

Report for
Funding Review



Prepared for
**Ohio Department of
Administrative Services**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
ASSUMPTIONS.....	1
OVERVIEW OF CURRENT EXPENDITURES/BALANCES	1
RECOMMENDATIONS.....	2
NEXT STEPS	2
1. INTRODUCTION.....	4
1.1 BACKGROUND	4
1.2 FUNDING STATUTES AND ADMINISTRATIVE RULES.....	5
1.3 EMERGENCY SERVICES IP NETWORK STEERING COMMITTEE	5
2. METHODOLOGY.....	7
2.1 DATA COLLECTION.....	7
2.2 DATA ANALYSIS	7
2.3 ASSUMPTIONS	7
3. CURRENT FUNDING PROVISIONS.....	9
3.1 FUNDING FOR WIRELINE 9-1-1.....	9
3.2 LOCAL PUBLIC SAFETY ANSWERING POINT OPERATIONS	9
3.3 WIRELESS 9-1-1.....	10
3.4 CURRENT FUND DISTRIBUTION LAWS.....	10
3.5 OVERVIEW OF SURCHARGE DISTRIBUTION	11
3.6 OVERVIEW OF CURRENT EXPENDITURES/BALANCES.....	12
4. RECOMMENDATIONS.....	13
4.1 CURRENT FUND DISTRIBUTION INEFFICIENCIES	13
4.2 CONSIDERATIONS FOR FUNDING NEXT GENERATION 9-1-1	13
4.3 L.R. KIMBALL RECOMMENDED DISTRIBUTION MODEL.....	15
5. CONCLUSION.....	18
5.1 CONSIDERATIONS	18
5.2 NEXT STEPS.....	18
APPENDIX A—STATE FEES	20

EXECUTIVE SUMMARY

The Emergency Services IP Network (ESInet) Steering Committee and its subcommittees have worked hard together with L.R. Kimball over the past months to gather and compile information in an effort to provide the Ohio Legislature with an understanding of how 9-1-1 is funded in Ohio and what it will take to adequately prepare for Next Generation 9-1-1 (NG9-1-1). In Ohio, funding for emergency services communications reflects a shared approach between state and local governments. Historically Ohio's 9-1-1 professionals, the telecommunications industry, community service organizations and state and local government leaders have worked together to develop funding solutions that work for all parties and that have enjoyed broad public support. Future funding approaches must leverage and build on that history.

Assumptions

- L.R. Kimball assumes that all information provided by the ESInet Steering Committee, the Public Utility Commission of Ohio (PUCO), the Ohio Telecom Association and the county and Public Safety Answering Point (PSAP) level survey data is true and accurate.
- L.R. Kimball assumes that prior to changing distribution rules; the Ohio ESInet Steering Committee will have an NG9-1-1 roadmap and at least high level network cost estimates in place.
- Both L.R. Kimball and the ESInet Steering Committee assume the State will take a more active role in the implementation, operation and maintenance of a statewide NG9-1-1 ESInet, and that the State will aid in the coordination of resource sharing across counties and agencies.
- The funding models also assume that emergency response will remain a local response.
- L.R. Kimball assumes that the Ohio ESInet Steering Committee will be provided additional time and funding to continue the analysis needed to craft a comprehensive funding recommendation along with policies and procedures for distribution of funds.

Overview of Current Expenditures/Balances

L.R. Kimball prepared a Fund Analysis for the Steering Committee in May 2013; however, because of the unavailability of key financial data L.R. Kimball recommended further study of funding in Ohio. A survey was again sent to both the County 9-1-1 Coordinators and the individual PSAPs to request information on the cost of 9-1-1 per PSAP. L.R. Kimball reached out to the Ohio Telecom Association to gather information from the wireline providers in Ohio regarding the Bill and Keep system.

According to information provided by the counties, it appears as though the wireless Enhanced 9-1-1 (E9-1-1) surcharge accounted for approximately 14.24 percent of the total costs for wireless E9-1-1 and PSAP operations in 2012. **Of the 352 PSAPs in OH, 113 provided financial information related to expending 9-1-1 wireless surcharge funds in 2012.** L.R. Kimball utilized the financial information reported and did not project expenditures for those PSAPs that did not report financial information. Based on the survey responses, L.R. Kimball believes the amount of Wireless Funds expended is an accurate representation; however the amount of all other funds expended could potentially be twice as much. The amount produced by the Bill and Keep funding mechanism in 2012 was \$6,390,197 bringing the total cost for 9-1-1 in 2012 to \$230,472,577. The table below displays the numbers reported in the survey for the past three years.

	Wireless Funds Expended	All Other Funds Expended [^]	Bill and Keep [*]	Total 9-1-1 Cost As Reported
2010	\$30,831,575	\$191,624,106	\$6,390,197	\$228,845,878
2011	\$30,630,133	\$186,066,238	\$6,390,197	\$223,086,568
2012	\$27,926,004	\$196,156,376	\$6,390,197	\$230,472,577
*The Bill and Keep number reported by the Ohio Telecom Association for 2012 was utilized as an estimate for 2010 and 2011.				
[^] Funds as reported, expenses not projected for those PSAPs not responding to survey.				

