications managers ever expressed an interest in consolidating?
- Is there a history of intergovernmental cooperation or shared services among or within jurisdictions serving or adjoining your region?
- Is coordination challenging among first responders being served by multiple communication centers?
- Has your jurisdiction experienced an incident where uncoordinated efforts played a part in delayed response time or a poor outcome?
- Are there multiple emergency communications centers within or among jurisdictions that are operationally and technologically deficient and struggling to provide services?

Source: L.R. Kimball. "Targeted Results for Emergency Communications Consolidation."

[12] Tennessee Advisory Commission on Intergovernmental Relations 2011.
[13] Testimony given at TECB meeting by Richard Daniel, county executive, Pickett County, May 3, 2017. TECB meeting video is available at http://www.tennessee.gov/commerce/section/E911.
[14] Tennessee Code Annotated, Section 7-86-310.
[15] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2016.
[16] Phone conversation with Jamison Peevyhouse, director, Weakley County 911 Communications Center, November 15, 2016.
[17] Interview with John Stuermer, executive director, Hamilton County 911 Emergency Communications District, November 1, 2016.
[18] Interviews with Anthony Holt, county executive, Sumner County, February 28, 2017; and Buddy Shaffer, director, Sumner County E-911, February 28, 2017.

Other states have tried voluntary and mandatory consolidation.

Other states offer a few examples of consolidation and attempted consolidation, both voluntary and required, but although consolidations have moved forward in these states, there has also been some resistance from local districts.

Other states offer a few examples of consolidation and attempted consolidation, both voluntary and required. Two counties in Pennsylvania are currently voluntarily consolidating their 911 centers, and they expect to eventually save millions of dollars.[19] Four states—Oregon, Maine, Indiana, and Illinois—have tried to require PSAP consolidation but have had mixed success. In 2001, Oregon passed a law requiring PSAPs in multi-PSAP districts to consolidate into one PSAP per district or county, but local opposition to forced consolidation led to a repeal of the requirement just two years later.[20] In 2003, Maine set the maximum number of primary PSAPs in the state between 16 and 24, and some PSAPs had to consolidate as a result of the change in the law.[21] But in a 2013 policy brief, *Saving Costs through Regional Consolidation: Public Safety Answering Points in Massachusetts*, the New England Public Policy Center reported that because towns maintained their own dispatch centers, few savings resulted, and more calls were transferred, which leads to increased response times and potential for error.[22] The brief concluded that "by more closely tying dispatch and primary PSAPs in the legislation or by using cost pressures to encourage voluntary consolidation of both primary PSAPs and dispatch operations, the state might have achieved more significant savings and better service quality." More recently, Indiana and Illinois also passed laws requiring PSAP consolidation. In Indiana there can be no more than two PSAPs per county,[23] while in Illinois, PSAPs are required to combine into two per ECD or to reduce the number of PSAPs in an ECD by half, whichever is greater.[24] The district has to file a consolidation plan or a waiver request with the state, and the state 911 administrator has to approve it. Both laws include a few minor exceptions. Though consolidations have moved forward in these states, there has also been some resistance from local districts.[25]

There are advantages and disadvantages to consolidation of operations.

Although improving service should be the main motivation to consolidate, cost savings is also a potential advantage. The literature, including the Commission's 2006 report *Emergency Challenge: A Study of E-911 Technology and Funding Structure in Tennessee* and 2010 staff report *E-911 Emergency*

[19] Blackledge 2017.
[20] Rasmussen 2012.
[21] 25 Maine Revised Statutes Annotated 2926 and Mission Critical Partners 2011.
[22] Kodrzycki and Cools 2013.
[23] Burns Indiana Code Annotated 36-8-16.7-47.
[24] 50 Illinois Compiled Statutes 750/15.4a and 50 Illinois Compiled Statutes 750/99. The consolidations had to be completed by July 1, 2017, and on December 31, 2020, the statute section mandating the consolidation will be repealed.
[25] Bustos 2017 and Smothers 2017.

Communications Funding in Tennessee, says that the opportunity to cut costs comes through economies of scale, specifically through reduction in personnel and replacement of expensive equipment. Other advantages include standardized training and expanded career opportunities for employees, increased collaboration, reduction or elimination of calls between PSAPs, lower response times, and increased ease of meeting minimum staffing requirements. The main concerns and disadvantages include perceived loss of control, dispatcher unfamiliarity with the area, elimination of job positions, potential expensive one-time costs, and uncertain cost savings that might not occur for several years, as well as staff concerns about job security, pay, and benefits.[26]

Literature tends to recommend creating incentives for consolidation over requiring it.

Encouraging but not requiring ECD and PSAP consolidation is consistent with recommendations in several reports, including previous Commission reports. The Communications Security, Reliability, and Interoperability Council, an advisory committee of the Federal Communications Commission (FCC) that makes recommendations to the FCC about telecommunications security and reliability, advises in its 2010 report, *Key Findings and Effective Practices for Public Safety Consolidation*: "Incentivizing consolidation will bring more benefit and eliminate more challenges than mandating a consolidation." There are a few ways to create incentives, but according to the New England Public Policy Center 2013 policy brief, the two most effective ways are to require PSAPs to meet quality standards and to establish financial incentives. Essentially, cost pressures can be used to encourage voluntary consolidation. In its 2006 report on E-911 technology and funding, the Commission also recommended continuing education efforts and encouraging ECD and PSAP consolidation but did not recommend requiring it. The 2010 Commission staff report on E-911 funding recommended encouraging consolidation through the reimbursement of associated costs.

Tennessee's ECD directors are generally not supportive of district consolidation but are more supportive of PSAP consolidation.

Although opinions vary about the most effective structure of an ECD, overall, ECD directors strongly agree with the TECB that district or PSAP consolidation should be a local choice. In a 2016 Commission survey of all ECD directors in the state, 43 of 71 (61%) respondents did not agree that there is a need or benefit to consolidate districts, while 14 (20%) agreed,

Although opinions vary about the most effective structure of an ECD, overall, ECD directors strongly agree with the TECB that district or PSAP consolidation should be a local choice.

[26] Governor's Work Group on PSAP Consolidation 2009, L.R. Kimball 2013, Rasmussen 2012, Task Force on Optimal PSAP Architecture 2016, and Working Group #1A 2010.

and 10 (14%) were neutral. Some said each county should only have one ECD. In survey responses and interviews, the main reason directors cite for being against consolidation is that local personnel and geographic knowledge of the area are critical to high quality service. One survey respondent commented, "Consolidation beyond the county level will decrease the quality of 911 service." Opinions about PSAP consolidation within districts are more mixed: 28 (39%) survey respondents did not agree that there is a need or benefit to consolidate PSAPs, 25 (35%) agreed, and 14 (20%) were neutral. And in regards to integrating services, such as call taking, dispatch, and GIS mapping, 35 (49%) respondents agreed that it was needed or beneficial, two (3%) disagreed, and 24 (34%) were neutral. Several directors and local ECD boards are choosing to combine PSAPs and services within their districts because they believe it will be a more effective operational structure for their district.[27] In the survey, one director said integrating services within ECDs "provides for seamless communications between agencies and departments and decreases call processing times." See appendix C for a copy of the Commission survey forms.

In the 2016 Commission survey of all ECD directors in the state, one survey respondent commented, "Consolidation beyond the county level will decrease the quality of 911 service."

Should the board membership of the state emergency communications board be amended to include other stakeholders such as telecommunications providers, emergency communications districts that dispatch, and other interested parties?

The Tennessee Emergency Communications Board (TECB) was created in 1998 by Public Chapter 1108 to assist the ECDs' "boards of directors in the areas of management, operations, and accountability, and establish(ing) emergency communications for all citizens of this state."[28] The state board is authorized to exercise operational and financial oversight over ECDs, provide substantial technical and financial assistance, and establish and implement technical and operational standards.[29] A key purpose of the TECB was to implement and fund wireless E-911 service across the state, as required by the FCC's 1996 order that wireless 911 access be the same as wireline access.[30]

The state board, which was modified in 2015 by Public Chapter 350, includes nine members, five of whom are required to be current ECD

[27] Interviews with Eric Carpenter, director, Hamblen County Emergency Communications District, November 30, 2016; Chuck Haston, district director, Warren County Emergency Communications, November 8, 2016; Marvin Kelley, director, McMinn County Emergency Communications District, March 6, 2017; Jamison Peevyhouse, director, Weakley County 911 Communications Center, November 15, 2016; and John Stuermer, executive director, Hamilton County 911 Emergency Communications District, November 1, 2016.
[28] Tennessee Code Annotated, Section 7-86-302(a).
[29] Tennessee Code Annotated, Section 7-86-306.
[30] Blasingame et al. 2010.

directors or board members.[31] As of July 2017, these five represent districts that provide dispatch.[32] The nine required voting members are appointed as follows:

- The Governor appoints four members: one member who has no connection to ECDs and three local ECD directors or board members—one from each grand division;
- The Speaker of the Senate appoints one county government representative and one local ECD director or board member;
- The Speaker of the House appoints one city government representative and one local ECD director or board member; and
- The Comptroller of the Treasury or a designee.[33]

The law also requires those appointing members to "strive to ensure" that the membership represents the diversity of the people and the state, including race, gender, age, geographical and political interests, urban and rural areas, and ECDs that employ both E-911 operators and dispatchers.

The TECB is required to create committees that support the board, but members of these committees do not have a vote on the board. These include a technical advisory committee comprised of service providers "for the purpose of providing and receiving operational and technical information and advice on all aspects of wireless enhanced 911 service."[34] Other advisory committees are appointed as needed to support the board; members can include various stakeholders such as local government officials, consumers, 911 service users, and law enforcement, firefighting, and emergency medical services personnel.[35] According to its 2016 annual report, the board's main committees are the operations, policy, technical, and training advisory committees.

Other states have a wider variety of stakeholders serving on their state 911 boards than Tennessee does.

Several states include other groups of stakeholders on their boards that Tennessee's board does not. Of 38 state boards with memberships outlined in statutes, 26 include service providers on the board. Of these 26, one state

Several states include other groups of stakeholders on their boards that Tennessee's board does not, such as service providers and members that dispatch or represent districts that dispatch.

[31] Before Public Chapter 350 went into effect, the state board included nine members all appointed by the governor except for the comptroller of the treasury or designee. The previous representation of the members was the same as the current law. The Act established a term limit of two successive terms and changed the term length from four years to three years for all members. It also added language to encourage diversity of the board, including requiring that the three members appointed by the Governor each reside in a separate grand division of the state. Tennessee Code Annotated, Section 7-86-302.

[32] According to responses from those five board members in the 2016 Commission survey and http://www.tennessee.gov/commerce/article/e911-board-members.

[33] Tennessee Code Annotated, Section 7-86-302.

[34] Tennessee Code Annotated, Section 7-86-308.

[35] Tennessee Code Annotated, Section 7-86-309.

has one provider on the board,[36] eight states have two,[37] five states have three,[38] four states have four,[39] five states have five,[40] two states have six,[41] and one state has eight.[42] The proportion of service providers on other states' boards ranges from 7% to 47%, excluding boards with no service providers. Three states, Illinois, Kansas, and Pennsylvania, specify that the service provider positions are non-voting positions.

Some other state's boards also require members that dispatch or that represent districts that dispatch. Of the 38 state boards with memberships outlined in statutes, two, Maine and New Hampshire, include districts that dispatch. Maine requires an actual dispatcher to serve, and New Hampshire requires a dispatcher representative to serve. Ten other states require Association of Public-Safety Communications Officials (APCO) representatives, which could include dispatchers and call takers. One state, New Jersey, requires two members, and the rest require one.[43] In Pennsylvania the APCO member is non-voting. Although currently the five 911 representatives serving on the Tennessee state board represent districts that dispatch, their representation is not required. Other groups that are required by statute to serve on 911 boards in other states but not in Tennessee include police and other law enforcement, firefighters, emergency medical services, information technology experts, National Emergency Number Association (NENA) representatives, and representatives from state agencies like the department of safety.

Although currently the five 911 representatives serving on the Tennessee state board represent districts that dispatch, their representation is not required.

Stakeholders' opinions about adding state board members are mixed.

Ideas vary about which types of groups the state board should represent. Twenty-seven of 71 (38%) ECD directors who responded to the Commission survey did not agree that board membership should be changed to include other stakeholders, and 23 (32%) were neutral. Seventeen (24%) agreed, and most of these think ECDs that dispatch should be required; although districts that dispatch are currently represented on the board, their representation is not required. Several directors specified in interviews

[36] Connecticut.
[37] Arkansas, Georgia, Maryland, Michigan, Mississippi, Nebraska, Rhode Island, and South Dakota.
[38] Kentucky, Missouri, Pennsylvania, South Carolina, and Virginia.
[39] Indiana, Iowa, Kansas, and Maine.
[40] Florida, Hawaii, Illinois, New Hampshire, and Washington (at least five).
[41] Alabama and Oklahoma.
[42] North Carolina.
[43] California, Illinois, Iowa, Maryland, Michigan, North Carolina, Pennsylvania, South Dakota, and Washington.

that they think service providers would have a conflict of interest.[44] For example, because AT&T has the contract with the state to manage the NG911 network, its representatives would have conflicts in decisions the board makes affecting the contract with the state.[45] In interviews, providers said it would be beneficial to have at least one seat on the board, and some said that if TECB had the authority to raise the rate without oversight by the state legislature, at least one provider should be on the board.[46] TECB staff did not take a position on whether new members should be added but does think the board is effective with the current membership.[47]

Is there a need or benefit for the providers of communications services to register with the board prior to providing service?

State law currently requires wireless telecommunications service providers to register with the state. In 2012, the state passed the Kelsey Smith Act, which requires wireless telecommunications service providers to provide call location information at the request of a law enforcement agency that is responding to an emergency and requires the Department of Commerce and Insurance to obtain the contact information for all wireless providers operating in the state.[48] The Department designated the TECB, which is a division of the Department, to receive the information. In accordance with the law, the TECB passed a rule requiring wireless providers to submit contact information for the purpose of facilitating requests from law enforcement agencies for call location information.[49] The rule requires the board to keep a list of wireless provider contact information on its website and distribute the list quarterly to all PSAPs.

Further, as required by Public Chapter 1047, Acts of 2016, which was effective July 1, 2017, all communications service providers began remitting the state 911 fee to the Department of Revenue (DOR). The law requires the DOR to establish registration procedures similar to the procedures that

As required by Public Chapter 1047, Acts of 2016, which was effective July 1, 2017, all communications service providers began remitting the state 911 fee to the Department of Revenue (DOR) and are required to register with the state before remitting fees and providing service.

[44] Interviews with Chuck Haston, director, Warren County Emergency Communications District, November 8, 2016; John Stuermer, executive director, Hamilton County 911 Emergency Communications District, November 1, 2016; and Randy Porter, county executive, Putnam County, October 26, 2016; and minutes from West TENA meeting received in an email from David Alexander, director, Hardin County Emergency Communications District, November 17, 2016.

[45] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2016.

[46] Interviews with Jeff Van Dyke, vice president, governmental affairs, AT&T Tennessee, December 20, 2016; Pam Melton, director of state regulatory and legislative affairs, CenturyLink, December 16, 2016; and Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; and testimony from Levoy Knowles, executive director, Tennessee Telecommunications Association, January 27, 2017.

[47] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2016.

[48] Tennessee Code Annotated, Section 38-1-602.

[49] Tennessee Emergency Communications Board Rule 0780-06-03-.01.

apply under the Retailers' Sales Tax Act.[50] The sales tax act requires people conducting business in the state to provide the name under which they will be doing business and their business location to the DOR.[51] Under the sales tax act they are not required to indicate their type of business or whether they provide 911 service, but under the new law, all communications service providers who connect to 911 are required to register with the state before remitting fees and providing service.

Stakeholders are mixed on the need for additional registration requirements. ECD directors strongly support the idea of requiring service providers to register. In response to the survey, 63 of 71 (89%) respondents agreed that registration is important, while none disagreed. One respondent said, "Logic would say this should be a given. With the TECB managing the NG911 statewide 911 call delivery system, it should be imperative that a service provider work with the TECB to ensure call delivery and provide 24/7 contact information for troubleshooting. Failure to do so could compromise the life-saving service of 911." TECB staff says it would be helpful to know who is providing service to ensure they are connecting to 911. And although staff would probably have to request registration information from the DOR since the new law does not include any reporting requirements, they have worked well with the DOR in the past and do not foresee any issues with obtaining the information.[52] Service provider representatives are mixed in their opinions on whether or not they should be required to register.[53] Four other states have statutes requiring registration: Connecticut (prepaid), Kansas (wireless),[54] Mississippi (wireless), and South Dakota.

One survey respondent said, "Logic would say this should be a given. With the TECB managing the NG911 statewide 911 call delivery system, it should be imperative that a service provider work with the TECB to ensure call delivery and provide 24/7 contact information for troubleshooting. Failure to do so could compromise the life-saving service of 911."

Is there a need or benefit for providers of communications services to notify the board when there is a known service interruption?

Federal law requires all regulated telecommunications providers to report information about communications disruptions affecting 911 facilities to the Federal Communications Commission (FCC).[55] Providers must notify

[50] Tennessee Code Annotated, Section 7-86-128(f)(1).
[51] Tennessee Code Annotated, Section 67-6-602.
[52] Interviews with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7 and March 14, 2017.
[53] Interview with Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; email from Pam Melton, director of state regulatory and legislative affairs, CenturyLink, January 6, 2017; and testimony from Levoy Knowles, executive director, Tennessee Telecommunications Association, January 27, 2017.
[54] In Kansas, "Every provider shall submit contact information for the provider to the council prior to January 1, 2012. Any provider that has not previously provided wireless telecommunications service in this state shall submit contact information for the provider to the council within three months of first offering wireless telecommunications services in this state." Kan. Stat. Ann. § 12-5364.
[55] 47 United States Code of Federal Regulations Part 4.

the FCC within two hours if the interruption is at least 30 minutes and affects 30,000 people;[56] in some cases they must also notify PSAPs as soon as possible. The regulations also include a detailed procedure that must be followed when requesting a copy of the reports.[57]

Although providers can voluntarily report outages, Tennessee law does not require that they be reported to the state. For example, during a large AT&T service interruption in March 2017, TECB staff first learned about it when districts started notifying them about 30 minutes after it occurred, and two hours later, AT&T released a statement notifying the public about it. AT&T did not directly contact the TECB and was not required to do so. ECD directors and TECB staff agree that it is beneficial when the providers notify the TECB when interruptions occur, and TECB staff says it would be immensely helpful if providers reported the same information to the board that they are required to report to the FCC. If they knew about service interruptions they could automatically reroute calls to a PSAP's administrative lines or a neighboring district, depending on what the PSAP prefers. They could also work with the district, and possibly the Tennessee Emergency Management Agency (TEMA), to notify the public that 911 in that area is down and provide alternate emergency numbers.[58]

ECD directors and TECB staff agree that it is beneficial when the providers notify the TECB when interruptions occur, and TECB staff says it would be immensely helpful if providers reported the same information to the board that they are required to report to the FCC. Service providers' opinions, however, are mixed.

An overwhelming 67 of 71 (94%) survey respondents agree there is a need or benefit for communications service providers to notify the state board when there is a known service interruption, and one survey respondent said, "Without hearing from carriers that they are having a service disruption in our area, the only way ECDs or PSAPs will know of a 911 outage not associated with the PSAP . . . is when callers successfully reach a telecommunicator to explain they have been attempting to call but have not been able to do so. Mitigation plans cannot be enacted if we discover an outage after it has been resolved." Service providers' opinions, however, are mixed. Some think the current reporting requirement is sufficient, there is not a problem with reporting interruptions, and there doesn't need to be a notification requirement in the state law; others think a reporting process would be appropriate.[59] Six states, Colorado, Maine, North Dakota, South Dakota, Washington, and Wyoming, have administrative rules requiring providers to report outages to their state public utility boards or commissions.

[56] Email from Curtis Sutton, executive director, Tennessee Emergency Communications Board, April 4, 2017.
[57] 47 United States Code of Federal Regulations Part 4.
[58] Phone conversation with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14, 2017; and email from Curtis Sutton, April 26, 2017.
[59] Interviews with Jeff Van Dyke, vice president, governmental affairs, AT&T Tennessee, December 20, 2016; and Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; email from Pam Melton, director of state regulatory and legislative affairs, CenturyLink, January 6, 2017; and testimony from Levoy Knowles, executive director, Tennessee Telecommunications Association, January 27, 2017.

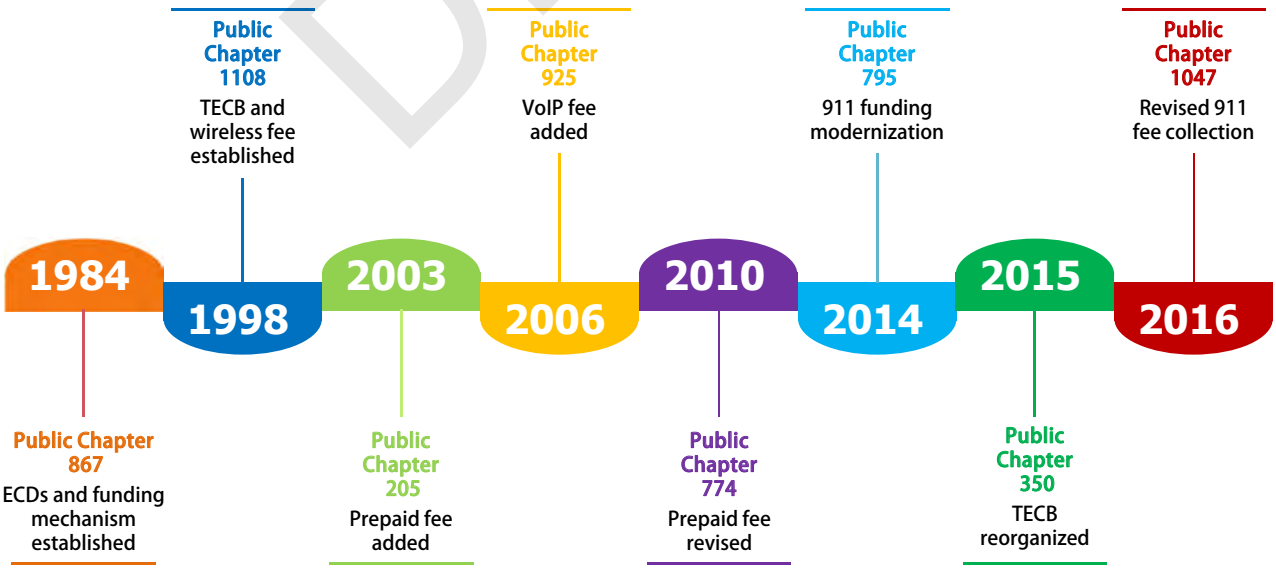
Public Chapter 795 Created a Single 911 Rate

The five remaining questions that Public Chapter 795 requires the Commission to study all relate to 911 funding. The issues include the adequacy of revenue from the new single rate, whether the fee amount could be reduced without harming service, alternatives to the flat-rate fee model, authority for rate increases, and the effect of NG911 implementation on local district costs. An explanation of the changes made to the previous law will help with understanding the effect the new funding model is having on the issues the Commission is required to address.

Before Public Chapter 795, Acts of 2014, went into effect, the 911 system was funded by a two-tier model.

The 911 funding laws have been adjusted over time as technology and needs have evolved. Figure 5 shows key legislative actions related to funding the 911 system in Tennessee since 1984 when the creation of emergency communications districts and a funding mechanism were authorized. Beginning in 1998 and continuing until Public Chapter 795 went into effect January 1, 2015, the state had a two-tier 911 funding system: service providers collected 911 fees on landline phones, also called wirelines, and remitted them to the ECDs and collected and remitted 911 fees on wireless phones to the TECB and DOR. Providers could keep an administrative fee of 3% of all their 911 fee collections.[60] Each ECD set its local rate up to allowable maximum amounts set in statute: 65 cents per month for

Figure 5. Key Legislation Related to 911 Funding in Tennessee since 1984



[60] Tennessee Code Annotated, Section 7-86-108, repealed.

residential landlines and $2.00 per month for business landlines, up to 100 lines. With voter approval by referendum or with approval from the TECB, ECDs could increase the residential rate to $1.50 and the business rate to $3.00 per landline. All funds ECDs received had to be used for their operations.[61] Appendix D shows the ECD local rates as of May 2014.

When Public Chapter 1108, Acts of 1998, required the creation of a state board, it also created the 911 Emergency Communications Fund (the Fund) and allowed the TECB to establish and collect a state 911 fee on wireless lines, resulting in the two-tier model in place until 2015. ECDs were only collecting fees on wireline service, not wireless, and the number of wireline devices was decreasing while the number of wireless devices was beginning to grow rapidly.[62] The TECB collected $1 per wireless line and never raised the rate,[63] although by law it could charge up to $3. Increases in the rate could be determined by the TECB but had to be ratified by a joint resolution of the General Assembly; the TECB could reduce the wireless rate without legislative approval as long as it met FCC requirements, covered operating costs, and maintained the solvency of the Fund.[64] All funds collected by the TECB were designated for the Fund and only used for the operational and administrative expenses of the board allowed by law. They were not to revert to the state general fund.[65]

When Public Chapter 1108, Acts of 1998, required the creation of a state board, it also created the 911 Emergency Communications Fund and allowed the TECB to establish and collect a state 911 fee on wireless lines, resulting in the two-tier model in place until 2015.

As technologies developed, 911 fees on different types of wireless service were added, all designated for the Fund. In 2003, Public Chapter 205 extended the $1 fee on wireless service to prepaid wireless phone service, requiring providers to charge and collect it.[66] They could collect the fee from each customer whose account balance was equal to or greater than the fee amount, or they could divide the total prepaid wireless telephone revenue received within the month by $50 and multiply the quotient by the fee amount. The revenue was then remitted to the TECB. The prepaid wireless fee was revised in 2010 by Public Chapter 774. The fee was reduced to 53 cents and was required to be charged on each retail transaction or point of sale.[67] The Act also required the DOR to collect the prepaid revenue from prepaid service retailers and remit it to the TECB. The DOR was allowed to retain a 2% administrative fee of collected charges. In 2006, Public Chapter 925 amended the law by applying the existing wireless fee collected by the TECB to VoIP.

[61] Tennessee Code Annotated, Section 7-86-102(d).
[62] Federal Communications Commission "Local Telephone Competition Reports." See https://www.fcc.gov/general/local-telephone-competition-reports.
[63] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2016.
[64] Tennessee Code Annotated, Section 7-86-108, repealed.
[65] Tennessee Code Annotated, Section 7-86-303.
[66] Tennessee Code Annotated, Section 7-86-108, repealed.
[67] Tennessee Code Annotated, Section 7-86-128, effective July 1, 2011.

The TECB was required to deposit all 911 wireless fee revenue it received into the Fund and distribute 25% to the ECDs, based on the proportion of each district's population to the state population.[68] After meeting its other fiscal requirements to cover its operational and administrative expenses, implementation of statewide 911 service, and the mandatory distribution, the TECB was allowed to disburse excess funds to the ECDs, as long as the "distribution is possible and practicable," and the solvency of the Fund was secure. To distribute the extra funds to the ECDs, the TECB created several funding programs. For example, the essential equipment grant program, started in 2007, allocated a total of $150,000 to each ECD and was increased to $450,000 in 2010. Under the NG911 controller grant program, started in 2010, each ECD was eligible for an allocation of a $120,000 base amount plus an amount based on population.[69] In addition, a separate controller funding program allotted $40,000 to each ECD, and the GIS mapping system reimbursement program allotted $50,000. The TECB also used the excess money to fund other programs, such as the dispatch training and recurring operational programs.[70] Because not all districts have requested their grant funds, some still have funds remaining in their accounts; the TECB plans to distribute any remaining grant funds in each district's account to those districts in 2017.[71]

As of January 1, 2015, under the new law, the TECB can recommend a rate increase after a public hearing before the board, but the increase still has to be ratified by a joint resolution of the General Assembly.

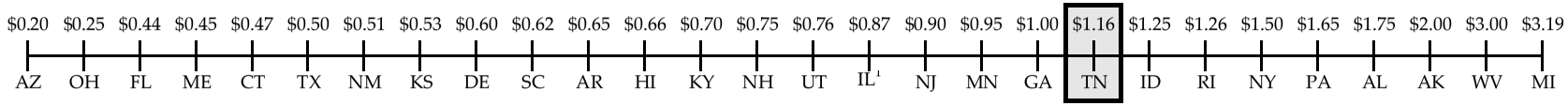
Now the state's 911 system is primarily funded with a monthly $1.16 fee levied on wireless, prepaid wireless, wireline, and VoIP services.

To help address the major shift in telecommunications from wireline to wireless and VoIP services, the General Assembly passed Public Chapter 795, Acts of 2014, replacing the two-tier funding model—characterized by wireline charges collected by providers and remitted to the ECDs and wireless charges collected by providers and remitted to the TECB and DOR—with a flat-rate fee of $1.16 on all telecommunications services that connect to 911, including wireless, prepaid wireless, VoIP, and wireline services. Service providers could keep an administrative fee of 3% of all their 911 fee collections. As of January 1, 2015, under the new law, the TECB can recommend a rate increase after a public hearing before the board, but as the previous law required,[72] the increase has to be ratified by a joint resolution of the General Assembly.[73] The TECB can, however, decrease the rate without General Assembly approval as the previous law also allowed. Figure 6 shows Tennessee's flat rate compared to other

[68] Tennessee Code Annotated, Section 7-86-303, effective until January 1, 2015.
[69] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14, 2017; and email from Jim Barnes, March 14, 2017.
[70] Blasingame et al. 2010.
[71] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017.
[72] Tennessee Code Annotated, Section 7-86-108, repealed.
[73] Tennessee Code Annotated, Section 7-86-128(b).

Figure 6. Maximum E-911 Fees by State as of February 2017

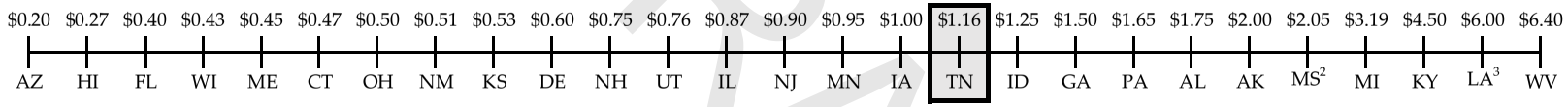
Wireless



[1] The rate is $3.90 for the city of Chicago.

See Appendix E for more details on states' rates including prepaid wireless and states not listed above: CA, MO, NV, VT, and WI.

Wireline

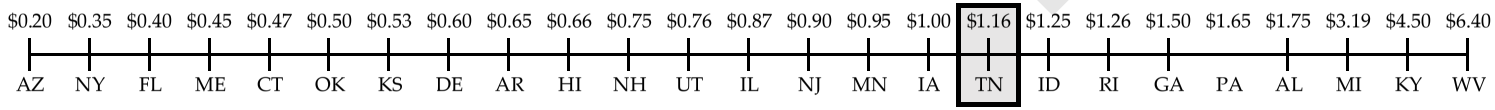


[2] The residential rate is $1.05 and commercial rate is $2.05.

[3] The residential rate is $1.25 and the business rate is $6.00.

See Appendix E for more details for the states not listed above: AR, CA, MO, NV, OK, and VT.

VoIP



See Appendix E for more details for the states not listed above: AK, CA, MO, NE, NV, NM, OH, VT, and WI.

Source: National Emergency Number Association 2017.

states' maximum rates for wireless, wireline, and VoIP service. According to NENA, Tennessee's rate is the 14th highest for wireline service and the 13th highest for wireless and VoIP service. Appendix E includes more detail about other states' rates for wireless, prepaid wireless, VoIP, and wireline service.

Providers collected 911 fees monthly on service and remitted revenue to the TECB every two months, except prepaid fee revenue, which was collected on each retail transaction and remitted to the DOR.[74] When Public Chapter 1047, Acts of 2016, went into effect on July 1, 2017, providers began remitting all 911 fee collections to the DOR monthly and may retain a 2% administrative fee. The DOR pays the TECB within 30 days of receiving funds and may deduct an administrative fee of 1.125% of the collected charges.[75] As under the previous law, all 911 fee revenue is deposited in the Fund to pay for TECB's mandated expenses and other 911 purposes.[76] Any fund balance at the end of the fiscal year must be carried over to the beginning of the next fiscal year, and excess funds do not revert to the state general fund.[77]

All 911 fee revenue is deposited in the 911 Emergency Communications Fund to pay for TECB's mandated expenses and other 911 purposes. Any fund balance at the end of the fiscal year must be carried over to the beginning of the next fiscal year, and excess funds do not revert to the state general fund.

The TECB distributes fee revenue to the ECDs in an amount "equal to the average of total recurring annual revenue the district received from distributions from the board and from direct remittance of 911 fees for fiscal years 2010, 2011, and 2012,"[78] which includes both the state wireless fee and the local wireline fees. The law includes a provision that the distribution to any ECD will not be less that the amount of revenue it received in fiscal year 2012. It also says, "The board may not reduce the base amount for any emergency communications district unless the local government funding for such emergency communications district is reduced, in which case the board may reduce the base amount by the same amount as the local funding reduction." The TECB is not required to reduce a district's base amount if a local government reduces its funding to a district, and according to TECB staff, under the current law, it never has.[79] Districts with wireline rates less than the allowable local fee before July 1, 2011, could request an increase in their base funding amount. Every district that was not charging the maximum rate by that date—55 districts—requested and received an increase effective July 1, 2016, distributed from a total $2 million available in the TECB budget for this purpose.[80] The board distributes 1/6 of the base amount to the ECDs every two months, and

[74] Tennessee Code Annotated, Section 7-86-128, effective until July 1, 2017.
[75] Tennessee Code Annotated, Section 7-86-128(f), effective on July 1, 2017.
[76] Tennessee Code Annotated, Section 7-86-303(d).
[77] Tennessee Code Annotated, Section 7-86-130.
[78] Tennessee Code Annotated, Section 7-86-303.
[79] Email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 31, 2017.
[80] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14, 2017; and email from Jim Barnes, March 27, 2017.

the total base amount distributed to the ECDs, including the increases, is $82,272,690; before the increases the amount was $80,272,692. Appendix F shows the base amounts for each district before and after the increases went into effect in 2016.

The distribution of excess revenue to ECDs also changed when the new law went into effect in 2015. Under the old law, the wireless fee revenue in excess of the mandated 25% distribution and the TECB's other mandated expenses was distributed to the ECDs through the grants and other funding programs, totaling over $60 million.[81] Under the new law, that revenue, in effect, is included in the mandated base amount distribution totaling $82,272,690. The new law also mandates that the TECB give at least 50% of any revenue in excess of its annual fiscal requirements, including the base amount distribution, to the ECDs.[82] However, the TECB's Policy 15 says it will distribute 75% of any excess fee revenue among the ECDs in individual lump sum payments based on their proportionate share of the base funding distribution. The TECB exceeded this in 2015 and 2016, distributing 100% of the excess revenue to the ECDs.[83]

Tennessee law still clearly requires that revenue the ECDs receive from the TECB and all other sources be used exclusively in the operation of the districts.[84] Although ECDs are funded primarily by revenue from state 911 fees, they can also receive—and often rely upon—funds from federal, state, and local government sources including the issuance of bonds.[85] They can also receive funds from private sources. Federal law allows state or local governments to charge 911 fees as long as they are used for 911 purposes.[86]

In fiscal year 2016, the first full fiscal year after Public Chapter 795 went into effect, the TECB collected sufficient revenue to operate and meet its mandated expenses, but not all the ECDs received sufficient revenue to meet their expenses.

Is the 911 surcharge generating adequate revenue to cover the costs of the services, equipment, maintenance, and improvements needed to provide a uniform, stable, and effective statewide 911 system?

Determining whether the surcharge or fee is generating adequate revenue for the state 911 system is a complex question. In fiscal year 2016, the first full fiscal year after Public Chapter 795 went into effect, the TECB collected sufficient revenue to operate and meet its mandated expenses, but not all the ECDs received sufficient revenue to meet their expenses. The

[81] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14, 2017.
[82] Tennessee Code Annotated, Section 7-86-130.
[83] Emails from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14 and 15, 2017.
[84] Tennessee Code Annotated, Section 7-86-102(d).
[85] Tennessee Code Annotated, Sections 7-86-109 and 7-86-114. According to the Fiscal Year 2016 audit reports, five districts currently have bonds: Cumberland, Hardin, Loudon, Montgomery, and Morgan.
[86] 47 United States Code Section 615a-1(f)(1).

TECB's mandated expenses are the distributions to districts, state board administration, the Tennessee Regulatory Agency's (TRA) relay services/ telecommunications devices access program, and implementation and maintenance of the NG911 network.[87] After meeting these expenses, the TECB had excess revenue it could distribute to the ECDs. Although required to distribute only 50% of excess revenue to the districts, the TECB distributed 100% of the excess revenue from fiscal years 2015 and 2016, $1.5 million and $5.4 million respectively, to the ECDs.[88]

According to fiscal year 2016 audits,[89] most districts received sufficient revenue from all sources to cover their expenses—46 systems reported supplementing TECB distributions with revenue from other local government contributions. However, in 64 of 100 districts, base amount and excess distributions alone did not cover their operating expenses, including depreciation as an expense, in fiscal year 2016. In fiscal year 2015, half the year was under the old funding method and half under the new so it is not a good year for comparison, but fiscal year 2014, the last full year under the old funding system is. In 2014, the revenue from wireline, wireless, prepaid wireless, and VoIP, excluding revenue from other sources, was not adequate to cover operating expenses in 74 of 100 districts.

One director echoed comments made by others in the 2016 Commission Survey: "If we would have had to replace major equipment, we would have been struggling to pay for it."

Responses from ECD directors to the 2016 Commission survey suggest that directors feel they don't have adequate revenue to cover the costs of the services, personnel, equipment, maintenance, and improvements needed to provide stable and effective 911 service. Forty-three of 72 (60%) ECD directors did not agree that the base funding distribution was adequate for their district, 16 (22%) agreed that it was adequate, and 13 (18%) were neutral. And in interviews and survey responses, some directors said that in addition to cutting expenses, they are using reserve funds to operate and balance budgets and, as a result, don't have sufficient reserves set aside for future equipment upgrades and replacements. One director echoed comments made by others: "If we would have had to replace major equipment, we would have been struggling to pay for it." The Tennessee Emergency Number Association (TENA) also conducted a survey in 2016, and 13 of 29 (45%) respondents said they used monies from their fund balance to balance the budget in fiscal year 2016; 46% said they did so for fiscal year 2017. According to one TENA member, most districts do not

[87] Tennessee Code Annotated, Section 7-86-303.
[88] Emails from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14 and 15, 2017.
[89] As of June 27, 2017, all 100 ECDs submitted their fiscal year 2016 audit reports to the state as required by law. Audit data compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

have a separate account for reserve funds designated for future upgrades but use their fund balance as reserves.[90]

When evaluating the financial health of a district, the TECB considers its net position both including and not including depreciation expenses for equipment. Under Tennessee law, "a 'financially distressed emergency communications district' is a district that, as shown by the annual audits, has a negative change in net position for a period of three (3) consecutive years."[91] A negative change in net position means an ECD operated at a loss during that 12-month period with depreciation included as an operating expense. ECDs determined to be distressed under this criteria are subject to evaluation and supervision by the TECB.

During its evaluation of the distressed ECDs, following procedures in its Policy 6,[92] TECB staff first removes the depreciation expense from operating expenses. If after removing depreciation an ECD does not show a negative change in net position, the ECD is no longer considered distressed and is no longer under the supervision of the TECB. If after removing depreciation the change in net position is still negative, TECB staff continues its review and makes a recommendation to the TECB members about the status of the ECD. The members then vote to designate the ECD as either confirmed distressed or not distressed. If it is confirmed, it is under the supervision of the TECB following guidelines in Policy 6. If it is not confirmed, the TECB will continue to assist and monitor the ECD as needed until it attains a positive change in net position in an annual audit. The TECB also offers assistance and guidance to ECDs with one or two consecutive years of negative change and works with them to improve their financial health. See appendix G for a copy of TECB's policy describing its evaluation and supervision procedures and guidelines for financially distressed districts. Table 1 shows the number of ECDs with one, two, or three consecutive years of negative change in net position, including depreciation as an operating expense, since 2014, and appendix H shows the change in net position, including depreciation, of all ECDs since 2012.

Table 1. Number of Districts with One, Two, or Three Consecutive Years of Negative Change in Net Position, including Depreciation as an Operating Expense

	2016	2015	2014
Single Year	16	21	18
Two Consecutive Years	13	10	2
Three Consecutive Years	4	0	0
Total	33	31	20

Source: Commission staff analysis of annual audit data for 100 ECDs compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

At the February 2017 TECB meeting, three of four districts that had three consecutive years of negative change in net position as shown by their fiscal year 2016 annual audits were reviewed and designated not financially

[90] Emails from Jamison Peevyhouse, director, Weakley County 911 Communications Center, November 30, 2016, and April 4, 2017.
[91] Tennessee Code Annotated, Section 7-86-304(d). The statute also includes a few additional criteria for determining whether a district is financially distressed, including districts that have a deficit in total net position, are in default on any indebtedness, are the subject of a lien filed by the internal revenue service, or cannot satisfy their financial obligations.
[92] Tennessee Emergency Communications Board 2017.

distressed by the TECB; one was determined not distressed at the August 2017 meeting. Those four districts were not determined to be distressed because they did not have three years of consecutive negative change in net position when depreciation expense was removed from the evaluation. The TECB is offering them assistance and monitoring according to policy. By comparison, in fiscal year 2014, three districts had a negative change in net position, and no districts had two or three consecutive years of negative change. According to the TECB, since 2009, only three districts have been confirmed distressed, and by 2014 these were all removed from distressed status.[93]

Because 911 equipment is expensive and has a short life span, setting funds aside for future equipment upgrades and replacements is critical for districts' long-term ability to provide quality service.

As table 2 shows, when not including depreciation as an operating expense, six districts had a negative change in net position. At the current rate of $1.16, to bring these six into a positive net position would require $553,172. But using the current distribution formula, the fee would have to be increased 57 cents, bringing it to $1.73 and generating $50,398,095 statewide, much more than is needed. This is because the distribution model, which is based on the fee revenue districts received in 2012, favors districts already receiving the greatest proportion of revenue, and most systems don't need an increase when all sources of funding are included and depreciation is excluded. Appendix I shows the change in net position, including all revenue and excluding depreciation, of all ECDs since 2012.

Table 2. Number of Districts with One, Two, or Three Consecutive Years of Negative Change in Net Position, not including Depreciation as an Operating Expense

	2016	2015	2014
Single Year	6	6	3
Two Consecutive Years	0	0	0
Three Consecutive Years	0	0	0
Total	6	6	3

Source: Commission staff analysis of annual audit data for 100 ECDs compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

Including Depreciation Expense when Evaluating Financial Status of Districts

Although the TECB does not include depreciation as an operating expense when determining whether a district is financially distressed, accounting for depreciation is a generally accepted accounting practice and an important part of planning and budgeting. Because 911 equipment is expensive and

[93] Emails from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, May 8 and March 31, 2017.

has a short life span, setting funds aside for future equipment upgrades and replacements is critical for districts' long-term ability to provide quality service.[94]

When including depreciation as an operating expense and all revenue sources, 33 ECDs had a negative change in net position in fiscal year 2016, as table 1 shows. Of these 33, sixteen had their first year of negative change, 13 had two consecutive years, and four had three consecutive years. To bring the 33 districts that had a negative change in net position in 2016 to a positive change in net position, a 77 cent increase in the fee would have been needed. This would have increased the current statewide $1.16 fee to $1.93. This increase of $68,081,638, distributed according to the current formula, would have been far more than the $3,558,412 needed to bring the 33 districts into a positive net position. In fiscal year 2014, 20 districts had negative changes in net position. Of these 20, eighteen had one year of negative change, two had two consecutive years, and none had three.

If the old funding system were still used in fiscal year 2016, 53 districts would have had a negative change in net position compared to the 33 that had a negative change in 2016 under the new system. Twenty-five are positive under the new system that would have been negative under the old rates and distribution, and five are negative that would have been positive under the old rates and distribution. Twenty-eight had a negative change under both systems, and 42 had a positive change under both systems. See table 3. Statewide, if the old system was still being used in fiscal year 2016, an estimated $70,994,669 would have been generated from wireline, wireless, and VoIP fees and distributed to the ECDs after the

If the old funding system were still used in fiscal year 2016, 53 districts would have had a negative change in net position compared to the 33 that had a negative change when including depreciation as an operating expense and all revenue sources in 2016 under the new system.

Table 3. Comparison of Number of ECDs with Positive and Negative Change in Net Position under Old and New Systems in 2016

		Number of ECDs if the Old System was Used in 2016		
		Negative	Positive	Total
Number of ECDs under the New System in 2016	Negative	28	5	33
	Positive	25	42	67
	Total	53	47	100

Source: Commission staff analysis using local wireline rates from May 2014, FCC estimates of subscriber counts, and fiscal year 2016 audit data compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

[94] Interviews with Chuck Haston, director, Warren County Emergency Communications District, November 8, 2016; David Alexander, director, Hardin County Emergency Communications District, February 22, 2017; Jamison Peevyhouse, director, Weakley County 911 Communications Center, November 15, 2016; John Stuermer, executive director, Hamilton County 911 Emergency Communications District, November 1, 2016; and Paul McCallister, director, Dickson County Emergency Communications Board, January 9, 2017.

providers' administrative fees were removed and excluding non-recurring distributions such as grant funds. This is approximately $10,824,608 less than the total ECDs actually received from the flat rate that year through the base and excess distributions.[95]

Other distribution models

Keeping the current fee and using alternative distribution methods, such as distributing all the revenue based on call volume or population or maintaining the current base distribution while distributing any excess revenue based on call volume or population, also would not have ensured that all ECDs are in better financial positions. Under these models, a few ECD distribution amounts would have increased, but most would have decreased.[96] For example, using a hypothetical call volume model to distribute the total revenue ECDs received in fiscal year 2016—from both base and excess distributions—revenue in only 11 districts would increase. The Davidson and Shelby County ECDs combined would receive 88% of the total increase received by these 11 districts. The distribution amounts to the other 89 districts would decrease.

Keeping the current fee and using alternative distribution models would not have ensured that all ECDs are in a better financial position—a few ECD distribution amounts would have increased, but most would have decreased.

Excess revenue generated from 911 fees could potentially be distributed in a way that helps districts that are not covering their costs. However, in a hypothetical scenario that distributes the excess amount based on call volume, without changing the fiscal year 2016 base amounts, the same 11 districts would receive more than what they actually received in fiscal year 2016, while the other 89 would receive less. Appendix J shows the distribution amounts that each ECD receives using the current method and what they would receive using four alternative methods. Other states distribute 911 fee revenue based on population, call volume, call-taking positions, district acreage, or a combination of these, and some states use 911 fee revenue to reimburse districts for expenditures.

In response to the survey, 35 of 72 (49%) ECD directors agreed that the current method used to distribute 911 fee revenue to the districts is sufficient and working well, 19 (26%) disagreed, and 16 (22%) were neutral. In

[95] The 100 districts received a total of $81,819,277 in fiscal year 2016 based on data received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, on March 14, 2017. This does not include an additional one-time payment of $109,596 to Maury County ECD to adjust for an error in the calculation of its base amount. Email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 29, 2017. In its analysis, Commission staff used the fiscal year 2016 data, local wireline rates from May 2014, and FCC estimates of subscriber counts to estimate revenue that would have been generated under the old funding system.

[96] To develop the hypothetical scenarios for distributing all revenue based on call volume or population or maintaining the current base distribution while distributing any excess revenue based on call volume or population, Commission staff used call volume data, population data, and fiscal year 2016 base and excess distribution amounts received in emails from Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February and March 2017.

interviews, several ECD directors commented that distribution revenue is fixed based on 2012 numbers, but expenses continue to increase. The base distribution amounts could be adjusted, for example, using an inflation index. Adjusting for inflation to bring the base amounts to January 2017 dollars increases the total statewide distribution by $5.7 million.[97] The revenue that had been used for excess distributions would be the funding source for this increase in the base distribution. However, the excess revenue in fiscal year 2016 was $5.4 million, which is not enough to cover the hypothetical inflation adjustment. Increasing the base amounts using inflation or some other method, in effect, eliminates the available excess revenue and could potentially lead to a revenue shortfall statewide if the rate is not increased as well.

It is difficult to determine what is adequate funding for the ECDs because there is disagreement over what ECDs should pay for.

Because ECDs have discretion to choose how they operate and how they are structured, their types of expenses and revenue sources vary—they are not all paying for the same things. Therefore, it is difficult to determine whether the funding each district receives from 911 revenue is adequate and to develop a "one size fits all" funding model.

In the Commission survey, a few respondents mentioned the idea of evaluating the functions each ECD performs, such as GIS mapping or dispatching, and necessary equipment to determine revenue distribution. In its 2006 E-911 report, the Commission suggested that if local fees were insufficient to cover minimum standards, an advisory committee of 911 experts could look at linking distribution of the state fee to cost components developed using technical and operational standards. The report says, "The development of standards should provide a means to determine the costs and necessary revenue to provide a minimum level of service statewide. Once the standards are set, the TECB should work with the districts to determine whether the level and distribution of revenue needs to change."[98]

This idea is similar to the state's Basic Education Program (BEP) funding formula consisting "of 45 components that have been deemed necessary for a school district to provide a basic level of education." The BEP cost components serve as the basis for calculating the level of funding for each school system but do not prescribe specific levels of expenditures for individual components. "The formula represents a continuing effort

Because ECDs are not all paying for the same things, it is difficult to determine whether the funding each district receives from 911 revenue is adequate and to develop a "one size fits all" funding model.

[97] Commission staff analysis using fiscal year 2016 base distribution amounts received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14, 2017; and the Bureau of Labor Statistics' Consumer Price Index at https://data.bls.gov/cgi-bin/surveymost.

[98] Tennessee Advisory Commission on Intergovernmental Relations 2006.

to determine the most appropriate levels of funding and the proper components for the BEP."[99]

Tennessee law clearly states that 911 revenue can only be used for 911 purposes.[100] However, there is disagreement over what functions and services "911 purpose" should include. Some stakeholders say that when the system was first funded in 1984, the original intent of the 911 fee, which was charged on phone landlines, was to pay only for equipment to deliver the call to the PSAP. Over the years, as 911 revenue increased and technology evolved, district expenditures expanded from call delivery to also include dispatch equipment and personnel, and now the distinction between functions is perhaps not as clear as it was in 1984.[101]

In 2003, the TECB created revenue standards outlining required, permissible, and prohibited uses of 911 revenue. ECDs are allowed to pay for dispatch, but only after they meet all required expenses, such as paying for equipment.

ECDs are required to either relay, transfer, or dispatch calls.[102]

- Relay means that a PSAP takes information from the caller and then relays that information to the appropriate agency.
- Transfer means that a PSAP directly transfers the call to the appropriate agency.
- Dispatch means that the PSAP arranges for the dispatch of the appropriate agency.[103]

According to TECB staff, no ECDs in Tennessee relay calls,[104] and according to Commission survey responses, 50 (68%) of 73 districts dispatch all calls, and 20 (27%) dispatch some and transfer some. Three responded that they transfer calls to the appropriate agency to dispatch.

State law gives the TECB authority to establish standards for acceptable uses of revenue.[105] In 2003, the TECB created revenue standards outlining required, permissible, and prohibited uses of 911 revenue.[106] ECDs are allowed to pay for dispatch, but only after they meet all required expenses, such as paying for equipment. A copy of the TECB revenue standards is in appendix K. The definition of 911 service in state law also includes dispatch:

[99] Tennessee Department of Education 2016.
[100] Tennessee Code Annotated, Sections 7-86-102(d) and 7-86-303(d).
[101] Interviews with Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; Rex Barton, police management consultant, University of Tennessee Municipal Technical Advisory Service, February 3, 2017; Terry Hazard, criminal justice consultant, University of Tennessee County Technical Assistance Service, February 6, 2017; and Mike Mahn, attorney, March 9, 2017.
[102] Tennessee Code Annotated, Section 7-86-107.
[103] Tennessee Code Annotated, Section 7-86-103.
[104] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017.
[105] Tennessee Code Annotated, Section 7-86-306(a)(11).
[106] Blasingame et al. 2010.