Table 1—Survey Numbers

Although 14.24 percent is the average for all counties in 2012 based on the limited survey responses; there are several smaller counties that receive the minimum distribution amount, which will have trouble funding the transition to NG9-1-1 without assistance. In addition, those PSAPs that do not accept wireless calls receive no funding from the wireless E9-1-1 surcharge and most likely will not be able to fund the transition to NG9-1-1.

Recommendations

L.R. Kimball recommends that in order to provide the most adequate long-term funding source for 9-1-1 into the future, funding mechanisms should meet the following criteria:

-
- The funding method should be technology, vendor and competitively neutral, so it does not give competitive advantages to one telecommunications, broadband or data provider at the expense of other providers.
- The funds collected should be used only for their intended purposes and should not be re-allocated at the state or local level for non-9-1-1 purposes.
-
- The funding method should be easy to understand and administer.
- The funding method should be fair and equitable to all individuals and devices capable of accessing the current and future 9-1-1 network.
- The funding method should be stable, and therefore not require frequent legislative adjustments.

L.R. Kimball recommends that Ohio establish funding legislation that enacts one Statewide fee for any device that can access 9-1-1. The funds from the Statewide fee would be collected at the State level and remain in a dedicated account that allows any interest accrued to remain in the dedicated account. The fee should be based on the cost of providing those 9-1-1 services the State has approved and distributed per an interim method determined by the State. The distribution should not be based on the number of PSAPs per county.

Once the NG9-1-1 network is in place and operational for at least a year; L.R. Kimball recommends the Ohio 9-1-1 Coordinating Entity do a distribution study to revisit the distribution of funds; based at least partly on total 9-1-1 call volume. This can't be done until the new network is in place and call statistics are being tracked consistently in the same manner across the State.

Next Steps

L.R. Kimball recommends that the ESInet Steering Committee be given permission and funding to complete the remaining work needed prior to making a decision on a new funding model. The ESInet Steering Committee has worked hard to date; and additional work is needed to complete the process.

L.R. Kimball recommends the following next steps:

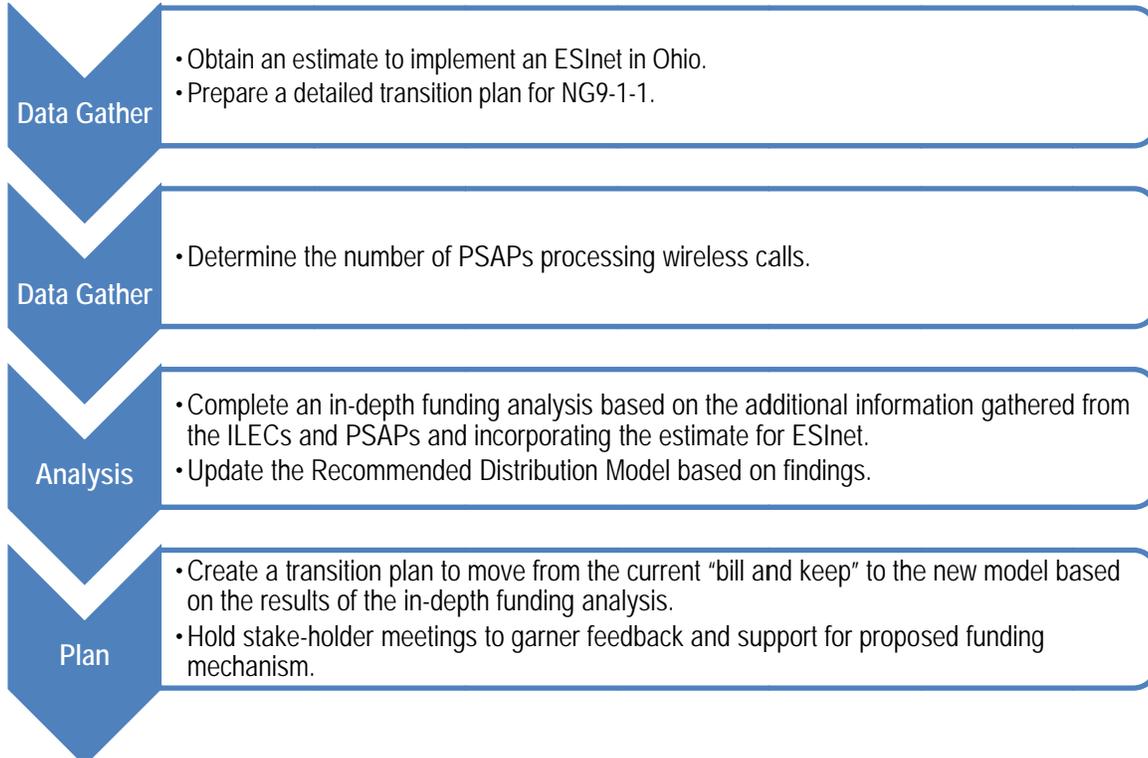


Figure 1—Next Steps

1. INTRODUCTION

The ESInet Steering Committee and its subcommittees have worked hard over the past months to gather and compile information in an effort to provide the Ohio Legislature with an understanding of how 9-1-1 is funded in Ohio and what it will take to adequately prepare for Next Generation 9-1-1 (NG9-1-1). The Technical Standards Subcommittee prepared a document entitled Tech Committee Recommendations v0.1.docx as a vehicle to organize the information that had been collected.