> "911 service" means regular 911 service, enhanced universal emergency number service, or enhanced 911 service that is a telephone exchange communications service whereby a public safety answering point may receive telephone calls dialed to the telephone number 911. "911 service" includes lines and may include the equipment necessary for the answering, transferring and dispatching of public emergency telephone calls originated by persons within the serving area who dial 911, but does not include dial tone first from pay telephones that may be made available by the service provider based on the ability to recover the costs associated with its implementation and consistent with tariffs filed with the Tennessee regulatory authority.[107]

ECDs are not obligated to provide dispatch,[108] and how they pay for it is a local choice. Some local governments help fund dispatch, while some ECDs make payments to their local governments to provide it. Some sign agreements to share the cost with local governments in their jurisdiction, as is done in Hardin, McMinn, and Sumner counties, for example.[109] Both the University of Tennessee Municipal Technical Advisory Service (MTAS) and the County Technical Assistance Service (CTAS) take the position that 911 fees should not pay for dispatch and encourage and support these agreements between ECDs and local governments. They recommend that the local government entities each contribute to pay for dispatch using a formula based 50% on their population and 50% on their call volume.[110]

ECDs are not obligated to provide dispatch, and how they pay for it is a local choice. However, people disagree on how dispatch should be funded.

However, people disagree on how dispatch should be funded. In their survey responses, several ECD directors in Tennessee agree that 911 revenue is not enough to pay for dispatch and think that local governments should help pay for it. One Commission survey respondent said, "The base funding would be much closer to an acceptable level if the ECD was providing 911 call answering services only. With the ECD also providing direct dispatch and serving as the sole provider of such in the county, the base amount cannot cover the necessary costs." Some ECD directors agree with the National Emergency Number Association (NENA) that 911 and

[107] Tennessee Code Annotated, Section 7-86-103.
[108] Tennessee Code Annotated, Section 7-86-107.
[109] Interviews with David Alexander, director, Hardin County Emergency Communications District, February 22, 2017; Marvin Kelley, director, McMinn County Emergency Communications District, March 6, 2017; and Anthony Holt, county executive, Sumner County, February 28, 2017.
[110] Interviews with Rex Barton, police management consultant, University of Tennessee Municipal Technical Advisory Service, February 3, 2017; and Terry Hazard, criminal justice consultant, University of Tennessee County Technical Assistance Service, February 6, 2017.

dispatch service and funding are intertwined.[111] Others, including some ECD directors and representatives from MTAS, CTAS, and the National Association of State 911 Administrators (NASNA), say that dispatch and 911 are distinct functions and should be funded separately,[112] and some also argue that local governments, not 911 revenue, should pay for dispatch. In its 2010 report, Commission staff said E-911 revenue is not enough to cover all dispatching costs and "it is important to remember that the state does not consider E-911 and dispatch services to be synonymous. In most areas, local governments and ECDs both contribute to the costs of operating a dispatch center." Commission staff did not make a recommendation in 2010 about funding dispatch.

ECD directors say they are cutting expenses and dipping into their reserves to pay for equipment and to balance budgets, and the quality of service is already diminished.

Use of 911 funds varies in other states, and their definitions of 911 service are not much clearer than Tennessee's. Most states are vague on the issue of dispatch in their statutes. Six states have 911 definitions in statute that specifically include dispatch and also allow it as an expense: Alabama, Georgia, Louisiana, Mississippi, Montana, and Washington; six other states, Colorado, Florida, Idaho, Illinois, North Carolina, and Wyoming, specifically say dispatch is an allowable expense. Nebraska is one state where the legislative intent is for local governments to be responsible for dispatch, but this will be repealed in 2018.[113] The FCC, in its 2016 *Eighth Annual Report To Congress On State Collection And Distribution Of 911 And Enhanced 911 Fees And Charges*, reports that 36 states allow 911 funds to cover computer-aided dispatch (CAD).[114] The report also says that compared to previous years, fewer states apply 911 fees to dispatch-related costs, and "nineteen states reported using 911 fees to reimburse other law enforcement entities providing dispatch service, while twenty-eight states reported that they used 911 funds to lease, purchase, or otherwise maintain radio dispatch networks."

Is the 911 surcharge generating more revenue than necessary to implement the purpose of this act and can it be reduced to the benefit of communications consumers?

Even though the new model generated and distributed more recurring revenue to ECDs than the old model would have if it were still used in 2016, that year 33 ECDs showed a negative change in net position when including depreciation as an operating expense; excluding depreciation six

[111] Email from Ty Wooten, education director, National Emergency Number Association, February 22, 2017.
[112] Interviews with Rex Barton, police management consultant, University of Tennessee Municipal Technical Advisory Service, February 3, 2017; and Terry Hazard, criminal justice consultant, University of Tennessee County Technical Assistance Service, February 6, 2017; and email from Evelyn Bailey, executive director, National Association of State 911 Administrators, February 24, 2017.
[113] Revised Statutes of Nebraska Section 86-1003.
[114] Wheeler 2016.

did. Most ECD directors in Tennessee agree that the fee is not generating sufficient revenue and should not be reduced. They say they are cutting expenses and dipping into their reserves to pay for equipment and to balance budgets, and the quality of service is already diminished.[115] Additionally, the state is planning for future technology changes and investing in its NG911 network, and although ECDs received funds through grant programs to offset the cost of NG911 equipment,[116] directors are concerned and uncertain about future costs.[117] Providers, however, generally don't want the rate to increase,[118] and the national wireless association, CTIA, which represents the US wireless communications industry, says "states should carefully examine whether new technologies can decrease PSAP costs and adjust 9-1-1 fees accordingly."[119]

Is a flat-rate communications services surcharge the best manner in which to fund 911 system costs, or should such costs be funded by a percentage surcharge or a different source, such as water service, electric power service, or state general funds or local taxes?

Similar to other states, Tennessee partially funds 911 services with local general fund revenue. ECDs rely not only on 911 fee revenue to meet their expenses, but according to audit data, 46 ECDs also reported receiving contributions from their local governments totaling $24,668,208, about 22% of ECDs' total revenue, in fiscal year 2016. Local governments might pay for some expenses, such as personnel cost, that are part of the local government budget, not the ECD budget, and therefore don't show up in the ECD audit reports. Of 72 Commission survey respondents, 33 (46%) specified using local governments' funds for dispatch or salaries. One benefit to partially funding 911 with local general fund revenue is that, like other emergency services funded with general tax revenue, it provides a broad-based revenue source. However, if there were no dedicated 911 fee, 911 service would compete with other services and might not receive an appropriate level of funding. According to NENA and NASNA, 911 is traditionally underfunded for a variety of reasons, often political.[120] Service providers in Tennessee prefer a general tax revenue method to a 911 fee or tax on telecommunications services, arguing that 911 service is

Similar to other states, Tennessee partially funds 911 services with local general fund revenue. ECDs rely not only on 911 fee revenue to meet their expenses, but according to audit data, 46 ECDs also reported receiving contributions from their local governments in fiscal year 2016.

[115] 2016 Commission and TENA survey responses.
[116] Email from Curtis Sutton, executive director, Tennessee Emergency Communications Board, January 11, 2017.
[117] Minutes from West TENA meeting received in an email from David Alexander, director, Hardin County Emergency Communications District, November 17, 2016.
[118] Interview with Jeff Van Dyke, vice president, governmental affairs, AT&T Tennessee, December 20, 2016.
[119] CTIA "Policy Considerations as States Transition 9-1-1 Fees toward NG911" received in an email from Lisa Volpe McCabe, director, state legislative affairs, CTIA, January 26, 2017.
[120] National Emergency Number Association 2007 and National Association of State 911 Administrators 2015.

like other emergency services and should be funded the same way.[121] No local governments in other states fully fund 911 services with local general fund revenue, but many provide partial funding.

Alternative methods for funding 911 are used in a few states.

A few states use funding methods other than charging a fee on communications services. Some examples are a universal service fund, sales tax revenue, fees added to property tax bills, special property tax levies, and fees added to utility bills. Like the telecommunications fee, they each have advantages and disadvantages. Although not used anywhere in the United States, other methods for funding 911 have been discussed in reports including a fee on health insurance[122] and a user fee on the provider or subscriber.[123] Appendix L lists some guiding principles for funding 911 from the FCC, NENA, NASNA, and CTIA.

Just a few states use funding methods other than charging a fee on communications services; like the telecommunications fee, each method has advantages and disadvantages.

Vermont pays for its 911 system with a state universal service fund.

Vermont is the only state that uses a universal service fund (USF) in lieu of dedicated 911 fees to pay for 911 services and other communications programs in the state. The state "E-911 board is funded solely by the USF,"[124] which is funded by a 2% universal service surcharge levied on retail telecommunications services.[125] The USF is similar to Tennessee's 911 Emergency Communications Fund except Vermont collects a percentage surcharge rather than a flat fee, and it distributes the collected revenue to several programs, including 911, which receives the largest portion of the funding, rather than dedicating the revenue in the fund to 911 purposes as Tennessee does.[126] The method works best in states with unified statewide funding and oversight for 911, does not restrict the collection method, reflects general market realities, and should provide consistent funding for 911 and emergency communications. Multiple organizations could benefit from the fund, which could be an advantage or disadvantage because there could be intense competition and loss of control over funding.[127] One study by Vermont's Enhanced 9-1-1 Board suggests that the state look at alternative funding methods because the current one is not raising sufficient revenue to meet needs.[128]

[121] Interview with Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; and email from Lisa Volpe McCabe, director, state legislative affairs, CTIA, January 26, 2017.
[122] National Association of State 911 Administrators 2015 and 911.gov 2013.
[123] National Emergency Number Association 2007, 911.gov 2013, and National Association of State 911 Administrators 2015.
[124] Lipinski 2012.
[125] State of Vermont Department of Public Service and 30 Vermont Statute Annotated Section 7523.
[126] Lipinski 2012.
[127] National Association of State 911 Administrators 2015 and National Emergency Number Association 2007.
[128] Lipinski 2012.

Sales tax revenue is intended to be used as another funding source in at least two other states.

In Virginia and Missouri, sales tax revenue can be used to pay for 911. In addition to the statewide 911 fee, Virginia levies a special sales tax on communications services, which replaced previous state and local taxes and fees on communications services including an E-911 tax on landline telephone service. Revenue from this tax is distributed to local governments and could be used to help fund 911 services.[129] In Missouri, state law authorizes local governments to impose a general sales tax, which is levied on other goods and services, to fund dispatch.[130] The method has the advantages of generating revenue from a broader base of taxpayers, being technology neutral, and potentially eliminating existing fees.[131] Additionally, the infrastructure to levy a new tax is already in place. However, levying a tax is often a politically contentious action, and it can take time to implement a tax. Revenues would probably fall with a weak economy, and 911 revenue could be diverted to the general fund, competing with other needs for funding.[132] In its 2015 report *Four Potential Sustainable Funding Models for NG911*, NASNA suggests considering this option, while the FCC, in its 2016 Task Force on Optimal PSAP Architecture (TFOPA) report, found "less merit in this approach than did the 2015 NASNA study" mainly because of the concern that 911 fees that are not dedicated would be diverted. Using sales tax revenue does not have strong support among ECD directors in Tennessee: in response to a question in the Commission survey about alternate ways to fund 911 and dispatch, four of 71 (6%) ECD directors suggested that 911 equipment and call delivery costs should be funded with a state sales tax, and four (6%) respondents think that 911 dispatch costs should be funded with a state sales tax.

A dedicated 911 fee added to property tax bills and special property tax levies have been used to fund 911 services in other states.

Some local governments in other states have authority to impose 911 fees on property tax bills or to levy property taxes to fund 911 services. Kenton County, Kentucky, added a 911 fee to their property tax bills,[133] and in 2013, Campbell County, Kentucky, started charging property owners $45 per year for each occupied unit, including apartments, single-family homes, and commercial property.[134] In 2016, an Ohio law that authorized a county, township, or municipal corporation to impose a 911 system

[129] Virginia Code Annotated, Sections 58.1-645 – 662. Statute does not prohibit the use of the statewide sales tax for 911. See https://www.tax.virginia.gov/communications-taxes.
[130] Missouri Revised Statutes, Section 190.335.1.
[131] National Association of State 911 Administrators 2015.
[132] National Association of State 911 Administrators 2015 and 911.gov 2013.
[133] Beam 2015.
[134] Mayhew 2015.

property tax levy was amended to restrict the tax to the portion of the subdivision that would be served by the 911 system.[135] In Oregon, counties can create special districts funded with property taxes and use the revenue to fund 911 services.[136] The state also authorizes local governments to impose an optional local property tax levy to fund 911 services.[137] The main advantage of property tax funding methods is that revenue is generated from a broader base. However, because fees might not be sufficient for initial investment requirements of NG911 and might be subject to political and legal scrutiny, NASNA rejects this as a funding option in its 2015 report *Four Potential Sustainable Funding Models for NG911*. The authors of the 911.gov Blue Ribbon Panel on 911 Funding 2013 *Report to the National 911 Program* suggest also exploring other types of fees. In Tennessee, service providers prefer that 911 services be funded with revenue from the general fund, which could include property taxes as a funding source, over a fee on telecommunications bills, saying it spreads the burden over a broader population base.[138]

Providers and some ECD directors are concerned about the uncertainty of relying on fees from the rapidly evolving telecommunications industry to fund 911 in the future.

Fees for 911 services have been added to utility bills in Kentucky.

Local governments in Kentucky have added flat fees to water bills, but not to other utilities like electric service, to fund 911 services. Gerrard County, Kentucky tried using this method, but the fee was challenged in court, and the Kentucky Court of Appeals held there is no relationship between the fee and the benefit received, and therefore the fee is not a valid user fee.[139] Whitley County, Kentucky put a fee on water bills, but the fee has not been challenged in court.[140] It is unclear whether a 911 fee added to water or other utility bills in Tennessee would be upheld if challenged in court. One advantage of this method over a property tax levy is that it extends the burden from homeowners to all users of 911.[141] In Tennessee, providers prefer this method over a fee on telecommunications bills,[142] while three of 71 (4%) ECD directors who responded to the Commission survey think a water service charge should be used to pay for 911 equipment and call delivery. Seven (10%) think an electric power service charge should be used. To pay for dispatch costs, two (3%) respondents chose water service charge, and ten (14%) chose electric power service charge as alternate methods.

[135] Ohio Revised Code Annotated, Section 5705.19.
[136] Rasmussen 2012 and Oregon Revised Statutes, Title 19, Chapter 198 and Title 32, Chapter 403.
[137] Rasmussen 2012 and Oregon Revised Statutes, 280.040-280.090.
[138] Interview with Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017; and email from Lisa Volpe McCabe, director, state legislative affairs, CTIA, January 28, 2017.
[139] City of Lancaster, Kentucky et al. v. Garrard County, Kentucky, et al., Court of Appeals Case No. 2013-CA-000716-MR.
[140] Whitley County Ordinance 2016-02.
[141] 911.gov 2013.
[142] Interviews with Jeff Van Dyke, vice president, governmental affairs, AT&T Tennessee, December 20, 2016; and Pam Melton, director of state regulatory and legislative affairs, CenturyLink, December 16, 2016; and testimony from Levoy Knowles, executive director, Tennessee Telecommunications Association, January 27, 2017.

Providers and some ECD directors are concerned about the uncertainty of relying on fees from the rapidly evolving telecommunications industry to fund 911 in the future.[143]

Is there a need or benefit for the board to have the ability to raise the 911 fee rate should there be a financial reason to do so?

The fee on telecommunications service is the most commonly used method of funding 911 services. In every state except Vermont, the state, the local governments, or both, charge 911 fees.[144] The advantages of using this method are that it is used almost universally, is acceptable to policy makers, and is easily understood. One disadvantage is that it is a reactive model that risks becoming obsolete as technology changes.[145]

Like Tennessee, of the 29 other states that levy a statewide 911 fee on telecommunications services, 22 have statewide fees set by their state legislatures. Twenty of these are flat rates[146] and two are formulas.[147] Four of the 22 states give local governments authority to add local fees to the state fees. Of these four, Illinois requires a referendum, but Michigan only requires a referendum if the fee is above 42 cents. Michigan has a limit on the fee while Illinois does not. Maryland and Washington have limits but no requirement for approval in a referendum. Seven of the 29 have fees set by state boards. Four of these seven states have fees that are set by 911 boards. In Alabama, the state board sets it without a limit, while in Indiana, North Carolina, and Texas, the board can set it up to a limit. In three New England states, Connecticut, Massachusetts, and New Hampshire, that do not have 911 boards, other state utility boards set the rate. Eleven states have fees set by both the state and local governments.[148] For example, wireless rates could be set by the state while local governments set wireline rates. Eight states have fees set by local governments only.[149]

Of the 29 other states that, like Tennessee, levy a statewide 911 fee on telecommunications services, 22 have statewide fees set by their state legislatures.

Several reports discuss using a telecommunications fee to fund 911 systems. The Commission's 2006 report suggests a committee of 911 experts look at 911 funding. One option the committee could consider would be a single fee that applies to all technologies, with local governments being

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[143] Email from Lisa Volpe McCabe, director, state legislative affairs, CTIA, January 26, 2017; and 2016 Commission survey.
[144] National Emergency Number Association 2017. See http://www.nena.org/?page=911ratebystate.
[145] National Association of State 911 Administrators 2015.
[146] Arizona, Florida, Hawaii, Illinois, Iowa, Maine, Maryland, Michigan, Minnesota, Montana, New Jersey, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Virginia, and Washington.
[147] California and Kansas.
[148] Colorado, Idaho, Kentucky, Louisiana, Mississippi, Nebraska, Ohio, South Carolina, Utah, West Virginia, and Wyoming.
[149] Alaska, Arkansas, Delaware, Georgia, Missouri, Nevada, North Dakota, and Wisconsin. Three states have fee amount limits set in state statute: Alaska, North Dakota, and Wisconsin.

given the authority to impose local fees to fund service above minimum standards covered by the state fee.[150] The 2007 NENA report *Funding 911 into the Next Generation*, the 2015 NASNA report *Four Potential Sustainable Funding Models for NG911*, and the FCC's Task Force on Optimal PSAP Architecture (TFOPA) 2016 report all recognize that although fees would likely continue to be the main method used to fund 911, fees might become obsolete as telecommunications technology evolves. NENA and NASNA suggest assessing the 911 fee on the base service charge for telephony, data, broadband access, and other services offered.[151] In its 2016 TFOPA report, the FCC suggests a network connection fee model that would base 911 fees on upstream bandwidth levels assessed on any carrier or broadband provider that provides internet access to retail customers. Nevertheless, the report authors also acknowledge that the Internet Tax Freedom Act, which prohibits state and local governments from taxing internet access, might be an issue with a network connection fee.[152]

In response to the Commission survey, 31 of 71 (44%) respondents agreed that 911 equipment and call delivery should only be funded by a statewide flat-rate fee, 16 (23%) disagreed, and 20 (28%) were neutral. In response to a similar question about funding dispatch, 18 (25%) respondents agreed that 911 dispatch should only be funded by a statewide flat-rate fee, 29 (41%) disagreed, and 20 (28%) were neutral. Service providers prefer the statewide flat fee to the old hybrid system because it is easier for them to collect and remit payments.[153]

Most ECD directors think the TECB should have rate-setting authority. In the survey, 59 of 71 (83%) directors agreed that there is a need or benefit for the TECB to have the authority to raise the 911 fee rate without state legislative approval should there be a financial reason to do so, four (6%) disagreed, and four (6%) were neutral. Among the reasons mentioned are that the TECB understands the challenges of providing 911 services and given the authority, could more quickly adjust rates if needed. In response to the TENA survey, 16 of 29 (55%) respondents support the TECB setting the rate, and 11 (38%) support it up to a limit. TECB staff thinks authority to approve any rate increases set by the board should rest with the state legislature, as it does under the current law, or the board should be allowed to set the rate up to a certain amount, and an increase above that amount should require legislative approval.[154] Providers prefer the legislature set

[150] Tennessee Advisory Commission on Intergovernmental Relations 2006.
[151] National Emergency Number Association 2007 and National Association of State 911 Administrators 2015.
[152] Task Force on Optimal PSAP Architecture 2016.
[153] Testimony from Levoy Knowles, executive director, Tennessee Telecommunications Association, January 27, 2017; and interview with Kiran Seshagiri, director of tax systems and billing, CenturyLink, December 16, 2016.
[154] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017; and email from Curtis Sutton, June 16, 2017.

the rate, but some stipulate that if the TECB were given the authority to set it they would want to be represented on the board.[155]

Has the expansion of 911 system functionality resulting from implementation of IP (internet protocol)-based next generation 911 technology increased or decreased costs for emergency communications districts?

It is unclear whether implementation of Next Generation 911 (NG911) has or will substantively affect the ECDs' expenses. According to NENA, current E-911 systems can no longer support technology that has moved beyond traditional voice 911 calls and the needs of the future.[156] NG911 is moving 911 onto the internet so in the future 911 will be able to receive texts, photos, videos, and other forms of data. Being NG911 compliant means PSAPs can receive calls through the network without converting back to analog format. Analog systems cannot handle large amounts of data, like text and video, and the NG911 system can handle more data. TECB staff says two of the biggest benefits are redundancy, or backup systems, and automatic call rerouting. Currently, calls can't be automatically routed to another PSAP or administrative lines when there are outages or service disruptions.[157] However, some ECD directors are concerned that additional funds will be needed to provide sufficient redundancy with NG911.[158]

Although NG911 is needed and beneficial, there are concerns about the cost of storing new types of data and about how local staff will respond to new forms of communication.

Another benefit of NG911 will be the ability to receive texts, photos, videos, and other forms of data. Over 768,000 adults with hearing loss living in Tennessee could benefit from this capability.[159] It can also be helpful for domestic violence or kidnapping victims or callers in other circumstances where it would not be safe or possible for a person to talk to a call taker. For example, children have texted 911 from the back of a car when their father was allegedly driving under the influence.[160] There are concerns about the cost of storing these new types of data and about how local staff will respond to these forms of communication.[161] ECDs will need to develop procedures and train staff on how to respond. The use of social media is also an issue. For example, people have tried to contact 911 through social

[155] Interviews with Jeff Van Dyke, vice president, governmental affairs, AT&T Tennessee, December 20, 2016; and Mandy Haynes Young, attorney and lobbyist, Butler Snow, January 6, 2017.
[156] National Emergency Number Association 2008.
[157] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director Tennessee Emergency Communications Board, February 7, 2017.
[158] Minutes from West TENA meeting received in an email from David Alexander, director, Hardin County Emergency Communications District, November 17, 2016.
[159] Emails from Mike Helms, director of adult education and outreach, Bridges for the Deaf and Hard of Hearing, April 26, 2017; and Jamison Peevyhouse, director, Weakley County 911 Communications Center, February 10, 2017.
[160] ABC13 Eyewitness News 2017.
[161] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017.

media websites expecting a response, but emergency responders do not have staff or resources to monitor social media at all times.[162] Although emergency responders sometimes use social media to share information with the public, they typically don't use it as a method of responding to emergencies.

Guidelines and standards are being developed at the state and national levels to help ECDs adapt to NG911 and train employees to handle text messages.

Guidelines and standards are being developed to help ECDs adapt to NG911 and train employees to handle text messages. The FCC, NENA, and APCO have planning, training, and implementation resources available for the 911 community, service providers, and the public.[163] For example, NENA's webpage "SMS Text-to-911 Resources for PSAPs & 9-1-1 Authorities"[164] lists several resources such as "Media & Public Questions and Answers about Text-to-911", which is included as appendix M. The TECB is also providing support to Tennessee's ECDs. Its dispatcher training regulations, included as appendix N, establish minimum training requirements for call takers and dispatchers. In 2016, it created a training advisory committee "for the purpose of reviewing the state's telecommunicator/dispatcher training requirements promulgated pursuant to Tennessee Code Annotated, Section 7-86-205, and to make recommendations to ensure these requirements provide Tennesseans with the highest level of 911 service."[165] Although the TECB has paid for several training classes in recent years and requested proposals for developing a training platform, there is currently not a recurring amount in the budget designated for training. Future courses will likely include text-to-911 training, but ECDs may also want to provide their own training.[166] The cost is uncertain.