L.R. Kimball prepared a Fund Analysis for the Steering Committee in May 2013; however, because of the unavailability of key financial data L.R. Kimball recommended further study of funding in Ohio. A survey was again sent to both the County 9-1-1 Coordinators and the individual PSAPs to request information on the cost of 9-1-1 per PSAP. L.R. Kimball reached out to the Ohio Telecom Association to gather information from the wireline providers in Ohio regarding the Bill and Keep system.

In Ohio, funding for emergency services communications reflects a shared approach between state and local governments. Historically Ohio's 9-1-1 professionals, the telecommunications industry, community service organizations, and state and local government leaders have worked together to develop funding solutions that work for all parties and that have enjoyed broad public support. Future funding approaches must leverage and build on that history¹.

1.1 Background

In 1985 House Bill 491 established a methodology to allow local governments in Ohio to adopt 9-1-1 plans and put in place a countywide 9-1-1 system. While jurisdiction for 9-1-1 was given to the PUCO, 9-1-1 was mainly handled at a local level with the PUCO creating the regulatory framework.

Wireline telephone companies were offered a tax credit for their initial nonrecurring costs to implement 9-1-1. In addition, a Bill and Keep system was established that allowed the wireline telephone companies to bill a tariffed rate to their customers to recover the recurring costs for the 9-1-1 network. The Bill and Keep system was based on the actual costs of implementing and operating the 9-1-1 network.

With the growing adoption of cellular technology, the funding model was expanded in 2004 by House Bill (HB) 361, which provided for a wireless 9-1-1 surcharge to be collected on each wireless phone number with an Ohio billing address. The funds collected were kept in a dedicated account and made available to counties after they filed a 9-1-1 plan and began to implement enhanced wireless 9-1-1 services.

HB 361 created an Ohio 9-1-1 coordinator position to administer the funds along with the Ohio 9-1-1 Council to create operational and technical 9-1-1 standards. It also created a Wireless Advisory Board to consult with the coordinator and PUCO to create administrative rules and assist in creating a report to the General Assembly. HB 361 placed a sunset provision on the wireless 9-1-1 surcharge for December 31, 2008.

In 2008, Senate Bill 129 lowered the amount of the wireless 9-1-1 surcharge and extended it through December 2012. In addition, it increased the minimum amount distributed per county and created a limit on the number of PSAPs per county eligible for funding.

¹ Tech Committee Recommendations v0.1.docx, page 14

In 2012, HB509 created an ESInet Steering Committee to advise the State on the implementation, operation and maintenance of a Statewide ESInet to support NG9-1-1.

In December 2012, HB 360 further lowered the amount of the wireless 9-1-1 surcharge and removed the sunset provision, making the wireless 9-1-1 surcharge permanent. HB 360 revised the prepaid wireless surcharge to a percentage of the sales price and stipulated it will be billed at the point of sale. Oversight was moved to the Department of Public Safety and the Department of Taxation.

1.2 Funding Statutes and Administrative Rules

The 9-1-1 service in Ohio is governed by Chapter 128 of the Ohio Revised Code (ORC) and rules 4901:1-8-01 through 4901:1-8-06 of the Ohio Administrative Code (OAC).

ORC 128 provides direction for countywide 9-1-1 programs, municipal corporations or townships that wish to form a 9-1-1 program; changes to the wireless 9-1-1 surcharge; a new NG9-1-1 fund; instructions on fund disbursement; limitations on the use of funds and the structure of the 9-1-1 Council, Wireless Advisory Board and the ESInet Steering Committee.

The OAC 4901 details accounting practices, records retention requirements, reporting requirements and defines a public emergency for the purposes of outbound emergency notification. OAC 4901 requires wireless providers to follow generally accepted accounting principles and details how providers are to remit monies collected from the 9-1-1 wireless surcharge. In addition, it details the process a county must use in order to obtain permission to utilize funds from the 9-1-1 Government Assistance Fund for personnel costs.

1.3 Emergency Services IP Network Steering Committee

HB509 created a Statewide ESInet Steering Committee and assigned responsibility to generally advise the State on the implementation, operation and maintenance of a Statewide ESInet that would support State and local government NG9-1-1 and the dispatch of emergency service providers.² The ESInet Steering Committee was tasked with the following:

- On or before May 15, 2013, deliver an initial report to the speaker of the house of representatives, the president of the senate and the governor providing recommendations for the state to address the development of a statewide emergency services internet protocol network, which recommendations shall include a review of the current funding model for this state's 9-1-1 systems and may include a recommendation for a reduction in wireless 9-1-1 charges
- Examine the readiness of the state's current technology infrastructure for a Statewide emergency services Internet protocol (IP) network
- Research legislative authority with regard to governance and funding of a Statewide ESInet, and provide recommendations on best practices to limit duplicative efforts to ensure an effective transition to next-generation 9-1-1;
- Make recommendations for consolidation of PSAP operations in this state, including recommendations for accelerating the consolidation schedule established in section [§128.571](#) of the Revised Code, to accommodate NG9-1-1 technology and to facilitate a more efficient and effective emergency services system;
- Recommend policies, procedures and statutory or regulatory authority to effectively govern a Statewide ESInet
- Designate an NG9-1-1 Statewide coordinator to serve as the primary point of contact for federal initiatives

2 ORC §5507.02 (C)

- Coordinate with Statewide initiatives and associations such as the State interoperable executive committee, the Ohio geographically referenced information program council, the Ohio multi-agency radio communications system steering committee and other interested parties.³

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³ ORC 5507.02 Statewide Emergency Services Internet Protocol Network Steering Committee

2. METHODOLOGY

2.1 Data Collection

The ESInet Technical Standards Subcommittee prepared a document entitled *Tech Committee Recommendations v0.1.docx* as a vehicle to organize the information that had been collected. The factual information contained in this report is taken directly from that document; information provided by the PUCO; the Ohio 9-1-1 Council and Advisory Board Website, both rounds of PSAP surveys, Ohio Telecom Association and the Ohio Wireless E9-1-1 Report to the Ohio General Assembly 2011. In addition, L.R. Kimball researched the funding statutes, enabling Legislation and wireline tariffs in Ohio.

2.2 Data Analysis

L.R. Kimball performed the funding analysis based on its industry experience and expertise and from having conducted similar projects in other states. In addition, we considered the analysis already performed by the ESInet Steering Committee and its subcommittees and used it to the extent possible.

The primary areas of analysis included:

- State revenue from the wireless 9-1-1 surcharge
- State distributions of the wireless 9-1-1 surcharge revenues to PSAPs
- Telephone company tariffs
- State statutes and regulations
- Data collected from the County and PSAP surveys
- Documents and information the ESInet Steering Committee and its subcommittees provided to L.R. Kimball

Analysis continued to be hampered by the lack of certain essential information from some of the PSAPs. For example, financial information about what it costs local government to house and staff a 9-1-1 operation, and what local revenue sources generate in terms of funding was not available for 50 percent of the PSAPs. L.R. Kimball worked with the limited data provided and believes the information in this report is an accurate reflection of the cost of 9-1-1 for those PSAPs acting as primary wireless answering points. At this point in time, there is no way to predict the cost of 9-1-1 for the 50 percent of the PSAPs not reporting.

L.R. Kimball made numerous assumptions during the analysis, which are presented in the next section and throughout the report.

2.3 Assumptions

- L.R. Kimball assumes that all information provided by the ESInet Steering Committee, the PUCO, the Ohio Telecom Association and the county and PSAP level survey data is true and accurate.
- Both L.R. Kimball and the ESInet Steering Committee assume the State will take a more active role in the implementation, operation and maintenance of a Statewide NG9-1-1 ESInet, and that the State will aid in the coordination of resource sharing across counties and agencies.
- The funding models also assume that emergency response will remain a local response.
- L.R. Kimball assumes that prior to changing distribution rules; the Ohio ESInet Steering Committee will have an NG9-1-1 roadmap and at least high level network cost estimates in place.

- L.R. Kimball assumes that the Ohio ESInet Steering Committee will be provided additional time and funding to continue the analysis needed to craft a comprehensive funding recommendation along with policies and procedures for distribution of funds.

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3. CURRENT FUNDING PROVISIONS

3.1 Funding for Wireline 9-1-1

As previously noted, the Incumbent Local Exchange Carriers' (ILEC) costs for wireline 9-1-1 is paid for by a Bill and Keep system that allows wireline companies to assess a tariffed monthly fee on their subscriber's bills. AT&T, Century Link, Cincinnati Bell, Frontier and Windstream Ohio each have approved tariffs on file with the PUCO. The tariffs also permit the wireline companies to recover incremental costs associated with the routing of wireless 9-1-1 calls to the appropriate PSAP⁴. Four companies - AT&T, Embarq, Cincinnati Bell and Verizon - have tariffs to recover incremental costs associated with the routing of wireless 9-1-1 calls.

It is very important to understand that while the tariffed rates are known, it is not known how much revenue is generated by the fee or what it costs the ILECs to provide the service. L.R. Kimball worked with the Ohio Telecom Association to gather the 9-1-1 access line counts and amount of revenue generated by the "bill and keep" system in Ohio. The Ohio Telecom Association gathered the information from the 42 member companies and provided L.R. Kimball with an aggregate number of access lines and revenue for one month within the previous year. L.R. Kimball utilized that information to project out revenue for 2012. For the year ending December 2012, the member companies reported 2,609,080 access lines and monthly revenue of \$532,516.42 or \$6,390,197 per year.

3.2 Local Public Safety Answering Point Operations

Local PSAP operations and personnel costs are paid for at the local level. Counties have six options for financing the local operations.