Tennessee began moving its 911 system onto the internet-based NG911 network several years ago and anticipates completing the transition by 2018. As of April 2017, all 142 primary PSAPs were receiving calls through the NG911 network, and 100 were compliant, meaning they meet the state's NG911 requirements and are benefitting from network redundancy, or backup systems, automatic call rerouting, and the ability to transfer calls statewide.[167] PSAPs that are not compliant do not enjoy these benefits and need to convert the calls they receive through the network back to analog format. They still use the Automatic Location Identification (ALI) and Automatic Number Identification (ANI) systems that automatically display the caller's phone number and location of the PSAP. Fifty-four ECDs are fully compliant, and 17 are partially compliant, meaning some

[162] Beck 2015.
[163] See https://www.911.gov/911-issues/texting911.html.
[164] See http://www.nena.org/?page=textresources.
[165] Tennessee Emergency Communications Board 2016 *Annual Report*.
[166] Email from Curtis Sutton, executive director, Tennessee Emergency Communications Board, May 30, 2017.
[167] Interviews with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, October 4, 2016, February 7, 2017, and March 14, 2017; and emails from Curtis Sutton, April 4 and June 3, 2017.

of their PSAPs are compliant and some are not. The other 29 do not have PSAPs that are compliant yet.[168]

According to TECB staff, PSAPs will receive texts over the NG911 network in some areas of the state by the end of 2017.[169] Currently if a PSAP does not receive 911 texts, federal law requires providers to send consumers a bounce back message that will advise them to contact emergency services through other means. The FCC requires all wireless carriers and other providers of text messaging to deliver emergency texts to 911 call centers that have requested the service within six months of the request.[170] The TECB is also discussing a statewide campaign in 2017 to educate the public about texting to 911.[171]

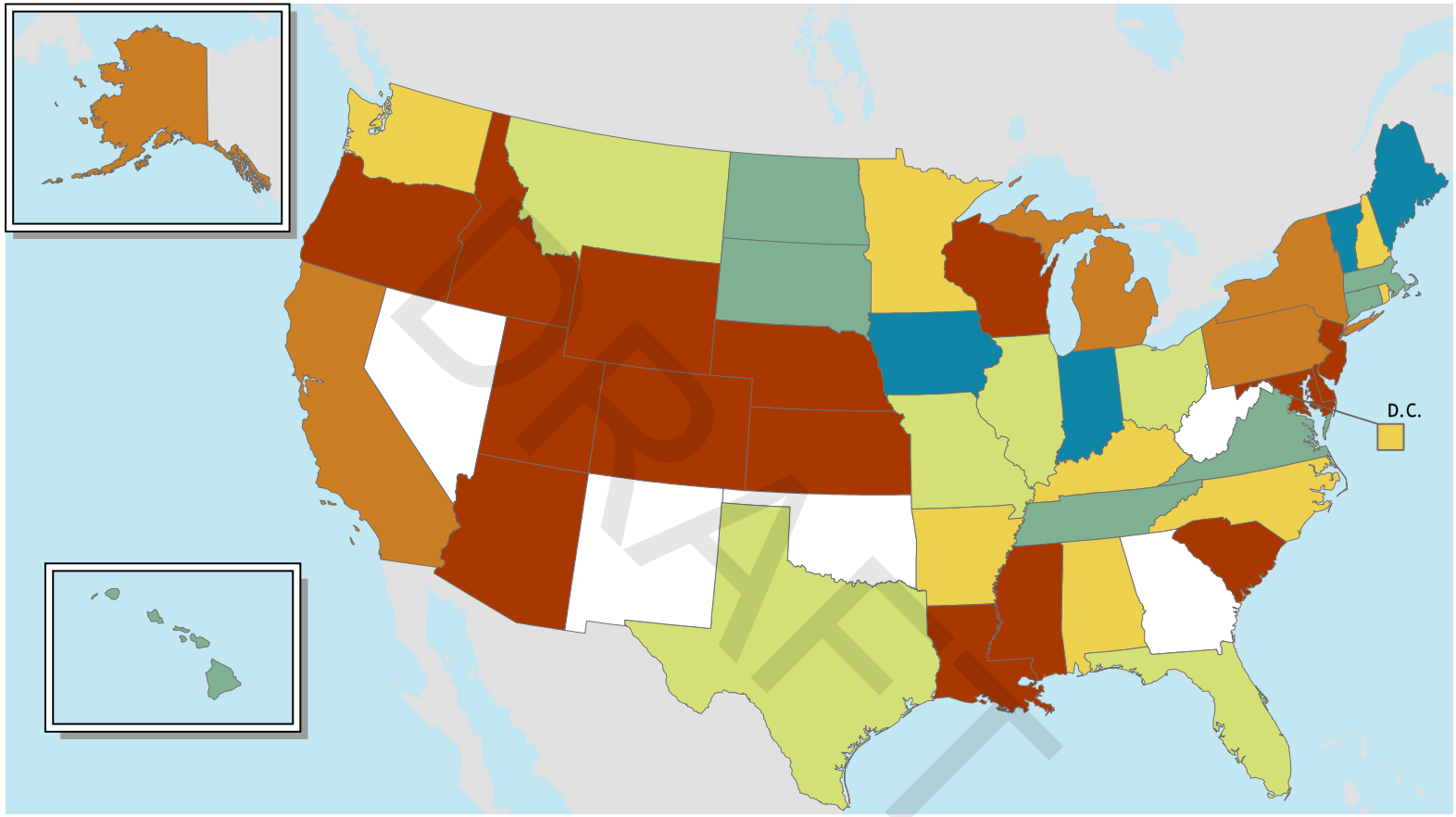
Tennessee is one of the states on the forefront of implementing a statewide NG911 network.

The NG911 NOW Coalition, comprised of NENA, NASNA, and the Industry Council for Emergency Response Technologies (iCERT), is leading the national initiative for NG911 implementation. Although there is no federal requirement, the coalition's goal for nationwide implementation is the end of year 2020.[172] Tennessee is one of the states on the forefront of implementing a statewide NG911 network. As of September 2016, according to NENA, four states have completed implementation of NG911 at the state level: Indiana, Iowa, Maine, and Vermont; and seven states, Connecticut, Hawaii, Massachusetts, North Dakota, South Dakota, Tennessee, and Virginia, are in the process of implementing NG911 at the state level. The map in Figure 7 shows states' progress according to NENA. The National 911 Program, a program of the US Department of Transportation, said in its *2016 National 911 Progress Report*, that 12 of 45 surveyed states reported that they were NG911 operational throughout their states. The report clarified that "for the purposes of this data collection, states that have operational NG911 systems are defined as those systems that can process Internet Protocol (IP)-based emergency call requests and are capable of processing NG911 emergency calls for all service types (wireline, wireless, VoIP) using NG911 infrastructure."[173]

Because NG911 is not fully implemented yet in Tennessee, it is unclear whether statewide implementation has substantively affected the expenses of ECDs. At the end of fiscal year 2016, the TECB had spent a total of $74.3 million on NG911 implementation statewide. The ECDs received grants for NG911 equipment and may also use local funds to implement NG911

[168] Based on information received in emails from Curtis Sutton, executive director, Tennessee Emergency Communications Board, December 2, 2016, and January 11, 2017; and interview with Curtis Sutton and Jim Barnes, February 7, 2017.
[169] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017.
[170] 47 United States Code of Federal Regulations 20.18.
[171] Interview with Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February 7, 2017.
[172] See http://www.ng911now.org/#about.
[173] National 911 Program 2016.

Figure 7. States' Progress towards NG911 Implementation as of September 5, 2016



Source: National Emergency Number Association 2016. http://www.nena.org/?page=NG911_StateActivity&hhSearchTerms=%22status+and+ng911+and+state%22.
Note: NENA's website includes the following disclaimer: "This map is a high level generalized snap shot and is not intended as a replacement for obtaining specific information from areas on their detailed current status."

in their PSAPs at their discretion. The TECB does not track how much ECDs are spending on NG911. A large cost savings for PSAPs will be the Automatic Location Identification (ALI) database. Currently, they have to pay for a contract or host their own database, but the state will maintain the ALI database when NG911 is operational. In addition, traditional phone lines, called CAMA trunks, will no longer be needed, which ECDs also currently pay for. The state will pay for the new NG911 trunks. At the May 3, 2017, TECB meeting, the board members approved a state-hosted NG911 controller, an expensive piece of equipment that the ECDs currently each host locally and pay for.[174] A state-hosted controller will potentially save ECDs significant recurring expense.[175] No studies were found that examine the issue of whether or not NG911 increases or decreases costs.

A state-hosted controller will potentially save ECDs significant recurring expense.

Although the operating costs of NG911 compliant districts in Tennessee do not show a clear trend either up or down, 44 of 72 (61%) respondents to the Commission survey said the expansion of NG911 technology has increased costs for their district, 13 (18%) said there has not been a change, and none said it has decreased costs. In the 2016 TENA survey, no respondents said costs went down because of NG911. Overall, ECD directors are concerned and uncertain about the costs of implementation and maintenance of NG911.

[174] The May 3, 2017, TECB meeting video is available at http://www.tennessee.gov/commerce/section/E911.

[175] Email from Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, January 11, 2017; and interview with Curtis Sutton and Jim Barnes, February 7, 2017.

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Persons Interviewed

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Appendix A: Public Chapter 795, Acts of 2014

State of Tennessee

PUBLIC CHAPTER NO. 795

HOUSE BILL NO. 2255

By Representatives McCormick, Evans, McDaniel, Haynes, Lundberg, Swann, Armstrong, Coley, Sargent, Kevin Brooks, Watson, McManus, Powell, Moody, Harrison, Cooper, Favors, Shaw, Camper, Casada, Hawk, Alexander, John DeBerry, Kent Williams, Eldridge, Curtis Johnson, Keisling, Ryan Williams, Forgety, Spivey, Faison, Dunn, Butt, Parkinson, Ramsey, Wirgau, Sanderson, Shipley, Hall, Akbari, Littleton, Doss, Powers, Dale Carr, Carter, Matheny, Bailey, Sexton, Mike Turner, Odom, Dean, Jernigan, Marsh, Calfee, Matlock, Rich, Womick, Mark White, Dennis, Floyd, Towns, Gilmore, Miller, Rogers, Ragan

Substituted for: Senate Bill No. 2407

By Senators Norris, Gardenhire, Kelsey, Overbey, Harper, Crowe, Gresham, Dickerson, Watson, Bowling, Niceley, McNally, Johnson, Massey, Haile, Green, Ketron, Stevens, Hensley, Southerland, Yager, Ford, Henry, Tate

AN ACT to amend Tennessee Code Annotated, Title 7, Chapter 86; Section 9-8-307; Title 29, Chapter 20 and Title 65, relative to the "911 Funding Modernization and IP Transition Act of 2014".

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. This act shall be known and may be cited as the "911 Funding Modernization and IP Transition Act of 2014".

SECTION 2. Tennessee Code Annotated, Section 7-86-103, is amended by adding the following as new, appropriately designated subdivisions:

( ) "911 surcharge" means the surcharge that is required to be collected from consumers under § 7-86-128(a);

( ) "Communications service" means a service that:

(A) Is capable of contacting and has been enabled to contact a public safety answering point (PSAP) via a 911 network by entering or dialing the digits 911;

(B) Is a "telecommunications service" as defined by § 67-6-102; and

(C) Is neither "prepaid calling service" nor "prepaid wireless calling service" as defined in § 67-6-102;

( ) "Consumer" means a person who purchases retail communications service or prepaid communications services in a retail transaction;

( ) "Dealer" has the meaning set forth in § 67-6-102;

( ) "Prepaid communications service" means "prepaid wireless calling service", as set forth in § 67-6-102, that is capable of contacting a PSAP by entering or dialing the digits 911;

( ) "Retail sale" has the meaning set forth in § 67-6-102;

( ) "Sales price" has the meaning set forth in § 67-6-102;

SECTION 3. Tennessee Code Annotated, Title 7, Chapter 86, Part 1, is amended by deleting §§ 7-86-108, 7-86-111 and 7-86-112 in their entirety.

HB 2255

SECTION 4. Tennessee Code Annotated, Section 7-86-128, is amended by deleting the section in its entirety and substituting instead the following:

7-86-128.

(a)

(1) Effective January 1, 2015, when a dealer collects the sales price for a retail sale of communications service or prepaid communications service from a consumer, such dealer shall collect a 911 surcharge of one dollar and sixteen cents ($1.16).

(2) Any change in the 911 surcharge amount set in subdivision (a)(1) shall be set at a level that is sufficient to fully fund the mandatory disbursements to emergency communications districts, the operational expenses of the state emergency communications board, referred to as "board" in this section, and the Tennessee relay services/telecommunications devices access program ("TRS/TDAP program") as provided in § 65-21-115. In the event of any revenue shortfall, mandatory disbursements to the emergency communications districts and the TRS/TDAP program shall be given priority. Revenues from the surcharge authorized in this section shall be used to support the long-term solvency and operations of emergency communications districts, as well as reasonable and necessary administrative and operational expenses of the board and the 911 Emergency Communications Fund.

(3) If the sales price for a retail sale of communications service is collected by a dealer less frequently than monthly, the 911 surcharge shall still apply and be collected for each month or partial month for which the sales price is collected.

(b)

(1) The board may increase the 911 surcharge upon determination of a need for additional funds after a public hearing before the board. At least thirty (30) days' notice shall be provided before the public hearing. There shall be opportunity for public comment at the public hearing. No increase in the 911 surcharge shall take effect until ratified by a joint resolution of the general assembly. Not less than ninety (90) days prior to the rate change, notice of the change shall be provided to all dealers in the manner that notices are provided of changes in sale tax rates pursuant to title 67.

(2) The board may decrease the amount of the 911 surcharge after providing thirty (30) days' notice and opportunity for public comment at a public hearing of the board. After determination of a decrease, the board must give at least sixty (60) days' notice to the speaker of the house of representatives, the speaker of the senate, and the governor. Not less than ninety (90) days prior to the rate change, notice of the change shall be provided to all dealers in the manner that notices are provided of changes in sales tax rates pursuant to title 67.

(3) It is the intent of the general assembly that the 911 surcharge be established at the lowest rate practicable consistent with the purposes of this section. The board shall report annually to the finance, ways and means committees of the senate and house of representatives on the financial status and solvency of emergency communications districts, status of the implementation of a uniform statewide 911 system and the status, level and solvency of the 911 Emergency Communications Fund.

(c) The 911 surcharge applicable to any multi-channel or other complex service that is capable of simultaneously carrying multiple voice and data transmissions, including, but not limited to, private branch exchange service, that is provided to a fixed location with a unique street address or physically identifiable location shall be calculated by applying one (1) 911 surcharge for each simultaneous outbound call that can be placed to 911 using such service.

(d) The maximum number of 911 surcharges that may be imposed on a single subscriber of retail communications services provided to a fixed location shall not exceed two hundred (200) surcharges per building with a unique street address or physically identifiable location. A communications service that is priced lower than five dollars ($5.00) per month or a prepaid communications service priced below a one-time fee of less than ten dollars ($10.00) shall not constitute a retail communications service for purposes of the 911 surcharge and shall not be subject to a 911 surcharge in accordance with subsection (a).

(e) The 911 surcharge shall, when practicable, be displayed as a separate line item by dealers of communications service on customer bills or invoices. 911 surcharge revenue actually collected by a dealer shall be remitted to the board every two (2) months. No additional or local 911 surcharges on retail communications service shall be permitted. Dealers of retail communications service shall have no obligation to remit surcharges that they are unable to collect from subscribers.

(f)

(1) For prepaid communications service, the surcharge shall be collected at the point of sale and remitted to the department of revenue at the times and in the manner provided by title 67, chapter 6, with respect to the sales and use taxes. The department of revenue shall establish registration and payment procedures that substantially coincide with the registration and payment procedures that apply under title 67, chapter 6.

(2) A dealer of prepaid communications service shall be permitted to deduct and retain up to three percent (3%) of 911 surcharges that are collected by the dealer from consumers.

(3) The audit and appeal procedures applicable under title 67, chapter 1, shall apply to the 911 surcharges on prepaid communications service.

(4) The department of revenue shall pay all remitted 911 surcharges to the board within thirty (30) days of receipt, for use by the board in accordance with part 3 of this chapter. The department of revenue may deduct an amount, up to two percent (2%) of collected charges, to be retained by the department of revenue to reimburse its direct costs of administering the collection and remittance of 911 surcharges.

(g) The 911 surcharge is the liability of the subscriber and not of the dealer. Dealers are authorized to demand payment from any subscriber who fails to pay any authorized 911 surcharge, and may take legal action, in the sole discretion of the dealer, to collect the 911 surcharge from any such subscriber, or may, in the alternative, and without any liability to such subscriber for any losses or damages that result from termination, terminate all service to such subscriber.

(h) Notwithstanding this section to the contrary, the board may withhold such distribution to an emergency communications district, if the district is operating in, or fails to correct a specific violation of state law. This may include, but not be limited to, the failure to submit an annual budget or audit, operating contrary to the open meeting requirements of title 8, chapter 44, part 1, or failure to comply with any requirements of this chapter 86. Further, the board may also withhold such distribution if it deems that the district is not taking sufficient actions or acting in good faith to establish, maintain, or advance E911 service for the citizens of an emergency communications district.

SECTION 5. Tennessee Code Annotated, Section 7-86-110, is amended by deleting the section in its entirety and substituting instead the following:

7-86-110.

(a) The board shall have the duty to ensure that dealers of retail communications service are in compliance for 911 surcharge collections and remittance. In carrying out such duty, the board shall have exclusive standing to bring claims against dealers of

retail communications service for non-payment or under-collection errors or other injuries relating to collection of 911 surcharges. The board's exclusive standing to bring such claims shall not impact any litigation against dealers of retail communications service regarding 911 surcharges that pre-date this subsection (a).

(b) Dealers shall be entitled to retain as an administrative fee an amount equal to three percent (3%) of the collections of the 911 surcharge on the retail sale of communications service.

(c) Damages for civil claims arising out of collection shall be adjudicated by the Tennessee claims commission and any award of damages shall either be limited to the actual amount of 911 surcharges not collected, including, at the discretion of the claims commission, reasonable interest, or the maximum award the claims commission may award per claimant or occurrence, whichever is greater.

(d) Each dealer of retail communications service shall annually provide to the board an accounting of the amounts billed and collected and the disposition of such amounts. Such accounting shall be subject to audit or review by the comptroller of the treasury.

(e) In the event an audit or accounting is initiated by multiple state government departments, such departments shall coordinate efforts to minimize administrative burdens and duplicative undertakings.

SECTION 6. Tennessee Code Annotated, Section 7-86-303, is amended by deleting subsections (c) and (d) and substituting instead the following as new subsections thereto:

(c) The board shall be funded by the 911 surcharge established in § 7-86-128.

(d) All current funds, including those funds currently in the 911 Emergency Communications Fund, funds collected by the board in future, and interest accrued on these funds shall be deposited in the state treasury in a separate interest-bearing fund to be known as the 911 Emergency Communications Fund. Disbursements from this fund shall be limited solely to the operational and administrative expenses of the board and the purposes as expressed in this part 3. At no time during its existence shall the 911 Emergency Communications Fund, or earnings derived thereof, be used to fund the general expenses of the state of Tennessee.

(e) In order to maintain adequate 911 funding provided to emergency communications districts, the board shall annually distribute to each emergency communications district a base amount equal to the average of total recurring annual revenue the district received from distributions from the board and from direct remittance of 911 surcharges for fiscal years 2010, 2011, and 2012; however, in no event shall such distribution be less than the amount the district received in fiscal year 2012. On or before December 1, 2014, the board shall publish on its web site the base amount for each emergency communications district. The board may not reduce the base amount for any emergency communications district unless the local government funding for such emergency communications district is reduced, in which case the board may reduce the base amount by the same amount as the local funding reduction. Any emergency communication district established after the effective date of this act shall be entitled to receive a base amount from the board in an amount determined by the board. Disbursal of the base amount to emergency communications districts shall be conducted in the following manner:

(1) The board shall distribute one-sixth (1/6) of the base amount for each emergency communications district every two (2) months, beginning at the end of the second month of each fiscal year; and

(2) Any emergency communications district with a locally established 911 surcharge in effect as of July 1, 2011, less than the maximum allowable surcharge then in effect shall be eligible to apply to the board for an increase in the base amount. The board shall promulgate rules and regulations to facilitate such a request and to set minimum criteria that the emergency communication district must satisfy to obtain increased funding. The board shall not be obligated

to increase the base amount if the board lacks sufficient funds or if the board, after reviewing its criteria as set out in its rules, finds the emergency communication district has not met the guidelines.

(f) The board's operational expenses shall include the implementation and maintenance of an IP-based next generation 911 network and any future 911 system advancements the board deems necessary, provided that the board shall provide a report to the information systems council each year to describe any such future 911 system advancements. The board's operational expenses shall also include funding to the Tennessee regulatory authority for the Tennessee relay services/telecommunications devices access program ("TRS/TDAP"), which provides assistance to those Tennesseans whose disabilities interfere with their use of communications services and technologies. Funding provided by the board shall not exceed the total cost of the TRS /TDAP program in 2012 unless approved by the fiscal review committee.

SECTION 7. Tennessee Code Annotated, Title 7, Chapter 86, Part 1, is amended by adding the following as a new section thereto:

7-86-130.

Any 911 surcharge revenue collected in excess of the annual fiscal requirements of the board and the mandatory every two (2) months payments to emergency communications districts shall not revert to the general fund. The board shall distribute a minimum of fifty percent (50%) of any revenue collected in excess of its annual fiscal requirements to the emergency communications districts in accordance with policies adopted by the board. Any unspent funds at the end of a fiscal year shall be carried forward to the next fiscal year to be used as a beginning balance of the fiscal requirements for such fiscal year.

SECTION 8. Tennessee Code Annotated, Section 7-86-320, is amended by adding the following as a new subsection thereto:

(d)

(1) Emergency communications districts shall be immune from suit or liability for civil claims arising from the actions or omission of emergency communications district personnel in processing emergency calls, except that claims for recklessness or intentional misconduct in processing emergency calls shall be permitted, but damages for such claims shall not exceed actual damages or the maximum award that may be awarded per claimant by the Tennessee claims commission.

(2) A provider or user of 911 services or next generation 911 services, a public safety answering point, and the officers, directors, employees, vendors, agents, and authorizing government entity, if any, of such provider, user, or public safety answering point, shall have immunity and protection from liability under federal and state law to the extent provided in subdivision (d)(1) with respect to:

(A) The release of subscriber information related to emergency calls or emergency services;

(B) The use or provision of 911 services, E911 services, or next generation 911 services; and

(C) Other matters related to 911 services, E911 services, or next generation 911 services.

(3) A dealer or provider of telecommunications service and other services, a user of such services, and a public safety answering point, and the officers, directors, employees, agents, vendors, and authorizing government entity, if any, involved in providing 911 service, shall not be liable for:

(A) Any civil claim, damage, or loss caused by an act or omission in the design, development, installation, maintenance, or provision of 911 service;

(B) The release of subscriber information related to emergency calls or emergency services; and

(C) Other matters related to the provision of 911 service.

SECTION 9. Tennessee Code Annotated, Section 29-20-108(b), is amended by deleting the subsection and substituting instead the following:

(b) Such immunity shall also extend to employees of an emergency communications district, and county and municipal governments for the acts or omissions of employees that manage, supervise, or perform 911 emergency communications service as communicators or dispatchers, provided that all such employees shall attain and maintain training requirements as may be required by law.

SECTION 10. Tennessee Code Annotated, Title 7, Chapter 86, is amended by adding the following as a new section thereto:

7-86-131.

The Tennessee advisory commission on intergovernmental relations shall study and report its conclusions to the joint committee on government operations on or before September 15, 2017, regarding the following matters:

(1) Whether the 911 surcharge is generating adequate revenue to cover the costs of the services, equipment, maintenance and improvements needed to provide a uniform, stable and effective statewide 911 system;

(2) Whether the expansion of 911 system functionality resulting from implementation of IP-based next generation 911 technology has increased or decreased costs for emergency communications districts;

(3) Whether there is a need or benefit to consolidate emergency communications districts or PSAPs;

(4) Whether the 911 surcharge is generating more revenue than necessary to implement the purpose of this act and can be reduced to the benefit of communications consumers;

(5) Whether a flat rate communications services surcharge is the best manner in which to fund 911 system costs or whether such costs should be funded by a percentage surcharge or a different source, such as water service, electric power service or state general funds or local taxes;

(6) Whether the board membership of the state emergency communications board should be amended to include other stakeholders such as telecommunications providers, emergency communications districts that dispatch, and other interested parties;

(7) Whether there is a need or benefit for the board to have the ability to raise the 911 surcharge rate should there be a financial reason to do so;

(8) Whether there is a need or benefit for the providers of communications services to register with the board prior to providing service; and

(9) Whether there is a need or benefit for providers of communications services to notify the board when there is a known service interruption.

SECTION 11. Tennessee Code Annotated, Section 7-86-305, is amended by adding the following new subsection (c):

(c) For purposes of determining whether an emergency communications district is financially distressed, the board shall not consider an emergency communications district's depreciation costs as an operating expense.

SECTION 12. Tennessee Code Annotated, Section 65-21-115, is amended by deleting the section in its entirety and substituting instead the following:

65-21-115.

(a) Funding for the Tennessee relay services/telecommunications devices access program ("TRS/TDAP") programs shall be provided by the state emergency communications board. Such funding shall not exceed the total cost of the TRS/TDAP program in 2012 unless approved by the fiscal review committee.

(b) The Tennessee regulatory authority may create a reserve for the TRS/TDAP program which shall not exceed one million dollars ($1,000,000) in any given year.

(c) It is the legislative intent that the TRS/TDAP program be designed with consideration of fair distribution of equipment that is technologically available and economically feasible to be provided to assist individuals with any disability using the basic telephone network.

(d) The administrative cost of the Tennessee regulatory authority to implement this section shall come from the funding described in subsection (a).

(e) The Tennessee regulatory authority is authorized to promulgate rules in accordance with the Uniform Administrative Procedures Act, compiled in title 4, chapter 5, to implement this section.

SECTION 14. Tennessee Code Annotated Section 9-8-307(a)(1), is amended to add the following as new, appropriately designated subdivision:

( ) Claims arising out of the billing, collection, or remittance of 911 surcharges;

SECTION 15. This act shall take effect January 1, 2015, the public welfare requiring it.

HOUSE BILL NO. 2255

PASSED: April 7, 2014

BETH HARWELL, SPEAKER
HOUSE OF REPRESENTATIVES

RON RAMSEY
SPEAKER OF THE SENATE

APPROVED this 25th day of April 2014

BILL HASLAM, GOVERNOR

Appendix B: TECB Policy 9
District Minimum Technical Operating Standards

TN Department of Commerce & Insurance

POLICY NO. 09
DISTRICT MINIMUM TECHNICAL OPERATING STANDARDS

PURPOSE: The following policy establishes minimum technical operating standards for emergency communications districts ("ECDs") and public safety answering points ("PSAPs") in order to ensure continuity of 911 operations and compatibility for connectivity to the statewide next generation 911 ("NG911") infrastructure.

POLICY:

I. TECHNICAL OPERATING STANDARDS FOR E-911 SERVICE

A. Pursuant to Tenn. Code Ann. § 7-86-306(a)(9), all PSAPs in Tennessee shall:

1. Be capable of receiving and processing 911 calls, and associated data elements, via the legacy and/or NG911 ESI Network, including Automatic Numbering Identification ("ANI") to determine a caller's phone number, Automatic Location Identification ("ALI") to pinpoint a wireline caller's location, and Phase II wireless coordinates as contemplated by 47 C.F.R. § 20.18 and the applicable orders of the Federal Communication Commission and their progeny, and shall make every effort to satisfy the National Emergency Number Association's i3 requirements;

2. Arrange with other PSAPs within the ECD, or within close proximity, for 911 call answering in the event of a major equipment failure or PSAP evacuation.[1] In cases where a PSAP is so large that another PSAP within close proximity cannot adequately provide call answering, then the PSAP should establish an alternate answering center or arrangement that minimizes the number or potential of unanswered 911 calls.

3. Prepare and regularly test, at least annually, a PSAP Operations Continuity Plan that specifically provides procedures for on-duty personnel in the re-routing of 911 calls, switchover to backup systems, evacuation plans, temporary call answering plans, return to normal plans, and other plans that minimizes the number or potential of unanswered 911 calls. Annually report to the Board the results of PSAP Operations Continuity Plan tests. The Tennessee Emergency Communications Board (the "Board") can provide, upon request, a model plan that can be customized for individual PSAPs.

II. GIS MAPPING SYSTEM CAPABILITIES

[1] Typically, alternate routing of 911 calls to an adjacent PSAP or mobile PSAP unit would be considered a short range plan with a projected duration of less than a week. This gives the PSAP and ECD managers time to implement more long range plans when re-occupancy of a PSAP will be delayed due to fire, tornado damage, or other significant event.

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Department of Commerce & Insurance

A. Each ECD shall obtain, and be capable of effectively operating, a Geographic Information Systems ("GIS") mapping system in accordance with the minimum standards set forth by the Board, and shall migrate their GIS data to follow the Tennessee Information for Public Safety ("TIPS") format or other format that the Board may designate, defining field naming conventions for address points, street centerlines and ESN boundaries.

B. With Respect to Local GIS Operations, each ECD shall:

1. Provide the Board with the name and direct contact information of the individual(s) who shall be responsible for their GIS Mapping and maintenance.

2. Coordinate with the Board or the Board's designee(s) to migrate GIS data to the TIPS format and maintain TIPS data on a monthly basis.

3. Implement and maintain the following data layers and provide that data to the Board or the Board's designee(s):

    a. Street Centerlines:
        i. Emergency service zones and street centerline data layers are seamless between counties with no gaps or overlaps between boundary polygons; and
        ii. All boundary Street centerlines share an exact begin or end node with adjacent county street centerline;
    b. Address Points;
    c. Emergency Service Zone Boundaries (ESN Boundaries);
    d. Fire Hydrants;
    e. Administrative Boundaries (City, State, and County);
    f. PSAP Routing Boundaries; and
    g. Other layers NENA may require.

4. Strive to comply with NENA GIS Mapping Standards.

III. NOTICE OF OUTAGE

A. Each ECD or the agent(s) or designee(s) responsible for carrying out "operations of the district" shall notify the Network Operations Center designated by the Board of any misrouted 911 calls or any failure or decrease in the level of any type or degree of 911 service of a duration over, or predicted to be over, thirty (30) minutes. Such notices shall be provided as soon as practicable after the outage occurs or notice of a predicted outage is received in order to permit the Board to assist in the restoration of service, if appropriate. The Executive Director or the

Executive Director's designee shall determine the Board's level of involvement, if any, in assisting ECDs, carriers and service providers in restoring the appropriate level of E-911 service.

B. In the event of service interruptions as a result of ECD local failure, ECDs shall be responsible for maintaining and/or restoring service. ECDs and carriers shall receive authorization from the Executive Director or the Executive Director's designee prior to halting or reducing the level or quality of E-911 service within any area of the state.

C. The NOC shall be notified of all activities in the PSAP that could impact NG911 network as follows:

1. No later than 24 hours prior to schedules activities; and

2. As soon as possible for unscheduled events and no later than one hour after such event.

3. Upon the second violation of this Policy, the Board may require the director and chairman of the ECD to appear at the next regularly scheduled Board meeting for a determination of whether the ECD is taking sufficient actions or acting in good faith to establish, maintain or advance 911 service for the citizens within the boundaries of the ECD. It is recommended that ECD leadership require their CPE vendors to execute an agreement promising not to undertake any activities that could impact NG911 equipment or connectivity to the network without first notifying the NOC consistent with this Policy.

IV. MINIMUM BACKUP POWER REQUIREMENTS

A. All PSAPs operated by ECDs shall purchase and maintain:

1. An uninterruptible power supply ("UPS") capable of providing uninterrupted power to emergency communications operations for a minimum of one (1) hour. UPS systems be of the "online" type, providing filtered power to protect against surges, voltage drops and other power-related issued often caused by switching to and operating on generator power or interruptions or degradation of the commercial power supply.

2. An emergency generator and fuel source for the generator capable of providing power sufficient to maintain minimum 911 service operations and a suitable work environment to the PSAP for a minimum of forty-eight (48) hours. ECD management shall assure backup power equipment and fuel supplies are not located in areas prone to flooding.

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B. Minimum backup power requirements shall apply to equipment used to provide NG911 service to the PSAP.

C. The Board recommends an additional backup emergency generator that utilizes an alternative fuel source with respect to backup power at PSAPs.

V. PLAN FOR REROUTING 911 CALLS

A. Each ECD shall develop and adopt a written plan that defines how 911 calls will be rerouted for all affiliated or self-operated PSAPs in the event of network facility disruption, equipment failure, PSAP evacuation, or for any other reason that 911 call cannot be answered at the intended PSAP.

B. Each ECD shall file its plan for each PSAP with the Board. Plans that require calls to be rerouted to another ECD must include a written agreement with the ECD that will receive the rerouted calls. Any changes or revisions to the plan must be filed with the Board thirty (30) days after such changes or revisions are made.

C. The plan for rerouting 911 calls may be included as part of the overall contingency plan for the ECD if so desired.

VI. PSAP RELOCATION

A. Any ECD planning to relocate any PSAP shall provide the Board with written notice no later than ninety (90) days prior to the move. ECDs with PSAPs that are connected to the NG911 infrastructure prior to relocation shall bear the costs connecting their new locations to the NG911 Infrastructure.

Effective: May 3, 2017.

Supersedes: Policy No. 20 (Adopted 3-12-04); Policy No. 31 (Adopted 3-17-05); Policy No. 32 (Adopted 3-17-05); Policy No. 33 (Adopted 3-17-05); Policy 36 (Adopted 4-20-06); Policy No. 44 (Adopted 5-17-12); and Policy 9 (Adopted 8-5-15).

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Source: Tennessee Emergency Communications Board 2017.

Appendix C: Commission Survey Forms

Thank you for completing this questionnaire. We appreciate any information you can provide.

The Tennessee Advisory Commission on Intergovernmental Relations, as required by Public Chapter 795, Acts of 2014, is studying the funding, functionality, and other effects of the Act, which created a new funding mechanism for emergency communications services in Tennessee.

To understand how emergency communications districts vary across the state and how the new law is affecting them, we are asking the director of each district to complete a questionnaire. We are aware that TENA has recently asked you to complete a survey. This questionnaire builds on their effort to gather input.

We would greatly appreciate it if you would complete this questionnaire by January 31, 2017.

If you have any questions, please contact Jennifer Barrie by email at jennifer.barrie@tn.gov or by phone at 615-741-3012. Your help with this study will be of great benefit to our Commission as it prepares its report to the General Assembly's joint committee on government operations.

Thank you!

Note: You may take a break from completing the survey and return to complete it later. But you have to complete it on the same device using the same web browser. Once you click on the "done with survey" button, your survey is submitted and you can no longer edit it.

Questions marked with an asterisk (*) require an answer.

TIP - To move to the previous or next page of the survey, use the "previous page" or "next page" buttons at the bottom of each page. Do NOT click the back arrow on your web browser - it will take you out of the survey and will not save your responses.

* 1. Please provide your contact information.

Emergency Communications District

Name

Position/Title

City

Email address

Phone Number

* 2. Which of the following best describes the 911 response system in your district? Please choose one.

- One PSAP answers calls and directly dispatches emergency response
- One PSAP answers calls and transfers calls to appropriate agency to dispatch response
- One PSAP answers calls and dispatches some directly and transfers others to appropriate agency to dispatch response
- Multiple PSAPs answer calls and directly dispatch emergency response
- Multiple PSAPs answer calls and transfer calls to appropriate agency to dispatch response
- Multiple PSAPs answer calls and dispatch some directly and transfer others to appropriate agency to dispatch response
- Other (please specify in comments)

Comments

* 3. How many PSAPs are in your district?

- ◯ One (1)
- ◯ Two (2)
- ◯ Three (3)
- ◯ Four (4)
- ◯ Five (5)
- ◯ Six (6) or more
- ◯ None (please explain in comments)

Comments

* 4. How many secondary PSAPs are in your district?

- ◯ One (1)
- ◯ Two (2)
- ◯ Three (3)
- ◯ Four (4)
- ◯ Five (5)
- ◯ Six (6) or more
- ◯ None

Comments

* 5. How many regularly active answering positions (call-taking seats) are available in your district, NOT including backup, training, and overflow positions? Please provide a number.

Number of positions or seats

Comments

* 6. How many PSAPs in your district provide medical advice to callers?

- ○ None
- ○ One (1)
- ○ Two (2)
- ○ Three (3)
- ○ Four (4)
- ○ Five (5)
- ○ Six (6) or more
- ○ Other (please explain)

* 7. Over the last two fiscal years (2014-15 and 2015-16), the call volume in my district has

- ○ Greatly increased
- ○ Increased
- ○ Stayed at the same level
- ○ Decreased
- ○ Greatly decreased
- ○ None of the above (please explain in comments)

Comments

8. If available, please provide the call volume number for fiscal years 2014-15 and 2015-16.

2014-2015

2015-2016

Questions marked with an asterisk (*) require an answer.

TIP - To move to the previous or next page of the survey, use the "previous page" or "next page" buttons at the bottom of each page. Do NOT click the back arrow on your web browser - it will take you out of the survey and will not save your responses.

* 9. In fiscal year 2015-16, my district's base funding provided adequate revenue to cover the costs of the services, personnel, equipment, maintenance, and improvements needed to provide stable and effective 911 service in my district.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

10. If your district is not adequately funded by the base amount, how much additional funding do you need?

11. How would the additional funds in question 10 be used? Please choose all that apply.

- ☐ Salaries
- ☐ Equipment
- ☐ Training
- ☐ Rent
- ☐ Other (please specify)

* 12. The current method used for distributing 911 surcharge revenue to the districts is sufficient and working well.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

13. If you do not think the current method for distributing 911 surcharge revenue is sufficient and working well, do you think distribution should be based on one or more of the following factors? Please select one or more.

- ☐ Population served by district
- ☐ Number of call takers in district
- ☐ Revenue divided equally among districts
- ☐ Number of wireless subscribers in district
- ☐ Call volume in district
- ☐ Other (please specify)

* 14. Does your city or county help fund part of your district's 911 service?

- ○ Yes
- ○ No
- ○ Sometimes
- ○ No response

Comments

Questions marked with an asterisk (*) require an answer.

TIP - To move to the previous or next page of the survey, use the "previous page" or "next page" buttons at the bottom of each page. Do NOT click the back arrow on your web browser - it will take you out of the survey and will not save your responses.

15. If you answered yes or sometimes to question 14, what does the city or county pay for? Please specify whether the funds are designated for specific items or given as a non-restricted lump sum for 911 service.

16. If you answered yes or sometimes to question 14, please estimate the percentage of your expenditures that were covered by local government contributions in fiscal year 2015-16. Choose the one that most closely matches your estimate.

- 5%
- 10%
- 20%
- 30%
- 40%
- 50%
- More than 50%

Comments

* 17. Has expansion of the 911 system functionality resulting from implementation of IP-based next generation 911 (NG911) technology increased or decreased costs for your district?

- Increased
- No change
- Decreased
- Not sure
- No response

Comments

18. If your district's costs increased or decreased as you indicated in question 17, what types of expenditures increased or decreased? Choose all that apply.

- [ ] GIS/mapping
- [ ] Records custodian
- [ ] Cyber security
- [ ] PSAP equipment
- [ ] Depreciation
- [ ] Other (please specify)

19. If your district's costs increased or decreased because of NG911 implementation as you indicated in question 17, by approximately what percentage did they change?

Questions marked with an asterisk (*) require an answer.

TIP - To move to the previous or next page of the survey, use the "previous page" or "next page" buttons at the bottom of each page. Do NOT click the back arrow on your web browser - it will take you out of the survey and will not save your responses.

* 20. There is a need or benefit to consolidate emergency communications districts.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- No response

Please explain why you agree or disagree.

* 21. There is a need or benefit to consolidate PSAPs.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- No response

Please explain why you agree or disagree.

* 22. There is a need or benefit to integrate services within emergency communications districts.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Please explain why you agree or disagree.

* 23. 911 equipment and call delivery costs should only be funded by a statewide flat rate surcharge.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

* 24. 911 dispatch costs should only be funded by a statewide flat rate surcharge.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

* 25. Do you think that 911 equipment and call delivery costs should be funded by any of these other methods? Choose up to two.

- [ ] Percentage surcharge
- [ ] Water service charge
- [ ] Electric power service charge
- [ ] State general fund
- [ ] Local taxes
- [ ] State sales tax
- [ ] Health insurance tax
- [ ] None of these - keep current funding mechanism
- [ ] Not sure
- [ ] Other (please specify)

* 26. Do you think that 911 dispatch costs should be funded by any of these other methods? Choose up to two.

- [ ] Percentage surcharge
- [ ] Water service charge
- [ ] Electric power service charge
- [ ] State general fund
- [ ] Local taxes
- [ ] State sales tax
- [ ] Health insurance tax
- [ ] None of these - keep current funding mechanism
- [ ] Not sure
- [ ] Other (please specify)

* 27. Local governments should have the authority to add a local 911 fee to the state $1.16 surcharge to fund 911 services in the local emergency communications districts.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly disagree
- ◯ No response

Comments

28. If you agree with the statement in question 27, at what maximum amount do you think the local 911 fee should be set?

* 29. There is a need or benefit for the state emergency communications board to have the authority to raise the 911 surcharge rate without state legislative approval should there be a financial reason to do so.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly disagree
- ◯ No response

Please explain why you agree or disagree.

Questions marked with an asterisk (*) require an answer.

TIP - To move to the previous or next page of the survey, use the "previous page" or "next page" buttons at the bottom of each page. Do NOT click the back arrow on your web browser - it will take you out of the survey and will not save your responses.

* 30. The membership of the state emergency communications board should be changed to include other stakeholders.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

31. If you agree with the statement in question 30, which of these stakeholders or stakeholder groups should have at least one representative added to the board? You may choose more than one.

- [ ] Telecommunications providers
- [ ] Emergency communications districts that dispatch
- [ ] Representative for the disabled emergency medical services
- [ ] Local firefighters representative
- [ ] State fire marshal
- [ ] State GIS representative
- [ ] State IT representative
- [ ] Local law enforcement representative
- [ ] State law enforcement representative
- [ ] NENA representative
- [ ] APCO representative
- [ ] State attorney general
- [ ] State audit representative
- [ ] State department of safety and homeland security representative
- [ ] State department of revenue representative
- [ ] State division of consumer affairs
- [ ] State legislator
- [ ] State treasurer
- [ ] Utilities or public service representative
- [ ] Other (please specify)

* 32. There is a need or benefit for communications service providers to register with the state emergency communications board prior to providing service.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

* 33. There is a need or benefit for communications service providers to notify the state emergency communications board when there is a known service interruption.

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree
- ○ No response

Comments

34. Please feel free to add any additional comments below.

Appendix D: Tennessee Local Wireline Rates as of May 2014

Tennessee Emergency Communications Board
Landline 9-1-1 Rates
May 22, 2014

Emergency Communications District	Residential Rate	Business Rate	Increase Approval Date	Extension Approval Date	Emergency Communications District	Residential Rate	Business Rate	Increase Approval Date	Extension Approval Date
Anderson	$0.65	$2.00			Lake	$0.65	$2.00		
Clinton City	$0.65	$2.00			Lauderdale	$1.25	$2.25	08/03/00	Referendum
Oak Ridge City	$1.50	$3.00	01/15/03	02/07/13	Lawrence	$1.50	$3.00	08/14/03	10/25/12
Bedford	$1.50	$3.00	06/22/06	08/30/12	Lewis	$0.65	$2.00		
Benton	$0.65	$2.00			Lincoln	$0.65	$2.00		
Bledsoe	$1.50	$3.00	07/16/04	08/22/13	Loudon	$1.50	$3.00	10/25/12	
Blount	$1.50	$3.00	05/17/12		Macon	$1.50	$3.00	09/16/10	02/20/14
Bradley	$1.50	$3.00	10/29/01	08/30/12	Madison	$0.45	$1.64		
Campbell	$1.50	$3.00	06/22/06	08/30/12	Marion	$0.65	$2.00		
LaFollette City	$1.50	$3.00	06/22/06	08/30/12	Marshall	$1.50	$3.00	01/13/05	02/20/14
Cannon	$1.50	$3.00	04/19/07	05/16/13	Maury	$1.50	$3.00	08/28/08	08/25/11
Carroll	$0.65	$2.00			McMinn	$0.65	$2.00		
Carter	$1.50	$3.00	11/10/05	10/27/11	McNairy	$1.15	$2.50	06/01/01	08/25/11
Cheatham	$1.15	$2.50	08/14/03	08/22/13	Meigs	$1.50	$3.00	07/28/05	10/27/11
Chester	$0.65	$2.00			Monroe	$0.65	$2.00		
Claiborne	$1.50	$3.00	08/03/00	Referendum	Montgomery	$1.50	$3.00	10/30/01	10/25/12
Clay	$1.50	$3.00	08/28/08	08/25/11	Moore	$0.65	$2.00		
Cocke	$1.15	$2.50	06/01/01	10/25/12	Morgan	$1.50	$3.00	04/01/02	05/19/11
Coffee	$0.55	$1.75			Obion	$1.50	$3.00	08/25/11	
Crockett	$0.65	$2.00			Overton-Pickett	$1.50	$3.00	10/29/01	05/19/11
Cumberland	$1.40	$2.75	07/19/01	11/18/10	Perry	$1.50	$3.00	06/22/06	08/30/12
Davidson	$0.65	$2.00			Polk	$0.65	$2.00		
Decatur	$0.65	$2.00			Putnam	$0.65	$2.00	06/25/13	
DeKalb	$1.50	$3.00	05/19/11	05/22/14	Rhea	$1.50	$3.00	01/31/02	10/31/13
Dickson	$0.55	$1.65			Roane	$1.50	$3.00	05/27/04	05/22/14
Dyer	$0.55	$1.67			Robertson	$1.50	$3.00	05/26/05	02/20/14
Fayette	$1.50	$3.00	10/25/07	08/22/13	Rutherford	$0.50	$1.52		
Fentress	$0.65	$2.00			Scott	$0.65	$2.00		
Franklin	$0.65	$2.00			Sequatchie	$1.50	$3.00	07/28/05	10/27/11
Gibson	$1.50	$3.00	01/15/03	10/25/12	Sevier	$0.55	$1.67		
Giles	$1.50	$3.00	07/28/05	02/20/14	Shelby	$0.65	$2.00		
Grainger	$1.50	$3.00	01/13/05	02/07/13	Smith	$0.65	$2.00		
Greene	$1.50	$3.00	10/27/11		Stewart	$1.00	$2.50	07/28/05	08/25/11
Grundy	$1.50	$3.00	05/14/08	05/19/11	Sullivan	$1.50	$3.00	03/17/05	08/22/13
Hamblen	$1.50	$3.00	02/20/14		Bristol City	$0.65	$2.00		
Hamilton	$1.50	$3.00	03/17/05	08/25/11	Kingsport City	$0.65	$1.65		
Hancock	$1.50	$3.00	04/20/06	05/16/13	Sumner	$0.65	$2.00	03/01/11	Referendum
Hardeman	$0.65	$2.00			Tipton	$1.50	$3.00	07/16/04	02/20/14
Hardin	$1.00	$2.50	08/25/11		Trousdale	$0.65	$2.00		
Hawkins	$1.50	$3.00	08/25/11		Unicoi	$1.50	$3.00	01/13/05	10/31/13
Haywood	$0.65	$2.00			Union	$1.50	$3.00	09/12/02	02/20/14
Henderson	$0.65	$2.00			Van Buren	$1.50	$3.00	05/20/10	02/20/14
Henry	$0.65	$2.00			Warren	$1.50	$3.00	05/22/03	02/20/14
Hickman	$1.50	$3.00	05/17/12		Washington	$1.50	$3.00	09/12/02	10/31/13
Houston	$1.50	$3.00	09/10/04	02/07/13	Wayne	$1.00	$2.50	10/29/01	05/22/14
Humphreys	$1.50	$3.00	10/30/01	10/31/13	Weakley	$0.65	$2.00		
Jackson	$1.50	$3.00	06/08/01	05/16/13	White	$1.50	$3.00	08/30/01	02/20/14
Jefferson	$1.00	$3.00	01/15/03	08/30/12	Williamson	$1.50	$3.00	08/30/12	
Johnson	$1.50	$3.00	05/27/04	05/19/11	Brentwood City	$1.50	$3.00	05/20/10	08/22/13
Knox	$1.50	$3.00	10/25/07	02/20/14	Wilson	$0.55	$1.67		

Source: Data received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 22, 2017.

Appendix E: E-911 Fees by State as of February 2017

911 Surcharge Rates by State and Type of Service				
State	Wireline	Wireless	Prepaid	VoIP
Alabama	$1.75	$1.75	$1.75	$1.75
Alaska	$0.00 - $2.00	$0.00 - $2.00	Not reported	Not reported
Arizona	$0.20	$0.20	0.8%*	$0.20
Arkansas	5% - 12% of tariff rates	$0.65	$0.65*	$0.65
California	0.75% of amount paid for service	0.75% of amount paid for service	Not reported	0.75% of amount paid for service
Colorado	$0.43 - $1.75	$0.43 - $1.75	1.5%*	$0.43 - $1.75
Connecticut	$0.47	$0.47	$0.47*	$0.47
Delaware	$0.60	$0.60	$0.60	$0.60
Florida	$0.40	$0.40 - $0.44	$0.40	$0.40
Georgia	$1.50	$1.00	$0.75	$1.50
Hawaii	$0.27	$0.66	Not reported	$0.66
Idaho	$1.00 - $1.25	$1.00 - $1.25	2.5%*	$1.00 - $1.25
Illinois	$0.87	$0.87 ($3.90 City of Chicago)	3%* (9%* City of Chicago)	$0.87
Indiana	$1.00	$1.00	$1.00*	$1.00
Iowa	$1.00	$1.00	$0.51*	$1.00
Kansas	$0.53	$0.53	1.06%*	$0.53
Kentucky	$0.36 - $4.50	$0.70	$0.93*	$0.36 - $4.50
Louisiana	$0.38 - $1.25 residential $0.99 - $6.00 business	$0.85 - $1.25	4%*	$0.38 - $1.25
Maine	$0.45	$0.45	$0.45*	$0.45
Maryland	$1.00	$1.00	$0.60*	$1.00
Massachusetts	$1.00	$1.00	$1.00	$1.00
Michigan	$0.19 state fee $0.00 - $3.00 (county)	$0.19 state fee $0.00 - $3.00 (county)	1.92%*	$0.19 state fee $0.00 - $3.00 (county)
Minnesota	$0.95	$0.95	$0.95*	$0.95
Mississippi	$1.05 residential $2.05 commercial	$1.00	$1.00	$1.00
Missouri	2% - 15% of base rate (45 counties) 1/8% - 1% of sales tax (51 counties) Unfunded (19 counties)	None	Not reported	Not reported

911 Surcharge Rates by State and Type of Service				
State	Wireline	Wireless	Prepaid	VoIP
Montana	$1.00	$1.00	$1.00	$1.00
Nebraska	$0.50 - $1.00	$0.45 - $0.70	1.1%*	Not reported
Nevada	Varies by jurisdiction - property tax and/or surcharge	Must be equal to wireline surcharge	Not reported	Not reported
New Hampshire	$0.75	$0.75	$0.75*	$0.75
New Jersey	$0.90	$0.90	Not reported	$0.90
New Mexico	$0.51	$0.51	Not reported	Not reported
New York	$0.35 - $1.00	$1.20 - $1.50	Not reported	$0.35
North Carolina	$0.60	$0.60	$0.60*	$0.60
North Dakota	$1.00 - $1.50	$1.00 - $1.50	2%*	$1.00 - $1.50
Ohio	$0.50 legally limited to a few counties, no general surcharge	$0.25	0.5%*	Not reported
Oklahoma	3-15% of base rate	$0.75 (approximately 61 counties)	$0.75*	$0.50
Oregon	$0.75	$0.75	$0.75*	$0.75
Pennsylvania	$1.65	$1.65	$1.65*	$1.65
Rhode Island	$1.00	$1.26	2.5%*	$1.26
South Carolina	$0.30 - $1.00	$0.62	$0.62	$0.30 - $1.00
South Dakota	$1.25	$1.25	2%*	$1.25
Tennessee	$1.16	$1.16	$1.16*	$1.16
Texas	$0.50 State Program fees vary - district	$0.50 State Program	2%*	$0.50 State Program fees vary - district
Utah	$0.09 state fee $0.61 local fee $0.06 CAD fee	$0.09 state fee $0.61 local fee $0.06 CAD fee	1.9%*	$0.09 state fee $0.61 local fee $0.06 CAD fee
Vermont	Universal Service Funding	Universal Service Funding	Universal Service Funding	Universal Service Funding
Virginia	$0.75	$0.75	$0.50	$0.75
Washington	$0.25 statewide $0.70 (county)	$0.25 statewide $0.70 (county)	$0.25 statewide $0.70 (county)	$0.25 statewide $0.70 (county)
West Virginia	$0.98 - $6.40	$3.00	6%*	$0.98 - $6.40
Wisconsin	$0.16 - $0.43	None	Not reported	Not reported
Wyoming	$0.25 - $0.75	$0.25 - $0.75	1.5%*	$0.25 - $0.75

*Prepaid fees are charged at the point of sale or on the retail sale.
Source: National Emergency Number Association 2017. http://www.nena.org/?page=911ratebystate. Commission staff also used state statutes to verify some data.