1. Allocation of costs to local political subdivisions according to the formula included in the final County plan
2. Real property tax levy
3. Sales and use tax
4. Special assessment
5. Wireless 9-1-1 Government Assistance Funds
6. General Fund Revenue

A seventh option to impose a telephone access line charge was made available to only a few counties that at the time of their enactment were having difficulty in obtaining a method to finance their 9-1-1 plan.⁵

It is important to note that due to the limited timeframe for this report, and the limited number of responses to the PSAP survey; reliable information on local PSAP operations and funding is not available. Kimball recommends that the ESInet Steering Committee collect additional information from the PSAPs in order to obtain a better understanding of how PSAP operations are funded at the local levels and the true costs of 9-1-1 statewide in order to plan for a transition to NG9-1-1.

⁴ There are additional complexities which exist in transmitting the data associated with a wireless call versus those required in the transmission of a wireline call. In order for a wireline carrier to transmit the information associated with enhanced wireless 9-1-1, the carrier must make certain upgrades to its 9-1-1 system and take on additional maintenance costs. These additions and costs are incremental to the offering of enhanced wireline 9-1-1 and cannot be recovered through the wireline surcharge authorized by Ohio law.

⁵ County Commissioners Association of Ohio Handbook, section 105.05, page 9.

3.3 Wireless 9-1-1

The Ohio E9-1-1 system is an adjunct to the legacy wireline 9-1-1 system in operation in Ohio since 1988. The wireless capabilities provided by the E9-1-1 system are funded by a Statewide 9-1-1 surcharge assessed on wireless telephones, which the carriers collect and remit to the PUC). The rate is a flat 25 cents per month for each wireless phone. Wireless carriers collect the fee monthly from their subscribers, and the PUCO places the funds in the Wireless 9-1-1 Government Assistance Fund for distribution to each county according to a funding formula set forth in ORC 4931.64. The funds distributed to a county from this fee may be utilized, in addition to funding enhanced wireless 9-1-1 implementation and training costs, to pay for fees associated with the local wireline company's tariff.⁶

At this time it is still unknown how many of the 352 PSAPs in Ohio accept wireless calls. Of the PSAPs that responded to the ESInet Committee Survey, 189 responded as primary PSAPs that receive Phase II wireless calls, redirecting them to the appropriate non-wireless capable PSAP for dispatch. Of the 189, 113 provided financial information related to expending 9-1-1 wireless surcharge funds in 2012. L.R. Kimball assumes those 113 PSAPs are actually the primary wireless PSAPs in Ohio; however, it is possible that all 189 are primary wireless PSAPs. L.R. Kimball believes it is essential for the ESInet Steering Committee to determine the exact number of PSAPs processing wireless calls in order to accurately plan for a transition to NG9-1-1.

Public Safety Answering Points that aren't currently capable of accepting wireless calls also aren't capable of accepting nomadic Voice over Internet Protocol (VoIP) calls, and are going to be further from NG readiness. In addition, their personnel will require additional training in order to be ready to process NG9-1-1 calls. Nomadic VoIP providers deployed 9-1-1 in the same manner as wireless 9-1-1; the calls arrive at the PSAP and display on the equipment in a similar manner as wireless 9-1-1 calls. However, many cable VoIP providers partnered with an ILEC to deploy 9-1-1 in the same manner as wireline 9-1-1. Those 9-1-1 calls come into the PSAP and display in the same manner as a wireline 9-1-1 call; therefore whether a PSAP is capable of accepting wireless calls will not impact these deployments.

3.4 Current Fund Distribution Laws

Currently, the PUCO distributes the wireless 9-1-1 surcharge to the Counties per the funding formula set forth in ORC 4931.64 below. The Counties, in turn, distribute the funds to PSAPs within the county that are designated as primary answering points for wireless 9-1-1.

OCR 4931.64 specifies that the wireless 9-1-1 surcharge is distributed in the following manner:

- § 4931.64. Determination of number of wireless service subscribers in county and of county's share of government assistance fund; disbursements to county and subdivision.
- (A) Prior to the first disbursement under this section and annually thereafter not later than the twenty-fifth day of January, until the wireless 9-1-1 government assistance fund is depleted, the Ohio 9-1-1 coordinator shall do both of the following for the purposes of division (B) of this section:
 - (1) Determine, for a county that has adopted a final plan under [sections 4931.40 to 4931.70](#) of the Revised Code for the provision of wireless enhanced 9-1-1 within the territory covered by the countywide 9-1-1 system established under the plan, the number of wireless telephone numbers assigned to wireless service subscribers that have billing addresses within the county. That number shall be adjusted between any two counties so that the number of wireless telephone numbers assigned to wireless service subscribers who have billing addresses within any portion of a municipal corporation that territorially lies primarily in one of the two counties but extends into the

⁶ ESInet Technical Committee Recommendations

other county is added to the number already determined for that primary county and subtracted for the other county.