Appendix F: ECD Populations and Base Distribution Amounts Before and After Increases went into Effect

Emergency Communications District	Population (Based on 2010 Census)	Base Distribution Before Increases	Proportion of Base Funding Before Increases	Base Distribution Per Individual Before Increases	Base Distribution After Increases	Proportion of Base Funding After Increases	Base Distribution Per Individual After Increases
Anderson	39,017	$ 390,210	0.49%	$ 10.00	$ 403,494	0.49%	$ 10.34
Bedford	45,058	611,706	0.76%	13.58	611,706	0.74%	13.58
Benton	16,489	281,904	0.35%	17.10	286,236	0.35%	17.36
Bledsoe	12,876	292,854	0.36%	22.74	292,854	0.36%	22.74
Blount	123,010	1,395,630	1.74%	11.35	1,426,740	1.73%	11.60
Bradley	98,963	1,292,694	1.61%	13.06	1,292,694	1.57%	13.06
Brentwood	37,060	864,126	1.08%	23.32	864,126	1.05%	23.32
Bristol	26,702	473,664	0.59%	17.74	497,574	0.60%	18.63
Campbell	33,260	479,820	0.60%	14.43	479,820	0.58%	14.43
Cannon	13,801	291,630	0.36%	21.13	291,630	0.35%	21.13
Carroll	28,522	396,564	0.49%	13.90	412,920	0.50%	14.48
Carter	57,424	775,092	0.97%	13.50	775,092	0.94%	13.50
Cheatham	39,105	484,602	0.60%	12.39	492,036	0.60%	12.58
Chester	17,131	291,342	0.36%	17.01	299,784	0.36%	17.50
Claiborne	32,213	534,510	0.67%	16.59	534,510	0.65%	16.59
Clay	7,861	254,928	0.32%	32.43	254,928	0.31%	32.43
Clinton	9,841	223,554	0.28%	22.72	228,966	0.28%	23.27
Cocke	35,662	529,164	0.66%	14.84	537,756	0.65%	15.08
Coffee	52,796	600,504	0.75%	11.37	635,334	0.77%	12.03
Crockett	14,586	246,954	0.31%	16.93	253,980	0.31%	17.41
Cumberland	56,053	871,794	1.09%	15.55	877,776	1.07%	15.66
Davidson	626,681	6,352,152	7.91%	10.14	6,684,210	8.12%	10.67
Decatur	11,757	249,090	0.31%	21.19	257,106	0.31%	21.87
DeKalb	18,723	412,098	0.51%	22.01	412,098	0.50%	22.01
Dickson	49,666	487,764	0.61%	9.82	515,160	0.63%	10.37
Dyer	38,335	595,050	0.74%	15.52	610,746	0.74%	15.93
Fayette	38,413	537,174	0.67%	13.98	537,174	0.65%	13.98
Fentress	17,959	320,898	0.40%	17.87	333,468	0.41%	18.57
Franklin	41,052	473,622	0.59%	11.54	494,568	0.60%	12.05
Gibson	49,683	763,350	0.95%	15.36	763,350	0.93%	15.36
Giles	29,485	543,360	0.68%	18.43	543,360	0.66%	18.43
Grainger	22,657	388,560	0.48%	17.15	388,560	0.47%	17.15
Greene	68,831	713,502	0.89%	10.37	748,464	0.91%	10.87
Grundy	13,703	315,168	0.39%	23.00	315,168	0.38%	23.00
Hamblen	62,544	894,924	1.11%	14.31	904,362	1.10%	14.46

Emergency Communications District	Population (Based on 2010 Census)	Base Distribution Before Increases	Proportion of Base Funding Before Increases	Base Distribution Per Individual Before Increases	Base Distribution After Increases	Proportion of Base Funding After Increases	Base Distribution Per Individual After Increases
Hamilton	336,463	5,095,614	6.35%	15.14	5,095,614	6.19%	15.14
Hancock	6,819	225,900	0.28%	33.13	225,900	0.27%	33.13
Hardeman	27,253	368,166	0.46%	13.51	380,580	0.46%	13.96
Hardin	26,026	416,328	0.52%	16.00	435,864	0.53%	16.75
Hawkins	53,979	713,610	0.89%	13.22	734,580	0.89%	13.61
Haywood	18,787	311,136	0.39%	16.56	318,876	0.39%	16.97
Henderson	27,769	389,808	0.49%	14.04	405,750	0.49%	14.61
Henry	32,330	446,592	0.56%	13.81	467,784	0.57%	14.47
Hickman	24,690	323,916	0.40%	13.12	334,974	0.41%	13.57
Houston	8,426	264,744	0.33%	31.42	264,744	0.32%	31.42
Humphreys	18,538	378,654	0.47%	20.43	378,654	0.46%	20.43
Jackson	11,638	282,414	0.35%	24.27	282,414	0.34%	24.27
Jefferson	51,407	692,004	0.86%	13.46	702,786	0.85%	13.67
Johnson	18,244	373,758	0.47%	20.49	373,758	0.45%	20.49
Kingsport	48,205	712,182	0.89%	14.77	769,230	0.93%	15.96
Knox	432,226	5,938,206	7.40%	13.74	5,938,206	7.22%	13.74
LaFollette	7,456	249,936	0.31%	33.52	249,936	0.30%	33.52
Lake	7,832	198,678	0.25%	25.37	201,414	0.24%	25.72
Lauderdale	27,815	389,958	0.49%	14.02	395,316	0.48%	14.21
Lawrence	41,869	601,494	0.75%	14.37	601,494	0.73%	14.37
Lewis	12,161	252,372	0.31%	20.75	259,992	0.32%	21.38
Lincoln	33,361	424,242	0.53%	12.72	442,776	0.54%	13.27
Loudon	48,556	572,430	0.71%	11.79	591,444	0.72%	12.18
Macon	22,248	422,376	0.53%	18.98	422,376	0.51%	18.98
Madison	98,294	1,115,310	1.39%	11.35	1,194,906	1.45%	12.16
Marion	28,237	352,290	0.44%	12.48	366,372	0.45%	12.97
Marshall	30,617	528,432	0.66%	17.26	528,432	0.64%	17.26
Maury*	80,956	1,141,992	1.42%	14.11	1,141,992	1.39%	14.11
McMinn	52,266	582,480	0.73%	11.14	612,204	0.74%	11.71
McNairy	26,075	402,204	0.50%	15.42	408,282	0.50%	15.66
Meigs	11,753	248,472	0.31%	21.14	248,472	0.30%	21.14
Monroe	44,519	481,482	0.60%	10.82	499,842	0.61%	11.23
Montgomery	172,331	1,971,228	2.46%	11.44	1,971,228	2.40%	11.44
Moore	6,362	194,004	0.24%	30.49	197,094	0.24%	30.98
Morgan	21,987	362,988	0.45%	16.51	362,988	0.44%	16.51
Oak Ridge	29,330	525,054	0.65%	17.90	525,054	0.64%	17.90
Obion	31,807	536,064	0.67%	16.85	554,196	0.67%	17.42
Overton-Pickett	27,160	644,520	0.80%	23.73	644,520	0.78%	23.73
Perry	7,915	263,562	0.33%	33.30	263,562	0.32%	33.30

Emergency Communications District	Population (Based on 2010 Census)	Base Distribution Before Increases	Proportion of Base Funding Before Increases	Base Distribution Per Individual Before Increases	Base Distribution After Increases	Proportion of Base Funding After Increases	Base Distribution Per Individual After Increases
Polk	16,825	270,738	0.34%	16.09	279,096	0.34%	16.59
Putnam	72,321	756,126	0.94%	10.46	800,646	0.97%	11.07
Rhea	31,809	496,824	0.62%	15.62	496,824	0.60%	15.62
Roane	51,122	664,518	0.83%	13.00	664,518	0.81%	13.00
Robertson	66,283	808,842	1.01%	12.20	808,842	0.98%	12.20
Rutherford	262,604	1,627,038	2.03%	6.20	1,736,058	2.11%	6.61
Scott	22,228	322,044	0.40%	14.49	335,226	0.41%	15.08
Sequatchie	14,112	311,052	0.39%	22.04	311,052	0.38%	22.04
Sevier	89,889	1,019,718	1.27%	11.34	1,091,250	1.33%	12.14
Shelby	927,644	8,837,052	11.01%	9.53	9,327,186	11.34%	10.05
Smith	19,166	302,676	0.38%	15.79	308,958	0.38%	16.12
Stewart	13,324	267,810	0.33%	20.10	271,986	0.33%	20.41
Sullivan	84,770	1,019,424	1.27%	12.03	1,019,424	1.24%	12.03
Sumner	160,645	1,360,488	1.69%	8.47	1,421,196	1.73%	8.85
Tipton	61,081	729,642	0.91%	11.95	729,642	0.89%	11.95
Trousdale	7,870	208,506	0.26%	26.49	211,470	0.26%	26.87
Unicoi	18,313	364,716	0.45%	19.92	364,716	0.44%	19.92
Union	19,109	311,250	0.39%	16.29	311,250	0.38%	16.29
Van Buren	5,548	231,672	0.29%	41.76	231,672	0.28%	41.76
Warren	39,839	673,152	0.84%	16.90	673,152	0.82%	16.90
Washington	122,979	1,839,444	2.29%	14.96	1,839,444	2.24%	14.96
Wayne	17,021	310,374	0.39%	18.23	314,844	0.38%	18.50
Weakley	35,021	436,416	0.54%	12.46	451,836	0.55%	12.90
White	25,841	479,496	0.60%	18.56	479,496	0.58%	18.56
Williamson	146,122	1,507,320	1.88%	10.32	1,581,396	1.92%	10.82
Wilson	113,993	1,091,796	1.36%	9.58	1,160,154	1.41%	10.18
Total Base Amount		$ 80,272,692			$ 82,272,690		

*This table does not include an additional one-time payment of $109,596 made to Maury County ECD in fiscal year 2016 to adjust for an error in the calculation of its base amount. Email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 29, 2017.

Sources: Base distribution data was received in emails from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 14 and 15, 2017. Population data was received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, March 3, 2017. Commission staff calculated the base distributions per individual.

Appendix G: TECB Policy 6
Financially Distressed Districts

TN Department of Commerce & Insurance

POLICY NO. 6

FINANCIALLY DISTRESSED DISTRICTS

PURPOSE: Pursuant to Tenn. Code Ann. § 7-86-304(d), financially distressed districts are subject to the supervision and evaluation by the Tennessee Emergency Communications Board (Board). The following policy sets forth procedures and guidelines to restore financial stability of financially distressed emergency communications districts.

POLICY:
Board staff shall provide a report of financial health status of emergency communications districts ("ECDs") to the Board at regularly scheduled meetings and make periodic visits and/or otherwise assist ECDs in efforts to improve financial health.

I. NOTICE OF FINANCIAL INSTABILITY

Each ECD shall provide written notice to the Board within ten (10) days of becoming aware of any of the following events:

1. Predicting or operating under a deficit total net position;
2. Default on any indebtedness due to insufficient funds;
3. Being the subject of a lien filed by the internal revenue service; or
4. Having a negative change in net position for three (3) consecutive years.

II. "FINANCIALLY DISTRESSED" DISTRICTS DEFINED

A "financially distressed emergency communications district" is a district that, as shown by annual audits:

1. Has a negative change in net position for a period of three (3) consecutive years; or
2. Has a deficit in total net position; or
3. Is in default on any indebtedness.

Additionally, the Board may determine a district is a "financially distressed emergency communications district" if:

1. The ECD is the subject of a lien filed by the internal revenue service;
2. The Board determines that it appears that the ECD cannot satisfy its financial obligations to the extent that the continued operation of the ECD is at risk; or
3. The ECD defaulted on any indebtedness due to insufficient funds, such default is not cured within sixty (60) days, and, upon determination of the Board, it appears that the ECD cannot satisfy its financial obligations to the extent that the continued operation of the ECD is at risk.

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III. BOARD EVALUATION OF FINANCIALLY DISTRESSED DISTRICTS

Board staff shall prepare an analysis of the financial statements and operations of a financially distressed ECD and present its findings, evaluation, and recommendations at an open meeting of the Board. The ECD board chairman and director of the financially distressed ECD are encouraged to attend this meeting and to respond to questions from the Board regarding the ECD's financial status.

Tenn. Code Ann. § 7-86-305 provides that as a means to restore financial stability to financially distressed ECDs and to ensure continued 911 service for the benefit of the public, the Board may study the possible consolidation or merger of two (2) or more adjacent ECDs, if at least one (1) such ECD is financially distressed. A merger or consolidation affecting a non-financially distressed ECD shall not occur without the prior approval of the board of directors of the non-financially distressed ECD. In the event that the Board determines that such a consolidation or merger is in the best interest of the public, and after holding public hearings within the service areas of the affected ECDs, the Board may order the consolidation or merger, provided that such action shall not threaten the financial integrity or stability of the affected ECDs, or the level and quality of 911 service.

If the Board in its evaluation concludes that the ECD cannot satisfy its financial obligations to the extent that the continued operation of the ECD is at risk, the Board may elect to confirm the financially distressed designation. In determining whether an ECD will be confirmed as a financially distressed ECD, the Board shall not consider the ECD's depreciation costs as an operating expense. Factors the Board may consider include, but are not limited to, the following:

1. Cash and reserve balances in relation to operating budgets.
2. Amount of the negative changes in net position in relation to revenues.
3. Recurring or non-recurring nature of expenditures causing negative changes.

If the Board concludes after evaluation that the ECD is not financially distressed, the provisions for ECDs with a negative change in annual net position described in Section V of this policy shall be followed.

IV. BOARD SUPERVISION OF FINANCIALLY DISTRESSED DISTRICTS

Financially distressed ECDs shall be subject to the following guidelines until the ECD demonstrates a positive change in net position, without considering depreciation as an operating cost, on audited financial statements for two (2) consecutive years.

1. A balanced budget must be adopted or an unbalanced budget shall be explained to the Board. A balanced budget is one in which operating expenditures include depreciation and expenditures do not exceed revenues. A copy of any proposed budget shall be provided to the Board at least ten (10) days prior to any ECD board meeting in which the ECD budget or any amendment to the budget is on the agenda to be discussed or approved.

2. Line item expenditures authorized by the budget shall not be exceeded. Any projected debt or anticipated expenditure with a cost in excess of five thousand dollars ($5,000), or which increases budgeted payroll costs over one thousand dollars ($1,000), must be requested and approved by the Board. This applies to purchases and expenditures involving partial payments of less than five thousand dollars ($5,000), provided the payment totals more than five thousand dollars ($5,000) over time. Subject to the provisions of Tenn. Code Ann. § 7-86-306, the Board executive director is authorized to approve or deny such requests. If such a request is denied by the Board executive director, the ECD may appeal the decision to the Board at a regularly scheduled meeting.

3. The board of directors of a financially distressed ECD shall meet at least bi-monthly (six times per year) in order to review and consider financial statements, operations, and efforts to end distressed status. Copies of all ECD board of directors meeting minutes and financial reports required under Tenn. Code Ann. § 7-86-123 shall be provided to the Board. Minutes shall be filed with the Board no later than seven (7) days after approval; financial reports shall be filed no later than seven (7) days after each ECD meeting.

4. All ECD board meetings and hearings to be held by the ECD board of directors shall be notified in writing to Board staff no less than ten (10) days in advance of such meeting or hearing. Reasonable notice of emergency meetings shall be provided to the Board.

5. ECD boards of directors and staff shall work with Board staff to accomplish a state of sound financial health.

V. DISTRICTS WITH NEGATIVE CHANGE IN NET POSITION

ECDs with a negative change in net position for one or more consecutive fiscal years, with such change being greater than the depreciation expenses recorded for the corresponding fiscal year, shall be offered assistance and guidance by Board staff and must comply with the following:

1. An ECD with one year of negative change greater than recorded depreciation expense, and not confirmed by the Board as financially distressed, shall:

    a. Be notified by Board staff in writing to the ECD director and ECD board chair regarding the existence of the negative change in net position and offered assistance and guidance by Board staff.

    b. Work with Board staff to try to improve the ECD's financial health.

2. An ECD with two or more consecutive years of negative changes greater than recorded depreciation expense, and not confirmed as financially distressed, shall:

    a. Be notified by Board staff in writing to the ECD director and ECD board chair regarding the existence of the two or more consecutive years of

TN Department of Commerce & Insurance

negative change in net position and offered assistance and guidance by Board staff.

b. Adopt a balanced budget or explain to the Board an unbalanced budget. A balanced budget is one in which operating expenditures include depreciation and expenditures do not exceed revenues.

c. Provide copies of all ECD board of directors meeting minutes and financial reports required under Tenn. Code Ann. § 7-86-123 to the Board. Minutes shall be filed with the Board no later than seven (7) days after approval; financial reports shall be filed no later than seven (7) days after each ECD meeting.

d. Work with Board staff to try to improve the ECD's financial health.

Effective: May 3, 2017.
Supersedes: Policy No. 16 (Adopted 01-15-04), Policy No. 6 (Effective August 5, 2015), and Policy 9 (Effective November 2, 2016).

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Source: Tennessee Emergency Communications Board 2017.

Appendix H: ECDs' Change in Net Position including Depreciation as an Operating Expense, 2012-2016

Emergency Communications District	Change in Net Position including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Anderson	$ (53,092)	$ 21,358	$ 521,842	$ 259,351	$ 141,641
Bedford	$ 85,539	$ 638,357	$ 34,132	$ 235,599	$ 74,427
Benton	$ 55,632	$ 37,439	$ 755,392	$ (23,352)	$ 111,261
Bledsoe	$ (34,096)	$ 227,099	$ 19,014	$ 128,801	$ 185,647
Blount	$ 605,043	$ 149,084	$ (40,044)	$ 253,263	$ 9,751
Bradley	$ (60,322)	$ (49,482)	$ 123,991	$ 338,879	$ (45,504)
Brentwood	$ 118,944	$ 115,190	$ 8,753	$ 421,650	$ 321,533
Bristol	$ 173,584	$ 207,779	$ 84,435	$ 166,753	$ 108,538
Campbell	$ 75,060	$ 40,524	$ 21,597	$ 220,127	$ 44,380
Cannon	$ (43,699)	$ (132,132)	$ 75,174	$ 75,174	$ 35,909
Carroll	$ 104,423	$ (353,904)	$ 95,588	$ 408,121	$ 277,915
Carter	$ 44,262	$ 178,120	$ 83,429	$ 421,063	$ 36,609
Cheatham	$ 30,828	$ 7,837	$ (9,001)	$ 572,651	$ 49,106
Chester	$ 147,648	$ 80,921	$ 77,375	$ 348,987	$ 75,153
Claiborne	$ (17,787)	$ (32,806)	$ (2,144)	$ 218,456	$ 34,376
Clay	$ 28,645	$ 17,665	$ 37,321	$ 221,035	$ 46,023
Clinton	$ 50,767	$ 21,358	$ 51,931	$ 202,499	$ 122,144
Cocke	$ 147,087	$ 209,278	$ 84,438	$ 120,419	$ 112,688
Coffee	$ (117,042)	$ 295,387	$ 188,257	$ 149,231	$ 352,710
Crockett	$ 114,665	$ 132,858	$ (13,062)	$ 54,954	$ (54,388)
Cumberland	$ (203,239)	$ (162,033)	$ (134,554)	$ 1,458	$ (79,766)
Davidson	$ (1,159,967)	$ (1,019,488)	$ (349,104)	$ 1,256,157	$ (6,995,885)
Decatur	$ 13,721	$ (762)	$ 242,692	$ 65,598	$ 65,670
DeKalb	$ 199,131	$ 192,321	$ 178,088	$ 214,227	$ 178,621
Dickson	$ (108,419)	$ (109,612)	$ (90,891)	$ 327,041	$ 269,271
Dyer	$ 8,600	$ (217,336)	$ (95,114)	$ 210,454	$ 126,956
Fayette	$ 141,158	$ 84,635	$ 28,960	$ 336,708	$ 138,858
Fentress	$ 54,658	$ (41,725)	$ 147,031	$ 104,539	$ 59,509
Franklin	$ 338,142	$ 429,095	$ 234,224	$ 159,513	$ 393,944
Gibson	$ (127,762)	$ (147,673)	$ 62,816	$ 189,739	$ 319,351
Giles	$ 100,796	$ 19,691	$ 45,471	$ 136,117	$ 152,047
Grainger	$ (29,047)	$ (4,414)	$ 223,908	$ 254,034	$ 55,087
Greene	$ 41,334	$ 60,849	$ 136,062	$ 204,413	$ 65,336
Grundy	$ 168,325	$ (1,302)	$ (11,156)	$ 43,345	$ 33,653
Hamblen	$ 216,568	$ 125,435	$ 72,493	$ 442,563	$ 129,730
Hamilton	$ 364,236	$ 294,735	$ 342,347	$ 595,363	$ 587,498

Emergency Communications District	Change in Net Position including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Hancock	$ 104,935	$ 54,299	$ 52,880	$ 228,208	$ 45,511
Hardeman	$ 62,261	$ 67,228	$ 48,379	$ 83,570	$ 298,467
Hardin	$ 96,396	$ 174,296	$ 156,948	$ 164,476	$ 283,255
Hawkins	$ (25,636)	$ 32,183	$ 153,337	$ 293,698	$ 48,087
Haywood	$ 104,960	$ 125,740	$ 97,484	$ 151,266	$ 68,042
Henderson	$ (20,360)	$ (77,530)	$ 176,124	$ 116,498	$ 68,284
Henry	$ 7,557	$ 234,601	$ 121,610	$ 391,909	$ 245,542
Hickman	$ 131,784	$ 421,193	$ 139,448	$ 222,988	$ 131,562
Houston	$ 167,006	$ (166,604)	$ (38,618)	$ 192,779	$ 82,460
Humphreys	$ (1,437)	$ (25,563)	$ 58,961	$ 66,420	$ (69,135)
Jackson	$ (8,985)	$ 27,045	$ 231	$ 172,312	$ 54,845
Jefferson	$ 123,083	$ 93,178	$ 218,453	$ 141,154	$ 429,541
Johnson	$ (279,653)	$ 90,366	$ 188,531	$ 183,577	$ 83,901
Kingsport	$ 156,267	$ 220,006	$ 113,175	$ 734,345	$ 220,193
Knox	$ 1,198,899	$ 1,500,650	$ 2,570,036	$ 3,030,978	$ 2,393,324
LaFollette	$ (47,682)	$ 39,183	$ 74,682	$ 181,100	$ 31,676
Lake	$ 20,157	$ 72,910	$ 23,834	$ 96,241	$ 256,692
Lauderdale	$ 41,814	$ 30,205	$ 115,610	$ (33,985)	$ 57,052
Lawrence	$ (62,226)	$ 40,927	$ 199,240	$ 151,170	$ (42,264)
Lewis	$ 67,931	$ (15,164)	$ (19,477)	$ 29,878	$ 37,431
Lincoln	$ (93,877)	$ (90,248)	$ 38,323	$ 241,592	$ 329,726
Loudon	$ (78,630)	$ (40,632)	$ 5,528	$ 203,623	$ 4,735
Macon	$ (70,922)	$ 142,268	$ 58,143	$ 144,324	$ 57,460
Madison	$ 451,583	$ 320,897	$ 601,336	$ 245,052	$ 532,193
Marion	$ (51,522)	$ 6,754	$ 336,213	$ 158,459	$ 163,322
Marshall	$ 14,186	$ (7,760)	$ 241,090	$ 101,609	$ 318,055
Maury	$ 77,691	$ 13,112	$ (128,768)	$ 318,567	$ (17,363)
McMinn	$ 487,961	$ 175,909	$ 129,372	$ 176,670	$ 167,635
McNairy	$ 20,243	$ (10,423)	$ 192,303	$ 357,362	$ 26,835
Meigs	$ 5,056	$ 33,728	$ (53,720)	$ 218,616	$ 37,180
Monroe	$ (45,570)	$ 657,659	$ 65,797	$ 93,232	$ 24,502
Montgomery	$ 489,753	$ 127,525	$ 78,038	$ (114,828)	$ 458,869
Moore	$ 26,356	$ 651,267	$ 114,543	$ 162,858	$ 102,611
Morgan	$ (94,277)	$ (164,723)	$ 132,064	$ 83,451	$ (92,001)
Oak Ridge	$ (71,407)	$ 82,964	$ 633,588	$ 122,533	$ 51,739
Obion	$ 152,081	$ 132,118	$ 113,228	$ 200,380	$ 144,485
Overton-Pickett	$ (146,482)	$ (163,261)	$ 322,072	$ 322,071	$ (96,428)
Perry	$ 120,502	$ 84,020	$ 49,680	$ 346,682	$ 107,434

Emergency Communications District	Change in Net Position including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Polk	$ (39,327)	$ 308,866	$ 11,496	$ 88,631	$ 84,797
Putnam	$ 44,888	$ (35,746)	$ 64,831	$ 183,664	$ 41,005
Rhea	$ 22,097	$ 537,492	$ 124,359	$ 180,648	$ 128,024
Roane	$ 221,852	$ 123,014	$ 234,216	$ 183,842	$ 72,346
Robertson	$ 68,856	$ (150,848)	$ (171,140)	$ 346,846	$ 7,514
Rutherford	$ 1,043,232	$ (142,127)	$ (680,314)	$ 453,259	$ (48,061)
Scott	$ 67,611	$ 109,431	$ 275,864	$ 275,864	$ 102,656
Sequatchie	$ 1,141	$ 47,732	$ 297,682	$ 119,932	$ 66,303
Sevier	$ 66,811	$ (24,196)	$ 204,340	$ 60,383	$ 264,298
Shelby	$ 114,826	$ 311,026	$ (1,740,169)	$ (458,847)	$ 3,137,371
Smith	$ (256,012)	$ 266,012	$ 2,830	$ (43,573)	$ 17,587
Stewart	$ (8,599)	$ 518,731	$ (10,720)	$ 23,945	$ 49,735
Sullivan	$ 88,260	$ 194,476	$ (56,614)	$ 53,075	$ 238,918
Sumner	$ 553,911	$ 607,476	$ 698,649	$ 400,684	$ 520,847
Tipton	$ 200,790	$ 46,492	$ 322,620	$ (41,660)	$ (76,588)
Trousdale	$ 116,647	$ 202,361	$ 132,357	$ 248,227	$ 105,885
Unicoi	$ (7,504)	$ 195,864	$ 293,901	$ 144,758	$ 90,853
Union	$ 24,180	$ 65,480	$ 35,512	$ 91,929	$ 51,355
Van Buren	$ (150,020)	$ (97,524)	$ 121,650	$ 131,162	$ 96,586
Warren	$ 33,247	$ 19,850	$ (70,417)	$ (49,259)	$ 119,501
Washington	$ 105,882	$ 4,357	$ (56,169)	$ 339,770	$ 5,312
Wayne	$ (28,650)	$ (18,459)	$ 181,561	$ 142,744	$ (1,212)
Weakley	$ (15,162)	$ (434,390)	$ 42,304	$ 150,563	$ 26,223
White	$ 346,137	$ 24,277	$ 289,129	$ 173,854	$ 413,093
Williamson	$ 273,079	$ (755,070)	$ 374,688	$ 480,969	$ 110,023
Wilson	$ 109,510	$ 161,120	$ 94,865	$ 183,490	$ 55,438

Source: Data from annual audits submitted to the Tennessee Comptroller of the Treasury by 100 ECDs, compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

Appendix I: ECDs' Change in Net Position not including Depreciation as an Operating Expense, 2012-2016

Emergency Communications District	Change in Net Position not including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Anderson	$ 66,900	$ 142,933	$ 581,043	$ 292,197	$ 176,752
Bedford	$ 200,213	$ 761,397	$ 158,266	$ 371,607	$ 196,693
Benton	$ 129,187	$ 107,960	$ 825,127	$ 42,674	$ 128,269
Bledsoe	$ 17,841	$ 271,358	$ 66,568	$ 178,847	$ 228,007
Blount	$ 840,259	$ 373,447	$ 187,330	$ 492,398	$ 178,914
Bradley	$ 50,853	$ 71,376	$ 257,831	$ 454,002	$ 60,415
Brentwood	$ 288,273	$ 283,679	$ 178,566	$ 595,290	$ 459,749
Bristol	$ 203,633	$ 232,562	$ 112,444	$ 213,680	$ 149,418
Campbell	$ 138,691	$ 99,714	$ 78,184	$ 269,817	$ 92,931
Cannon	$ 51,359	$ (41,578)	$ 150,309	$ 142,611	$ 76,326
Carroll	$ 220,016	$ (244,307)	$ 213,571	$ 521,392	$ 366,882
Carter	$ 123,816	$ 245,145	$ 125,539	$ 484,390	$ 104,021
Cheatham	$ 124,144	$ 103,037	$ 27,888	$ 598,478	$ 72,613
Chester	$ 195,421	$ 139,469	$ 152,089	$ 426,685	$ 133,740
Claiborne	$ 30,792	$ 26,297	$ 59,749	$ 271,963	$ 82,340
Clay	$ 88,501	$ 76,133	$ 100,947	$ 278,873	$ 92,118
Clinton	$ 66,680	$ 43,321	$ 75,161	$ 218,526	$ 142,343
Cocke	$ 217,274	$ 282,586	$ 150,735	$ 203,846	$ 196,716
Coffee	$ (55,588)	$ 391,657	$ 278,406	$ 251,040	$ 451,359
Crockett	$ 165,118	$ 188,946	$ 46,166	$ 125,349	$ 27,544
Cumberland	$ (38,422)	$ 26,240	$ 37,339	$ 200,918	$ 96,011
Davidson	$ 342,300	$ 618,147	$ 903,062	$ 2,733,410	$ (5,262,197)
Decatur	$ 75,444	$ 65,764	$ 308,612	$ 128,690	$ 107,953
DeKalb	$ 238,421	$ 246,167	$ 216,393	$ 238,422	$ 201,983
Dickson	$ 127,416	$ 138,695	$ 135,687	$ 543,518	$ 449,169
Dyer	$ 335,636	$ 224,835	$ 283,366	$ 588,934	$ 378,945
Fayette	$ 219,737	$ 157,217	$ 103,089	$ 336,708	$ 202,370
Fentress	$ 124,180	$ 26,890	$ 186,693	$ 147,638	$ 111,635
Franklin	$ 385,183	$ 463,104	$ 304,226	$ 229,378	$ 466,123
Gibson	$ 75,938	$ 50,876	$ 253,477	$ 325,707	$ 419,035
Giles	$ 156,882	$ 75,018	$ 89,186	$ 170,710	$ 190,567
Grainger	$ 60,986	$ 82,683	$ 310,558	$ 301,352	$ 120,287
Greene	$ 101,339	$ 121,379	$ 201,732	$ 261,761	$ 113,988
Grundy	$ 226,540	$ 57,734	$ 48,440	$ 98,091	$ 66,805
Hamblen	$ 292,557	$ 209,784	$ 169,611	$ 539,540	$ 192,676
Hamilton	$ 1,308,321	$ 1,203,558	$ 835,022	$ 1,116,464	$ 1,099,072

Emergency Communications District	Change in Net Position not including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Hancock	$ 154,622	$ 100,353	$ 98,159	$ 267,741	$ 79,820
Hardeman	$ 160,007	$ 164,398	$ 70,117	$ 190,072	$ 339,363
Hardin	$ 212,471	$ 284,099	$ 263,457	$ 269,975	$ 380,950
Hawkins	$ 74,876	$ 121,613	$ 234,622	$ 357,190	$ 110,728
Haywood	$ 186,602	$ 208,743	$ 190,773	$ 241,778	$ 151,552
Henderson	$ 90,984	$ 48,175	$ 291,154	$ 199,494	$ 146,111
Henry	$ 122,518	$ 369,824	$ 204,256	$ 427,103	$ 317,313
Hickman	$ 217,131	$ 482,625	$ 183,820	$ 293,303	$ 200,159
Houston	$ 298,227	$ (58,457)	$ 32,340	$ 244,943	$ 129,537
Humphreys	$ 69,356	$ 45,368	$ 131,693	$ 132,076	$ 31,877
Jackson	$ 24,883	$ 67,588	$ 39,479	$ 190,318	$ 69,610
Jefferson	$ 199,690	$ 168,989	$ 272,291	$ 204,157	$ 485,691
Johnson	$ (198,178)	$ 162,727	$ 256,909	$ 246,406	$ 125,122
Kingsport	$ 321,206	$ 321,139	$ 222,156	$ 776,795	$ 271,360
Knox	$ 2,015,494	$ 1,683,714	$ 2,740,993	$ 3,202,894	$ 2,580,378
LaFollette	$ 27,948	$ 134,422	$ 168,616	$ 251,671	$ 113,648
Lake	$ 72,439	$ 125,524	$ 74,286	$ 155,252	$ 296,353
Lauderdale	$ 104,472	$ 90,366	$ 176,440	$ 28,082	$ 118,025
Lawrence	$ 32,557	$ 135,710	$ 294,023	$ 257,882	$ 45,850
Lewis	$ 132,237	$ 48,003	$ 40,119	$ 89,500	$ 108,725
Lincoln	$ 100,675	$ 99,417	$ 215,940	$ 398,071	$ 454,964
Loudon	$ 37,331	$ 122,287	$ 177,549	$ 360,340	$ 171,507
Macon	$ (23,222)	$ 217,649	$ 148,522	$ 230,178	$ 164,319
Madison	$ 753,607	$ 634,017	$ 922,296	$ 579,862	$ 931,968
Marion	$ 96,029	$ 157,783	$ 479,891	$ 267,334	$ 243,953
Marshall	$ 197,537	$ 176,960	$ 415,884	$ 255,438	$ 435,882
Maury	$ 189,547	$ 117,949	$ (32,571)	$ 407,579	$ 52,310
McMinn	$ 600,446	$ 307,478	$ 273,269	$ 317,409	$ 167,635
McNairy	$ 83,133	$ 50,547	$ 249,129	$ 399,175	$ 62,897
Meigs	$ 59,998	$ 90,345	$ 11,359	$ 273,988	$ 79,113
Monroe	$ 50,047	$ 738,378	$ 105,480	$ 134,039	$ 68,524
Montgomery	$ 691,510	$ 334,308	$ 285,544	$ 96,546	$ 672,373
Moore	$ 86,259	$ 691,119	$ 137,872	$ 188,408	$ 129,661
Morgan	$ 27,150	$ (30,194)	$ 257,151	$ 194,459	$ 18,789
Oak Ridge	$ 121,699	$ 273,144	$ 760,201	$ 239,168	$ 173,516
Obion	$ 240,844	$ 207,124	$ 188,248	$ 265,392	$ 217,586
Overton-Pickett	$ 8,916	$ 15,043	$ 481,102	$ 474,663	$ 52,217
Perry	$ 175,460	$ 135,161	$ 106,631	$ 386,201	$ 148,463

Emergency Communications District	Change in Net Position not including Depreciation as an Operating Expense				
	2016	2015	2014	2013	2012
Polk	$ 75,389	$ 408,110	$ 104,391	$ 146,318	$ 127,357
Putnam	$ 170,349	$ 113,958	$ 300,868	$ 397,454	$ 209,723
Rhea	$ 116,803	$ 696,721	$ 192,587	$ 250,348	$ 206,824
Roane	$ 324,153	$ 222,514	$ 323,113	$ 237,638	$ 124,772
Robertson	$ 255,479	$ 39,757	$ 21,857	$ 639,530	$ 205,986
Rutherford	$ 1,258,529	$ 20,698	$ (585,971)	$ 553,742	$ 105,918
Scott	$ 117,676	$ 157,890	$ 329,396	$ 321,811	$ 124,948
Sequatchie	$ 93,862	$ 137,182	$ 364,284	$ 139,648	$ 109,618
Sevier	$ 246,287	$ 195,021	$ 430,292	$ 270,359	$ 446,798
Shelby	$ 1,331,487	$ 1,499,333	$ (775,881)	$ 616,597	$ 3,874,696
Smith	$ (189,350)	$ 334,028	$ 77,588	$ 39,991	$ 101,765
Stewart	$ 58,297	$ 577,599	$ 37,209	$ 62,347	$ 82,429
Sullivan	$ 200,309	$ 312,739	$ 93,191	$ 136,394	$ 325,591
Sumner	$ 851,820	$ 905,385	$ 995,137	$ 677,756	$ 723,956
Tipton	$ 310,592	$ 146,474	$ 415,135	$ 103,048	$ 72,831
Trousdale	$ 162,270	$ 245,506	$ 168,652	$ 282,317	$ 139,288
Unicoi	$ 65,179	$ 256,183	$ 327,041	$ 175,252	$ 141,213
Union	$ 73,438	$ 108,708	$ 71,901	$ 120,827	$ 80,257
Van Buren	$ (48,412)	$ 10,584	$ 208,134	$ 185,067	$ 165,305
Warren	$ 122,853	$ 116,432	$ 43,506	$ 60,664	$ 232,627
Washington	$ 281,870	$ 166,609	$ 108,625	$ 445,676	$ 122,569
Wayne	$ 49,493	$ 60,224	$ 255,577	$ 201,235	$ 64,697
Weakley	$ 40,832	$ (377,740)	$ 103,055	$ 210,085	$ 89,750
White	$ 463,088	$ 143,237	$ 409,262	$ 260,786	$ 484,834
Williamson	$ 313,065	$ (699,880)	$ 448,911	$ 649,820	$ 342,721
Wilson	$ 221,614	$ 287,187	$ 235,657	$ 306,766	$ 171,177

Source: Data from annual audits submitted to the Tennessee Comptroller of the Treasury by 100 ECDs, compiled by and received in an email from Jim Barnes, fiscal director, Tennessee Emergency Communications Board, June 27, 2017.

Appendix J: Comparison of Amounts Distributed to ECDs Using the Current Distribution Model and Four Alternative Models

Emergency Communications District	Actual Base Distribution in Fiscal Year 2016*	Actual Base Plus Excess Distribution Fiscal Year 2016	Call Volume Distribution	Population Distribution	Base plus Call Volume for Excess Distribution	Base plus Population for Excess Distribution
Anderson	$ 390,210	$ 397,728	$ 442,532	$ 503,040	$ 398,575	$ 399,719
Bedford	611,706	623,492	357,020	580,925	618,455	622,687
Benton	281,904	287,335	122,293	212,590	284,216	285,922
Bledsoe	292,854	298,496	67,008	166,008	294,121	295,992
Blount	1,395,630	1,422,519	1,346,197	1,585,947	1,421,076	1,425,608
Bradley	1,292,694	1,317,600	1,373,070	1,275,914	1,318,648	1,316,812
Brentwood	864,126	880,775	157,710	477,808	867,107	873,158
Bristol	473,664	482,790	231,151	344,264	478,033	480,171
Campbell	479,820	489,065	383,769	428,816	487,074	487,926
Cannon	291,630	297,249	65,071	177,934	292,860	294,993
Carroll	396,564	404,204	185,402	367,729	400,069	403,515
Carter	775,092	790,025	642,910	740,358	787,245	789,087
Cheatham	484,602	493,939	271,609	504,174	489,736	494,132
Chester	291,342	296,955	152,544	220,867	294,225	295,517
Claiborne	534,510	544,808	439,154	415,317	542,811	542,361
Clay	254,928	259,840	27,668	101,351	255,451	256,844
Clinton	223,554	227,861	82,953	126,878	225,122	225,952
Cocke	529,164	539,359	472,335	459,784	538,092	537,855
Coffee	600,504	612,074	565,173	680,690	611,187	613,371
Crockett	246,954	251,712	121,673	188,055	249,254	250,509
Cumberland	871,794	888,591	499,009	722,682	881,227	885,454
Davidson	6,352,152	6,474,537	10,017,063	8,079,694	6,541,499	6,504,878
Decatur	249,090	253,889	130,340	151,581	251,554	251,955
DeKalb	412,098	420,038	123,039	241,393	414,424	416,661
Dickson	487,764	497,162	475,117	640,335	496,745	499,868
Dyer	595,050	606,515	418,391	494,247	602,959	604,392
Fayette	537,174	547,524	398,994	495,252	544,716	546,536
Fentress	320,898	327,081	106,622	231,542	322,913	325,275
Franklin	473,622	482,747	234,652	529,277	478,058	483,627
Gibson	763,350	778,057	450,727	640,555	771,870	775,458
Giles	543,360	553,829	353,593	380,145	550,044	550,546
Grainger	388,560	396,046	151,451	292,113	391,423	394,082
Greene	713,502	727,249	617,354	887,427	725,172	730,277
Grundy	315,168	321,240	147,974	176,671	317,965	318,508
Hamblen	894,924	912,166	792,275	806,369	909,900	910,166
Hamilton	5,095,614	5,193,789	5,180,510	4,337,962	5,193,539	5,177,612

Emergency Communications District	Actual Base Distribution in Fiscal Year 2016*	Actual Base Plus Excess Distribution Fiscal Year 2016	Call Volume Distribution	Population Distribution	Base plus Call Volume for Excess Distribution	Base plus Population for Excess Distribution
Hancock	225,900	230,252	42,346	87,916	226,700	227,562
Hardeman	368,166	375,259	357,766	351,368	374,929	374,808
Hardin	416,328	424,349	360,125	335,549	423,135	422,671
Hawkins	713,610	727,359	460,016	695,942	722,305	726,765
Haywood	311,136	317,131	347,334	242,218	317,701	315,715
Henderson	389,808	397,318	321,703	358,021	395,889	396,575
Henry	446,592	455,196	215,876	416,825	450,673	454,471
Hickman	323,916	330,157	187,911	318,324	327,468	329,933
Houston	264,744	269,845	34,845	108,635	265,403	266,797
Humphreys	378,654	385,949	153,190	239,007	381,550	383,172
Jackson	282,414	287,855	41,799	150,047	283,204	285,250
Jefferson	692,004	705,337	554,692	662,782	702,489	704,532
Johnson	373,758	380,959	98,923	235,217	375,628	378,204
Kingsport	712,182	725,903	543,838	621,499	722,462	723,930
Knox	5,938,206	6,052,615	6,175,374	5,572,618	6,054,936	6,043,542
LaFollette	249,936	254,751	188,507	96,129	253,499	251,753
Lake	198,678	202,506	52,578	100,977	199,672	200,587
Lauderdale	389,958	397,471	346,366	358,614	396,505	396,737
Lawrence	601,494	613,083	352,078	539,810	608,149	611,698
Lewis	252,372	257,234	99,693	156,790	254,256	255,336
Lincoln	424,242	432,416	231,300	430,118	428,614	432,372
Loudon	572,430	583,459	444,618	626,024	580,834	584,263
Macon	422,376	430,514	97,134	286,840	424,212	427,798
Madison	1,115,310	1,136,798	1,961,688	1,267,288	1,152,391	1,139,265
Marion	352,290	359,077	333,650	364,055	358,597	359,172
Marshall	528,432	538,613	204,476	394,740	532,297	535,894
Maury	1,141,992	1,163,994	745,012	1,043,752	1,156,075	1,161,722
McMinn	582,480	593,702	648,722	673,857	594,742	595,218
McNairy	402,204	409,953	304,343	336,181	407,957	408,559
Meigs	248,472	253,259	129,024	151,529	250,911	251,336
Monroe	481,482	490,759	434,311	573,976	489,692	492,332
Montgomery	1,971,228	2,009,207	2,377,545	2,221,835	2,016,170	2,013,226
Moore	194,004	197,742	29,878	82,024	194,569	195,554
Morgan	362,988	369,982	138,859	283,475	365,613	368,346
Oak Ridge	525,054	535,170	326,075	378,147	531,218	532,202
Obion	536,064	546,392	304,666	410,082	541,823	543,816
Overton-Pickett	644,520	656,938	132,377	350,169	647,022	651,139
Perry	263,562	268,640	65,394	102,047	264,798	265,491

Emergency Communications District	Actual Base Distribution in Fiscal Year 2016*	Actual Base Plus Excess Distribution Fiscal Year 2016	Call Volume Distribution	Population Distribution	Base plus Call Volume for Excess Distribution	Base plus Population for Excess Distribution
Polk	270,738	275,954	198,342	216,922	274,487	274,838
Putnam	756,126	770,694	565,247	932,423	766,811	773,751
Rhea	496,824	506,396	319,766	410,108	502,868	504,576
Roane	664,518	677,321	607,270	659,107	675,997	676,977
Robertson	808,842	824,426	731,923	854,576	822,677	824,996
Rutherford	1,627,038	1,658,386	2,093,990	3,385,710	1,666,620	1,691,036
Scott	322,044	328,249	168,315	286,582	325,226	327,461
Sequatchie	311,052	317,045	139,207	181,944	313,683	314,491
Sevier	1,019,718	1,039,365	1,165,985	1,158,924	1,041,758	1,041,625
Shelby	8,837,052	9,007,312	20,896,513	11,959,960	9,232,048	9,063,125
Smith	302,676	308,508	106,398	247,104	304,687	307,347
Stewart	267,810	272,970	107,764	171,784	269,847	271,057
Sullivan	1,019,424	1,039,065	827,865	1,092,926	1,035,073	1,040,083
Sumner	1,360,488	1,386,700	1,116,189	2,071,169	1,381,587	1,399,638
Tipton	729,642	743,700	619,614	787,507	741,354	744,528
Trousdale	208,506	212,523	40,707	101,467	209,275	210,424
Unicoi	364,716	371,743	144,572	236,106	367,449	369,179
Union	311,250	317,247	166,874	246,369	314,404	315,907
Van Buren	231,672	236,136	38,099	71,529	232,392	233,024
Warren	673,152	686,121	276,005	513,638	678,369	682,861
Washington	1,839,444	1,874,884	1,856,084	1,585,548	1,874,529	1,869,415
Wayne	310,374	316,354	103,269	219,449	312,326	314,522
Weakley	436,416	444,824	191,934	451,520	440,044	444,951
White	479,496	488,734	184,136	333,164	482,977	485,794
Williamson	1,507,320	1,536,361	926,316	1,883,927	1,524,830	1,542,931
Wilson	1,091,796	1,112,831	778,516	1,469,693	1,106,512	1,119,577
Total	$ 80,272,692	$ 81,819,277	$ 81,819,280	$ 81,819,277	$ 81,819,280	$ 81,819,280

*Effective July 1, 2016, 55 districts receive an increased base amount, totaling a $2 million increase to the distribution amount statewide.

Note: Some totals are different because of rounding.

Sources: To develop the hypothetical scenarios for distributing all revenue based on call volume or population or maintaining the current base distribution while distributing any excess revenue based on call volume or population, Commission staff used call volume data, population data, and fiscal year 2016 base and excess distribution amounts received in emails from Curtis Sutton, executive director, and Jim Barnes, fiscal director, Tennessee Emergency Communications Board, February and March 2017.

Appendix K: TECB 911 Revenue Standards

STATE OF TENNESSEE
TENNESSEE EMERGENCY COMMUNICATIONS BOARD
DEPARTMENT OF COMMERCE & INSURANCE
500 JAMES ROBERTSON PARKWAY
NASHVILLE, TENNESSEE 37243-0582
615-253-2164

911 REVENUE STANDARDS

Pursuant to Tenn. Code Ann. § 7-86-306(a)(11), The Tennessee Emergency Communications Board is required to establish operating standards concerning acceptable uses of revenue for emergency communications districts ("ECDs"). Accordingly, the board hereby establishes the following required, permissible and prohibited uses of 911 revenue in order to ensure the appropriate expenditure and use of 911 funds by ECDs.

All funds received by ECDs are public funds and are limited to purposes for the furtherance of 911, as set forth in Title 7, Chapter 86, Part 1 of the Tennessee Code Annotated. See Tenn. Code Ann. § 7-86-102(d). Funds received by ECDs should only be used to obtain emergency services for law enforcement and other public service efforts requiring emergency notification of public service personnel. Funds received from all sources shall be used exclusively in the operation of the ECD. *Id.*

"Operation of the ECD" includes, among other things, providing "911 service," which means regular 911 service, enhanced universal emergency number service, or enhanced 911 service that is a telephone exchange communications service whereby a public safety answering point may receive telephone calls dialed to the telephone number 911. See Tenn. Code Ann. § 7-86-103(1). "911 service" also includes the lines, and may include the equipment, necessary for the answering, transferring and dispatching of public emergency telephone calls originated by persons within the serving area who dial 911. *Id.*

Effective Date: August 3, 2016.

Required Uses of 911 Revenue

The following items are required uses of 911 surcharge revenue necessary to provide 911 service. These expenditures must be provided for before an ECD may consider spending revenue on other permissible items, goods or services.

1. **Lease, purchase, modification, upgrade and/or maintenance of equipment, systems and devices necessary to provide reliable and up-to-date 911 service. ECDs shall routinely maintain and/or upgrade such equipment to ensure equipment is in good working condition so as to prevent any degradation of 911 service. Such items include necessary hardware, software, equipment and other services to ensure compliance with the TECB Minimum Technical Operating Standards, which includes, but is not limited to, the following:**
    a. **Controller/Telephone System**
    b. **GIS Mapping System**
    c. **Emergency Generator & Uninterruptible Power Supply**
    d. **TTD or Other Equipment Necessary to Provide Hard-of-Hearing Services**
2. **Annual audits, pursuant to Tennessee Code Annotated § 7-86-113.**
3. **Premiums on surety bonds, pursuant to Tenn. Code Ann. § 7-86-119.**
4. **Public meeting notices or other legal notices required by the Open Meetings Act (Tenn. Code Ann. Title 8, Chapter 44, et seq.)**
5. **All other expenditures required by law.**

Permissible Uses of 911 Revenue

The following items are permissible uses of 911 surcharge revenue. Such items may be used in the provision of 911 service, provided they are only used exclusively in the operation of the ECD. These items are permissible for ECD affiliated PSAPs. The Permissible Uses of 911 Revenue presume an ECD has the budgetary resources, and that such expenditures are provided for within the ECD's annual budget.

The order of the items in this list does not constitute any priority that should be given to the items and this list is not exhaustive of all permissible expenditures of 911 surcharge revenue that may be used exclusively in the operation of the ECD.

1. **Lease, purchase, maintenance and/or upgrade of additional equipment, hardware, software, systems etc. for additional/backup PSAPs.**

2. **Equipment necessary for the operation of the ECD, including but not limited to the following:**

    a. **Radio Equipment**
    b. **Computer Aided Dispatch ("CAD") Equipment**
    c. **Geographical Positioning System ("GPS")/Addressing Equipment**
    d. **Logging Recorder Equipment**
    e. **Furniture and Fixtures**
    f. **Other necessary equipment and/or supplies**

3. **Employment and/or retention of employees, experts, or consultants hired by the Board of Directors of an Emergency Communications District pursuant to Tenn. Code Ann. § 7-86-105(g) and (h).**

4. **Construction, lease, purchase and/or maintenance of buildings or other facilities.**

5. **Payments of debt service pursuant to Tenn. Code Ann. §§ 7-86-114 and 7-86-121.**

6. **Addressing, mapping, master street address guides and location related equipment and systems related to providing 911 service.**

7. **911 education and outreach.**

8. **Acquisition and maintenance of insurance.**

9. **Reasonable board meeting expenses.**

10. **Employee uniforms.**

11. **Pagers, cell phones, and other personal communication devices.**

12. **Licensing fees.**

13. **Lawsuit settlement expenses and other legal expenses.**

14. **Dues and memberships to professional organizations for employees of an ECD and board members of an ECD. Dues and membership to Chamber of Commerce for the ECD.**

15. **Issuance of bonds and notes for legal, engineering, fiscal services, and interest during construction and for six months after the estimated date of completion of construction, pursuant to Tenn. Code Ann. § 7-86-114(a).**

16. **Travel expenses pursuant to Tenn. Code Ann. § 7-86-125.**

17. **Service recognition awards and ceremonies for members of an ECD Board of Directors, employees of an ECD or ECD affiliated PSAP and members of the public. Awards shall be plaques, trophies or similar items.**

18. **Expenditures for CJIS/NCIC/TBI/TIES and associated costs are permissible, if and only if, an ECD is providing law enforcement dispatch services pursuant to an interlocal agreement between the ECD and a law enforcement services provider in accordance with the Interlocal Cooperation Act, Tenn. Code Ann. § 12-9-101, et seq.**

19. **Contracts, interlocal agreements and other agreements to the extent permitted by applicable law.**

20. **Responder and dispatch surveys.**

21. **Facility Relocation.**

22. **Training ECD board members and ECD employees.**

23. **Impact payments made pursuant to an interlocal agreement.**

24. **Radio/communications and location equipment for emergency responders direct dispatched by the ECD.**

25. **Vending Machines. Provided, however, that all proceeds from vending operations shall be deposited to the ECD's official bank account in the same manner as all other receipts. All disbursements related to vending operations shall be paid by official check of the ECD in the same manner as all other disbursements. The machines shall be operated on at least a break-even basis. Provided further that, in all cases involving vending facilities, the Tennessee Department of Human Services (DHS) shall be contacted to determine requirements for compliance with Tenn. Code Ann. § 71-4-501, et seq., and any other applicable state or federal laws.**

26. **Emergency notification systems (*e.g.,* reverse 9-1-1, etc.) used to perform broadcasts of public warnings issued by various government agencies.**

27. NOAA Weather Radios, weather radar, and other civil emergency and weather warning products for installation in a PSAP to be used for alerting 911 personnel of impending dangers and warnings issued by various government agencies.