- (2) Determine each county's proportionate share of the wireless 9-1-1 government assistance fund for the ensuing calendar year on the basis set forth in division (B) of this section; estimate the ensuing calendar year's fund balance; compute each such county's estimated proceeds for the ensuing calendar year based on its proportionate share and the estimated fund balance; and certify such amount of proceeds to the county auditor of each such county.
- (B) The Ohio 9-1-1 coordinator, in accordance with this division and not later than the last day of each month, shall disburse the amount credited as remittances to the wireless 9-1-1 government assistance fund during the second preceding month, plus any accrued interest on the fund. Such a disbursement shall be paid to each county treasurer. The amount to be so disbursed monthly to a particular county shall be a proportionate share of the wireless 9-1-1 government assistance fund balance based on the ratio between the following:
 - (1) The number of wireless telephone numbers determined for the county by the coordinator pursuant to division (A) of this section;
 - (2) The total number of wireless telephone numbers assigned to subscribers who have billing addresses within this state. To the extent that the fund balance permits, the disbursements to each county shall total at least twenty-five thousand dollars annually.

3.5 Overview of Surcharge Distribution

The chart below depicts the surcharges received and distributed by the PUCO for the previous seven years.

Year	Wireless Surcharge Received	PUCO Percentage	Wireless Surcharge Deposited	Wireless Surcharge Paid
2006	\$24,845,865.64	\$704,017.35	\$24,326,028.53	\$20,587,466.63
2007	\$28,570,767.33	\$570,842.35	\$27,971,274.92	\$26,689,461.34
2008	\$30,206,302.22	\$604,125.78	\$29,602,163.26	\$37,348,761.97
2009	\$28,164,049.54	\$186,336.70	\$27,977,712.84	\$29,375,654.27
2010	\$29,175,929.75	\$40,321.92	\$29,135,590.79	\$28,903,491.63
2011	\$27,904,310.71	\$64,132.07	\$27,840,178.14	\$28,571,604.40
2012	\$28,837,121.12	\$24,220.72	\$28,812,900.40	\$29,468,394.81
Totals	\$203,754,262.90	\$2,435,993.56	\$201,473,768.80	\$200,953,909.97

Table 2—Surcharges Received and Distributed

The drop in funding from 2008 to 2009 was due to the reduction in the fee from \$0.32 to \$0.28. The declines in 2010 and 2011 were likely due to an increase in prepaid cell phone sales. The results for 2013 and beyond due to the reduction in the fee in 2013 to \$0.25 and the assessment of fees for prepaid Cell phones are uncertain at this time. It does however highlight the need to collect a fee from any device that is capable of accessing 9-1-1 in order to ensure a consistent revenue stream.

3.6 Overview of Current Expenditures/Balances

L.R. Kimball worked with the Ohio Telecom Association to gather the 9-1-1 access line counts and amount of revenue generated by the Bill and Keep system in Ohio. The Ohio Telecom Association gathered the information from the 42 member companies and provided L.R. Kimball with an aggregate number of access lines and revenue. For the year ending December 2012, the member companies reported 2,609,080 access lines and monthly revenue of \$532,516.42 or \$6,390,197 per year.

While the second round of PSAP surveys produced a small number of additional responses; that response level is not large enough to enable complete confidence in the totals. However, for purposes of planning L.R. Kimball will utilize the 50 percent response rate and assume that number includes the primary wireless PSAPs within Ohio.

Based on the County Survey responses, it appears as though the wireless E9-1-1 surcharge accounted for approximately 14.24 percent of the total costs for wireless E9-1-1 and PSAP operations in 2012. However, because of the low number of PSAP responses that percentage is likely much lower. **Of the 352 PSAPs in OH, 113 provided financial information related to expending 9-1-1 wireless surcharge funds in 2012.** L.R. Kimball utilized the financial information reported and did not project expenditures for those PSAPs that did not report financial information. Based on the survey responses, L.R. Kimball believes the amount of Wireless Funds expended is an accurate representation; however the amount of all other funds expended could potentially be twice as much. The amount produced by the Bill and Keep funding mechanism in 2012 was \$6,390,197 bringing the total cost for 9-1-1 in 2012 to \$230,472,577. The table below displays the numbers reported in the survey for the past three years.

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*The Bill and Keep number reported by the Ohio Telecom Association for 2012 was utilized as an estimate for 2010 and 2011.				
^Funds as reported, expenses not projected for those PSAPs not responding to survey.				

Table 3—Three Years Survey Numbers

There are several smaller counties that receive the minimum distribution amount, which will have trouble funding the transition to NG9-1-1 without assistance. However, according to the information provided by the counties; there is a balance of \$50.27 million in the 9-1-1 reserve account to fund future upgrades or conversion to NG9-1-1. Despite limited funding; the counties have been very diligent in preparing for and saving towards equipment upgrades and conversion to NG9-1-1.

It is not possible to determine a cost per call for the counties as the call volume that was provided in many cases is information from the ILEC's and is not an actual count of calls received. The ILECs in many cases provided a count of the number of times a particular PSAP had sent a request for an Automatic Location Information (ALI). For wireless calls, a minimum of two requests per call is required; and many PSAPs have their equipment set up to automatically request refreshed location information at set intervals. This could result in the call volume appearing to be at a minimum twice as high and in some instances many times higher than actual.