28. Any other equipment, goods or services used exclusively in the operation of the district.

Prohibited Uses of 911 Revenue

The following items represent prohibited expenditures not related to the operation of the ECD, regardless of the source of revenue or the budgetary resources of an ECD. This list is not exhaustive.

1. **Emergency response equipment or emergency response personnel that are not necessary for dispatching "911 Service," as defined in Tenn. Code Ann. § 7-86-103(1).**

2. **Purchase or lease of emergency response vehicles, law enforcement vehicles, vehicles for public safety emergency services providers, as defined in Tenn. Code Ann. § 7-86-103(19), other political subdivision vehicles, and any other vehicles not designated for exclusive use for or by an ECD.**

3. **Purchasing, installation, and maintenance of public or private road signs.**

4. **Gifts, gift cards and flowers, other than those deemed permissible under Permissible Uses, above.**

5. **Entertainment expenses, other than those deemed permissible under Permissible Uses, above.**

6. **Civic Club Dues, other than those deemed permissible under Permissible Uses, above.**

7. **Purchasing, installation, and maintenance of outdoor warning sirens.**

8. **Alcohol.**

Source: Tennessee Emergency Communications Board. 2016. "911 Revenue Standards."

Appendix L: Guiding Principles for Funding 911 from the FCC, NENA, NASNA, and CTIA

FCC Guiding Policy Principles for any State Funding Mechanism

As NENA's 2007 *Funding 9-1-1 Into the Next Generation* accurately points out, NG9-1-1 will reflect an ecosystem comprised of shared networks, databases, and application environments fostering both traditional and new types of 9-1-1 costs that must be funded. In the new ecosystem, traditional stakeholders in the 9-1-1 community will work together in new and innovative ways, generating a more complex service setting that calls for the sharing of costs and financial obligations. As a matter of principle, 9-1-1 funding mechanisms should be:

- Predictable and stable

  This is necessary to support budgetary planning, as migration to NG9-1-1 will occur over several years and involve capital intensive projects. Revenue streams must be predictable and stable to support essential financial and budgetary planning.

- Based on a consumer's ability to request emergency services

  Funding 9-1-1 service should be directed to the potential end user that such service is intended to benefit. Such a "user fee" should be based on the use of any communication service that supports requests for emergency services.

- Reasonable, equitable, and non-discriminatory

  9-1-1 fees assessed on end-users should be set at a reasonable rate, equitably applied, and nondiscriminatory based on non-recurring and recurring costs to deploy 9-1-1 services as required by State law.

- Assessed on all services that can access NG 9-1-1 systems

  This is the complement to the second principle outlined above. 9-1-1 fees should be applied to any communications service with the capability of reaching 9-1-1 public safety agencies to request emergency services response.

- Technologically and competitively neutral

  9-1-1 funding policy should support a technologically and competitively neutral service environment and provide 9-1-1 agencies an opportunity to deploy and upgrade 9-1-1 technologies as advancements are made. Such funding mechanisms also should be flexible enough to accommodate the evolution of communication technologies.

- Designed to assure fees can only be used to support 9-1-1 systems

  As a communications user fee, funding should be dedicated to the provisioning, maintenance, and upgrade of emergency communication systems as defined by state statute and related state and local rules and policies. All revenues collected should be dedicated specifically for such purposes and not diverted to other uses. 9-1-1 funds should be collected and deposited in special purpose dedicated fund/accounts held outside the legislative appropriations process and not subject to restrictions beyond the scope of the authorizing 9-1-1 legislation. Language also should be considered that prohibits the diversion of 9-1-1 funds for purposes beyond the scope of the legislation.

- Designed to assure fair and equitable allocation of the funds collected to provide service to those that pay the fees

  Distribution of 9-1-1 fees should be allocated to authorized 9-1-1 stakeholders based on the relative share of cost and be distributed in a fair, consistent, and equitable manner.

- Designed to assure the revenues collected are sufficient to address transitional, provisioning, and ongoing operational costs

  Migrating to NG9-1-1 will involve transitional, provisioning, and operational costs. Any funding mechanism must be sufficient to support all three types of costs, including a combination of legacy and emerging NG9-1-1 costs during the initial stages of transition. The funding of ongoing operational costs must allow for the replacement of capital equipment and upgrades to 9-1-1 systems.

- Clearly identified and accountable

  9-1-1 fees billed to end user/devices should be identified separately as a "9-1-1 Emergency Services User Fee" on consumer/user bills. Service Providers billing 9-1-1 fees should be subject to audit to ensure proper billing and remittance of the 9-1-1 fee. 9-1-1 agencies should be subject to audit.

- Clear enough to avoid complicating the intergovernmental and sharing environment they support

  9-1-1 funding mechanisms shouldn't overly burden local government and should allow for flexibility in the planning, deployment, and operations of 9-1-1 systems, including intergovernmental and shared service environments.

Source: Task Force on Optimal PSAP Architecture 2016.

NENA Principles

Regardless of the ultimate model chosen, sufficient funds must be provided to pay for migration to and maintenance of a NG9-1-1 system (the network and associated control and database systems), as well as PSAP equipment and operational and training costs, to ensure all emergency communications are routed to the appropriate PSAP and information is efficiently shared amongst the appropriate emergency response entities. In assessing and collecting 9-1-1/emergency communications funds, some basic principles should be adhered to:

1) Funds collected must be used for their intended purpose—no raiding for non-9-1-1/emergency communications purposes;
2) Funding from all access methods—any communications device on which the public has an expectation to receive emergency services;
3) Technologically and competitively neutral;
4) Equitable allocation of revenues;
5) Constantly evolving system focused on improving level of service;
6) Efficient, accountable operations; and
7) Coordination, cooperation, and collaboration amongst all industry players and government entities.

Source: National Emergency Number Association 2007.

NASNA Position

The 911 funding model based on fees on wired and wireless telecommunications services must be adjusted to remain a reliable source of sustainable funding, although the rate of decline and the impact on 911 operations varies from state to state. As a result, changes to 911 funding mechanisms will occur at different times in different states. States could adopt one of the NASNA-recommended models or a combination of them.

A Single, Nationwide Funding Model Will Not Work

NASNA members are in agreement that no single solution will work for all states – there is simply too much diversity in the statutory and regulatory frameworks within which the state 911 programs operate and in the degree to which adequate funding for 911 is a problem. For example, some states define eligible uses of 911 funds broadly and others narrowly, which may have an impact on how far available funds will stretch. Some states (and counties) are able to fund 911 completely through their 911 fee and others are not, which means there will be variability in the degree to which states feel the need to make a change.

Defining 911 Service

NASNA debated the pros and cons of attempting to achieve a national consensus definition of what 911 service is, but ultimately reached the conclusion that funding for 911 has to be independent of any definitional considerations. What we mean by this has to do with the previous point about how states define eligible uses of 911 funds—whether broadly or narrowly. Although this clearly has an impact on available funding, NASNA's position is that variability exists among the states because each state's needs, circumstances, and policies are different. This variability is so much a part of our historic fabric as a nation that it is not going to change. We must work with it. That said, allowable uses of 911 funds must include everything necessary to prepare for a successful transition to NG911, including development of the necessary GIS data and infrastructure.

Everyone Should Help Pay for 911

NASNA believes that everyone who uses the 911 system should help to pay for that system. In many parts of the country with transient or seasonal populations, the people that use the local 911 system pay 911 fees in another region altogether (e.g., students, tourists, commuters). The ideal funding model would broadly capture everyone who uses or benefits from the system whether they live in the jurisdiction or are just passing through or visiting. Providers should help pay for the system, as well.

Fund Diversions

Much has been said and written about the importance of making 911 funds "raid proof." NASNA agrees that states should make every effort to enact laws to prevent the diversion of funds to non-911 purposes. Nevertheless, the reality is that state legislatures can enact such legislation, and a future legislature can take it away in an effort to address a larger economic crisis. Even where such provisions are in place, those responsible for the oversight of 911 funds need to maintain vigilance and be ready to advocate for the inviolability of the funds.

Timeframe for Adopting a New 911 Funding Model

Given the pace of NG911 deployments and the increase in funding sustainability issues, NASNA takes the position that the timeframe for replacing or augmenting the current funding mechanism is the next two to five

years. This range reflects the fact that some states may need to address this sooner than others. As previously noted, some states may not feel the need to change and will continue to rely on the current 911 funding model for years to come.

Source: National Association of State 911 Administrators 2015.

The National Wireless Association (CTIA) Policy Considerations as States Transition 9-1-1 Fees toward NG911

CTIA
The Wireless Association®

Expanding the Wireless Frontier

Policy Considerations As States Transition 9-1-1 Fees Toward NG911

The majority of states impose a wireless 9-1-1 fee to help defray the cost of emergency communications systems. Some states impose this fee at the state-level, others impose this fee at the local level, and some do both. At its inception, the Enhanced 911 ("E911") fee supported two phases. In Phase I, the Public Safety Answering Point ("PSAP") automatically receives the caller's wireless phone number. In Phase II, the PSAP receives both the caller's wireless phone number and location information. According to the National Emergency Number Association (NENA), as of October 2013 98.2% of the US population has Phase II capability.

The next "phase" of 9-1-1 will be the roll-out of Next Generation 9-1-1 ("NG911"). NG911 is intended to expand E911's current circuit-switch voice capability to a broader Internet Protocol-based ("IP") system. This system will accommodate voice, data and video transmission. As the federal government determines the national policy framework and standards for the NG911 ecosystem, it is inevitable that the states will also begin embarking on a similar examination of their 9-1-1 statutes, particularly with an eye toward funding NG911. In doing so, the goal should be to provide citizens with efficient emergency communications services, but to do so in a way that does not exacerbate further the current tax and fee burden on wireless consumers. As such, the wireless industry endorses the following policy considerations as states seek to update their 9-1-1 statutes with an eye toward NG911:

- **Fees Should be Imposed on End-user**

  For billed wireless service, the fee should be imposed on the consumer and collected as part of the normal billing process. For prepaid wireless service, the fee should be imposed on the end-user and collected from the customer at the time of the retail purchase.

- **Single, Statewide Rate Administered at State-level**

  Collection of a single, statewide fee reduces administrative burdens for providers and allows states and localities to utilize scarce public funds to leverage economies of scale and share resources when appropriate.

  Any efforts to establish a federal 9-1-1 fee should be strongly discouraged. Wireless consumers bear a tax burden more than two times the tax burden on regular goods and services. Imposing a federal 9-1-1 fee in addition to a state-level 9-1-1 fee is not only egregious, but severely violates the principles of rational tax policy and exacerbates further the discriminatory tax regime on wireless consumers.

- **State Legislature Should Set the 9-1-1 Rate in the Statute**

  The state legislature should set the rate of the statewide 9-1-1 fee in statute. If the state 9-1-1 agency believes the amount of the 9-1-1 fee is no longer appropriate, they should come before the legislature and justify the reason for an increase or decrease in the rate.

- **Funds Should be Spent on 9-1-1 systems**

  Wireless carriers annually collect over $2 billion dollars of dedicated taxes, fees and surcharges from wireless consumers. The intent of 9-1-1 fees is to specifically support the costs to establish and maintain the emergency communications systems so that PSAPs have the ability to call back wireless 9-1-1 callers and pinpoint their location within FCC prescribed guidelines. As PSAPs begin to examine and transition to NG911, it is very important that clearly-defined, uniform statewide definitions pertaining to "allowable costs" be administered across the state. 9-1-1 funding must be limited to "allowable costs" and should not

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be a funding source for the agencies' general budgets. "Allowable costs" could include the nonrecurring costs of establishing a 9-1-1 system, the cost of emergency telephone and dispatch equipment and costs for training for maintenance and operation of the 9-1-1 system. Conversely, "allowable costs" should not include the cost for leasing real estate, cosmetic remodeling of facilities, salaries or benefits or emergency vehicles. States should be prohibited from using the 9-1-1 fund to pay for other unrelated expenses.

- **Need for Accountability and Audits**

  9-1-1 operations and expenditures should not only be efficient, but also transparent and accountable to an oversight board and to the public through annual reports to the legislature and/or Governor. Annual reports should contain information regarding collections and expenditures and progress toward the goal of statewide deployment.

- **Justify Costs or Reduce Imposition**

  As with any system implementation involving significant capital expenditures, costs should decrease once states implement their NG911 system. Accordingly, states should carefully examine whether new technologies can decrease PSAP costs and adjust 9-1-1 fees accordingly.

- **PSAP Efficiencies**

  State-level coordination is practical from a technical and financial perspective. Consolidation of PSAPs into regional PSAPs covering as large a number of local jurisdictions as can be efficiently served should be encouraged.

- **Funding Should Ultimately be from General Revenue**

  States have historically funded some or all 9-1-1 costs from user fees on telecommunications service customers. However, as communications services evolve from traditional telecommunications services using the publicly switched telephone network (PSTN) to a host of Internet-protocol based services, states should examine whether the existing funding mechanism is still viable. Since emergency communications service is an essential government service and provides a common benefit for all citizens, a strong public policy argument exists that these services should be funded through the broad-based taxes that finance general fund expenditures. States should establish a long-term goal of phasing-out 9-1-1 fees on communications services and using general fund revenues for 9-1-1 programs. This will likely prove to be a more stable funding mechanism than depending on fees from an industry that is changing more rapidly than policymakers ever anticipated when 9-1-1 fees were first implemented.

Source: Email from Lisa Volpe McCabe, director, state legislative affairs, CTIA, January 26, 2017.

Appendix M: NENA Questions and Answers about Text-to-911

NENA
The 9-1-1 Association
1700 Diagonal Road | Suite 500 | Alexandria, VA 22314

Questions and Answers about Text-to-9-1-1

What is text-to-9-1-1?

Text-to-9-1-1 refers to the ability to send text messages to local 9-1-1 call centers during an emergency. Despite growing reliance on text messaging by millions of consumers, almost all 9-1-1 call centers today cannot receive text messages; they can only receive *voice* calls, about two-thirds of which are from wireless phones. A limited amount of caller data is automatically provided to the call centers, such as the caller's location, which may be only approximate if the call is placed from a wireless phone or a large, multi-unit building.

In a Next Generation 9-1-1 environment, consumers will be able to make voice, text, or video "calls" from any communications device via Internet Protocol-based networks. Such calls may provide additional useful information to the 9-1-1 center, such as the caller's medical history (if pre-approved by the caller), the schematics of a building, or images of an accident scene.

What are the benefits of text-to-9-1-1?

There will be many significant benefits to consumers, especially in cases when the caller cannot communicate verbally. For example, text-to-9-1-1 will be very useful to the approximately 34 million Americans who are hard of hearing, deaf, or speech-impaired. Text-to-9-1-1 could also help in situations when a crime is in process; the caller is facing domestic abuse; the caller is injured and cannot speak; or other scenarios.

When will text-to-9-1-1 be broadly available?

Under a historic agreement reached in December 2012 between NENA , the "Big 4" wireless carriers (Verizon, AT&T, Sprint, and T-Mobile), and the Association of Public-Safety Communications Officials International (APCO), text-to-9-1-1 capabilities will be in place on those four carriers' networks by May 2014. However, this does *not* mean that text-to-9-1-1 service will be available to *all* consumers by 2014; the *actual* availability will also hinge on the deployment of new systems and training at more than 6,000 9-1-1 centers across America.

That said, the "Big 4" agreement—and subsequent action by the FCC to begin codifying that agreement—is expected to hasten the day when all Americans can call for emergency aid via text messages.

NOTE: Until text-to-9-1-1 service is implemented in a given area, texters in those areas will receive an automatic "bounce-back" message indicating that text-to-9-1-1 is not yet available and advising to use another method to contact emergency authorities.

Even when text-to-9-1-1 becomes widely available, the best way to contact 9-1-1 will continue to be via voice communications whenever possible.

How does it work?

Wireless carriers will provide text-to-9-1-1 services in the format requested by local 9-1-1 call centers, e.g., through TTY, Internet Protocol (IP), or other technologies. The carriers will provision the service based on the call centers' requests.

What does this mean in terms of funding for 9-1-1?

There is growing concern that existing funding models for 9-1-1 cannot be sustained because of the growing number of devices and services not covered by traditional 9-1-1 fees, as well as the diversion of 9-1-1 funds to other uses in some states. NENA and its partners are exploring and advocating for new funding models to maintain high-quality 9-1-1 services and accelerate the momentum toward NG9-1-1.

Are there current pilots in progress?

The state of Vermont and several local governments across the United States are currently piloting text-to-9-1-1 programs. NENA will help share these successes and lessons learned with emergency call centers across the nation.

What are the major challenges to making text-to-9-1-1 work?

As noted above, the widespread availability of text-to-9-1-1 will depend not only on telecommunications carriers but also on the ability of more than 6,000 9-1-1 centers to implement new systems and training. A key challenge facing 9-1-1 call centers is selecting the text-to-9-1-1 platform that works best in their individual centers, out of more than a dozen solutions available today. Emergency call centers and authorities need to conduct extensive research and testing—including input from front-line call takers—to select the option that best fits their needs.

Why is text-to-9-1-1 needed now?

Simply put, text messaging is one of the primary ways people communicate today, especially younger people and members of the hearing and speech disabilities community. According to Forrester Research, an estimated 6 billion SMS messages are sent every day in the United States, or more than 2.2 trillion per year. The 9-1-1 community is constantly striving to meet the evolving needs of the public, and right now that means implementing text-to-9-1-1 solutions.

Updated June 2013

Source: http://www.nena.org/?page=textresources

National Emergency Number Association | 202-466-4911 | FAX 202-618-6370 | www.nena.org

Source: National Emergency Number Association. http://www.nena.org/?page=textresources.

Appendix N: TECB Chapter 0780-06-02 Dispatcher Training Regulations

RULES
OF
DEPARTMENT OF COMMERCE AND INSURANCE
EMERGENCY COMMUNICATIONS BOARD

CHAPTER 0780-06-02
DISPATCHER TRAINING REGULATIONS

TABLE OF CONTENTS

0780-06-02-.01 PURPOSE.

The purpose of this chapter is to establish minimum requirements for the training of and course of study for each emergency call taker or public safety dispatcher who receives an initial or transferred 911 call from the public in Tennessee. Nothing in these regulations should be construed to limit or restrict any additional training that an agency may elect to provide. Existing public and private training programs are encouraged to establish new curricula and modify existing programs to incorporate these minimum requirements. Such programs are urged to develop meaningful methods for measuring the knowledge, skill and ability gained through their training programs and to offer continuing education programs.

Authority: *T.C.A. §§ 7-86-205 and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

0780-06-02-.02 DEFINITIONS.

In this chapter, unless the context requires otherwise, the definitions in T.C.A. § 7-86-103 shall apply.

Authority: *T.C.A. §§ 7-86-103, 7-86-205, and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

0780-06-02-.03 MINIMUM TRAINING REQUIREMENTS.

(1) Each 911 or public safety dispatcher who receives an initial or transferred 911 call from the public in Tennessee shall be subject to the following minimum training requirements.

(a) No less than forty (40) hours of supervised on-the-job training; and

(b) No less than forty five (45) hours of public safety communications coursework which is administered or sponsored by an academy, agency, or post-secondary educational institution that:

1. Is capable of supporting a public safety communication student with practical experience on a communication console either through liaison with a Public Safety Communication Center or a fully functional communication console simulator; and

2. Maintains an accurate, comprehensive record system for all phases of the program which shall be available for inspection and shall include the following:

(Rule 0780-06-02-.03, continued)

(i) Attendance records;

(ii) Course outlines; and

(iii) Lesson plans.

(c) Continuing education of no less than ten (10) additional hours of public safety communications coursework every two (2) years after completion of the initial training. Two (2) hours must be related to 911 calls involving missing or exploited children.

(2) All emergency call takers or public safety dispatchers subject to T.C.A. § 7-86-205 employed after July 1, 2006 shall have six (6) months from the date of their employment to comply with the provisions of this rule.

Authority: *T.C.A. §§ 7-86-205 and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

0780-06-02-.04 MINIMUM COURSE OF STUDY REQUIREMENTS.

(1) The minimum course of study requirements for each 911 or public safety dispatcher who receives an initial or transferred 911 call from the public in Tennessee shall include course work of:

(a) No less than four (4) hours in the roles and responsibilities of 911 or public safety dispatchers, including but not limited to the following subjects:

1. The mission, ethics, and values of emergency communications providers;

2. Professionalism; telecommunicators as part of a public safety team;

3. Basic policies and procedures for telecommunicators and their organizations;

4. Overview of communities and agencies served;

5. Rules and regulations governing emergency communications;

6. Service area geography;

7. Emergency communications disaster plans;

8. Risk management;

9. CPR;

10. News/media relations;

11. Responder safety.

(b) No less than two (2) hours in legal concepts and principles, including but not limited to liability, applicable to the operation of:

1. Law enforcement agencies;

2. Fire/rescue agencies;

(Rule 0780-06-02-.04, continued)

3. Emergency medical services ("EMS") agencies;

4. Public safety communications agencies.

(c) No less than five (5) hours in interpersonal communication skills, including but not limited to the following areas:

1. Communication techniques and information processing, such as listening, hearing, diction, empathy, perception, and intuitiveness;

2. Customer service, including but not limited to discrimination and harassment issues;

3. Diversity issues relating to effective emergency communications, including but not limited to race, nationality, age, speech/hearing impairment, non-English speaking callers, and demographics.

(d) No less than four (4) hours in emergency communications technology, including but not limited to the following areas:

1. Operation of telephones, including but not limited to wireline, portable, wireless (including cellular and personal communication service ("PCS")), and text telephones for the speech/hearing impaired;

2. Basic and Enhanced 911;

3. Automatic Location Identification ("ALI") and Automatic Number Identification ("ANI");

4. Call tracing and records retrieval procedures;

5. Computerized mapping;

6. Logging recorders;

7. Computer aided dispatch ("CAD") systems;

8. Wireless, Phase I and II;

9. Voice Over Internet Protocol.

(e) No less than eleven (11) hours in communication techniques and call processing, including but not limited to the following areas:

1. Public relations;

2. Call receipt;

3. Interviewing;

4. Controlling the call;

5. Managing high risk/difficult calls, including but not limited to domestic violence;

6. Managing differing call categories, including law enforcement, fire/rescue, EMS, HAZMAT, or acts of terrorism;

(Rule 0780-06-02-.04, continued)

7. Managing differing call types and events, including in-progress, just-occurred, late, events requiring specific instructions, notifications;

8. The importance of obtaining proper information, including location, nature, injuries, weapons, chemicals, etc.;

9. Telematics;

10. Homeland Security issues, including but not limited to:

(i) Protocols and procedures (for example, call profiling, as in when to notify the FBI);

(ii) NIMS ("National Incident Management System"), if applicable; and

(iii) NORAD ("North American Aerospace Defense") call procedures and protocols (dealing with emergency calls from aircraft).

(f) No less than twelve (12) hours in radio communications and dispatch techniques, including but not limited to the following areas:

1. Procedures and protocols;

2. Radio discipline;

3. Rules of the Federal Communications Commission ("FCC") related to radios;

4. Radio coverage;

5. Consoles;

6. Responder safety.

(g) No less than two (2) hours in stress management, including but not limited to the following areas:

1. Causes;

2. Strategies for dealing with stress;

3. Peer support;

4. Critical incident stress debriefing.

(h) No less than five (5) hours in 911 calls involving missing or exploited children.

(2) Course work shall include practical exercises duplicating communication center practices in which the student performs the subject matter being taught.

(3) Course work shall include testing.

Authority: *T.C.A. §§ 7-86-205 and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

0780-06-02-.05 MINIMUM SUPERVISED ON-THE-JOB TRAINING REQUIREMENTS.

(1) The minimum on-the-job training/course of study requirements for each 911 or public safety dispatcher who receives an initial or transferred 911 call from the public in Tennessee shall include a period of supervised instruction of no less than forty (40) hours related to the following:

(a) Agency/department policies and procedures (including a written handbook containing such policies and procedures);

(b) Agency/department geographical area;

(c) Agency/department telephone system and equipment operations;

(d) Structure of local government and agencies being served;

(e) Local ordinances and requirements;

(f) Governmental and private resources;

(g) National Crime Information Center data and records, if applicable.

Authority: *T.C.A. §§ 7-86-205 and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

0780-06-02-.06 WAIVER.

In the event of a natural or manmade disaster which renders local emergency communications unable to remain operational without the assistance of individuals who have not completed the requirements included herein, said requirements are waived.

Authority: *T.C.A. §§ 7-86-205 and 7-86-306(a)(1).* ***Administrative History:*** *Original rule filed October 11, 2005; effective December 25, 2005. Repeal and new rule filed February 1, 2013; effective May 2, 2013.*

Source: Tennessee Emergency Communications Board 2013.