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4. RECOMMENDATIONS

4.1 Current Fund Distribution Inefficiencies

Today, the Wireless 9-1-1 surcharge provides approximately \$28,800,000 to fund wireless 9-1-1 service throughout the State. The remainder of the total cost of providing 9-1-1 services is made up at the local level through the use of county general revenue funds, user fees, property tax, special assessments and sales tax revenues. In addition, the funds are currently distributed from the PUCO to the counties based on the address of the cell phone subscriber. There are counties within Ohio that have a significant increase in 9-1-1 call volume during certain months of the year due to tourism. The current distribution method does not address their need for increased funds to provide service during those busy months.

Furthermore, users of new technologies may not be required by statute to pay the 9-1-1 fees, even though they are able to access the 9-1-1 system. This means that wireline and wireless carriers, their users, and local government are left to subsidize 9-1-1 system access for providers and users of new technologies.

One predominant new service is VoIP; the Ohio Consumer Counsel lists 19 providers of VoIP services in Ohio. Telephone companies operating in Ohio, both wired and wireless providers collect and pay the required 9-1-1 fees; but many vendors, which operate solely as internet VoIP service providers, do not. As consumers move away from standard wireline phone services in favor of new technologies like VoIP, there is a corresponding loss of revenue. The Ohio Telecom Association estimated that in 2012 there were 925,000 cable VoIP customers in Ohio; however, the Ohio Cable Telecommunications Association (OCTA) could not verify this number. This number does not include non-cable VoIP users such as Vonage and MagicJack. Voice over Internet Protocol is but one example of technologies capable of accessing 9-1-1 services that the current body of law does not require to contribute to the support of the state's 9-1-1 system and results in a loss of revenue currently estimated at approximately \$2.7 million per year. According to discussions with OCTA, some 9-1-1 fees are being collected by the cable VoIP provider; however, there is no clear indication those fees are being remitted either directly to the county or to the state local government assistance funds. At this time there is no clear understanding of how these fees are supporting 9-1-1.

With the passage of HB360 prepaid wireless telephone service will be subject to a wireless 9-1-1 surcharge; however, some providers in other states dispute this obligation and do not collect and remit the fees. National estimates put prepaid wireless at 12 percent of total wireless consumers. With over 8 million wireless subscribers in the state of Ohio, the total number of prepaid wireless customers could approximate 960,000. At the current rate of 25 cents per phone this results in a potential revenue loss of up to \$2.9M per year in funds that are not being remitted to the State.⁷

4.2 Considerations for Funding Next Generation 9-1-1

The limitations of the existing revenue model drive the need for a new funding model, as does the NG9-1-1 technology. According to the E9-1-1 Institute, "...the way we do business in the 9-1-1 community nationwide is changing rapidly. Currently, in the vast majority of our 9-1-1 centers, we attempt to respond to today's requests for service using yesterday's technology. The new technology associated with Next Generation 9-1-1 cannot be implemented piecemeal and on an "as a local government can afford it" basis. We must have a plan and funding in place to implement Next Generation 9-1-1. Our

⁷ ESInet Committee Recommendations

neighbors in the next county...must have the same technology and ability to process 9-1-1 calls and data on the same level if we are to be successful..."⁸

The public's expectation is that 9-1-1 service is all encompassing, seamless, transparent, and universal for all technologies and devices that are capable of accessing 9-1-1. To meet that expectation, the State needs to upgrade the current piecemeal E9-1-1 networks to a Statewide NG9-1-1 Network so PSAPs and response agencies can respond to a 9-1-1 communication anytime, anywhere and from any device.

The system or model envisioned by the ESnet Technical Standards Subcommittee and other 9-1-1 professionals across this nation is one where networks, databases and applications are shared among all emergency responders and response agencies. It implicitly assumes that the State will take a more active role in the implementation, operation and maintenance of a Statewide NG9-1-1 ESnet, and that the State will aid in the coordination of resource sharing across counties and agencies. As a result, any funding method implemented needs to account for these assumptions and provide a sufficient rate and base to fund the state's long-term needs.

The model also assumes that emergency response will remain a local response. That is, while telecommunications is becoming increasingly borderless, E9-1-1 service and emergency response will always be a local response. It does not matter what the funding source is, as long as the full costs of providing service are adequately funded in the long-run. If something goes wrong with a 9-1-1 call or response, local authorities will still be held accountable to the public. Any funding paradigm implemented in Ohio needs to account for this fact.

This funding model implicitly assumes that broadband access providers will become one entity responsible for determining the location of 9-1-1 calls. In this scenario, funding moves from the calling network to the access network. Regardless of application, the surcharge in this model would capture all devices and points that are or will be capable of accessing E9-1-1 services. As new carriers enter the IP telephony market, surcharges on calling services become more and more limiting and obsolete. By applying the E9-1-1 excise tax on access points, this problem is eliminated. A final reason for this revenue model is that more and more IP telephony services are being provided by international companies over which state and local governments have no control. The access market, however, is always local. In fact, the only limitation to this funding model is that it is new and relatively unfamiliar. NENA expects this model to be cost-neutral to consumers.⁹

It is important to note, that while L.R. Kimball agrees the approach above has been discussed at the national level for several years; it is not yet ready to be implemented. L.R. Kimball believes that this approach should be kept in mind as a long term goal and not as an immediate solution.

Other areas in the country have attempted to implement alternative funding methods similar to the access point model described above. In Tennessee, the Emergency Communications Board attempted to implement a 9-1-1 fee on electric bills; however because of very strong opposition from the electric utility companies, the idea was abandoned. One county in Kentucky has begun to impose a 9-1-1 fee on water utility bills. However, a city within the county boundary intends to file a lawsuit to challenge the new fee and its implementation. Another Kentucky county, which is a part of the Cincinnati Ohio metropolitan area, has imposed a 9-1-1 service fee on parcels of real estate, after a failed attempt to impose a fee on resident's electric bills. The real estate fee is also being challenged in court by a city within the county boundary and there is a legal precedent for the fee to be ruled an unconstitutional tax.

⁸ E9-1-1 Institute IP Issues Committee, Business Operation Subcommittee document.
<http://www.e911institute.org/ipissuescommittee/Papers/IP%20Operations%20Subcommittee%20Final%20Report%20v3.pdf>

⁹ NENA Next Generation Partner Program, Funding 9-1-1 into the Next Generation: An Overview of NG9-1-1 Funding Model Options for Consideration. March 2007, page 6-7.

At this time, the states that have updated their funding methods to prepare for NG9-1-1 have done so within the traditional methods of placing a service fee on the communications device that contacts 9-1-1. For example, last year Alabama reworked its funding structure, which had previously been a combination of landline fees collected locally and wireless fees collected at the state level, to a statewide 9-1-1 charge that is assessed on all voice communications and remitted to the state. In addition, the new legislation created a 9-1-1 board that will have authority for 9-1-1 within the state. The new statewide charge will be calculated by the new 9-1-1 board to produce revenue for the districts equal to the amount collected previously by each district.

The state of Michigan is currently discussing an approach to the NG9-1-1 transition that may be useful for Ohio. There are some differences in that Michigan's counties have authority to assess their own 'all devices surcharge,' which Ohio's counties generally do not. Michigan is not proposing to change local funding mechanisms. Its technical charge is like Ohio's Bill and Keep arrangement and Michigan is considering the elimination of that surcharge over time and the creation of a new fund that would be applied to legacy costs in addition to NG9-1-1 costs and initiatives to incentivize PSAP consolidation and regionalization. Under this new concept, the state's 'all devices surcharge' would be increased and the distribution formula modified. A portion of the state surcharge revenues would "distributed" into this new fund, which would provide grants to PSAPs for Customer Premise Equipment (CPE), hosted solutions and other technologies; grants for 'efficiency efforts' including regionalization; and NG9-1-1 network and common legacy network costs.

Appendix A contains the National Emergency Number Association (NENA) Chart on 9-1-1 surcharge fees collected by state. This provides a high level view of the range of surcharge being collected throughout the nation. The states surrounding Ohio collect a range of fees to fund 9-1-1. In Michigan \$.19 is collected at the state level, and counties are allowed to collect an additional fee up to \$3.00. Indiana and Pennsylvania collect \$.90 and \$1.00 respectively on wireline, wireless, VoIP and prepaid wireless devices to fund 9-1-1. West Virginia charges one of the highest fees ranging from \$.98 - \$6.40 on wireline and VoIP, 6 percent on wireless prepaid and a flat \$3.00 for wireless.

L.R. Kimball recommends that Ohio continue to monitor those areas that have attempted an alternate funding mechanism for future consideration while updating the funding mechanism in Ohio to collect a fee on all devices that access 9-1-1.

L.R. Kimball recommends that in order to provide the most adequate long-term funding source for 9-1-1 into the future, funding mechanisms should meet the following criteria:

- The funding method should be technology, vendor and competitively neutral, so it does not give competitive advantages to one telecommunications, broadband or data provider at the expense of other providers.
- The funds collected should be used only for their intended purposes and should not be re-allocated at the state or local level for non-9-1-1 purposes.
- The funding method should be easy to understand and administer.
- The funding method should be fair and equitable to all individuals and devices capable of accessing the current and future 9-1-1 network.
- The funding method should be stable, and therefore not require frequent legislative adjustments.

4.3 L.R. Kimball Recommended Distribution Model

Kimball agrees with the approach recommended by the ESInet Steering Committee Vision Document with a few modifications. Ohio should begin to look at all emergency communications as a whole in order to improve communications, interoperability, and information sharing between public safety agencies statewide. Ohio should consider coordinating 9-1-1 with other public

safety departments at the state level in order to allow a unified approach and long term planning. Some states have already begun the process to move in this direction.

L.R. Kimball recommends that Ohio establish funding legislation that enacts one statewide fee for any device that can access 9-1-1. The legislation should be crafted to allow for future technologies and flexibility. It should also allow the State to modify the fee (either up or down) if needed within a set range. The fee should be based on the cost of providing those 9-1-1 services the State has approved and distributed per a method other than the number of PSAPs within a county. L.R. Kimball recommends the Ohio 9-1-1 Coordinating Entity require all PSAPs to report each year on the cost of providing 9-1-1 service and review the reports to determine if the fee requires modification.

In addition to a fee on devices that access the 9-1-1 network, the ESInet Steering Committee should ensure statutes, regulations and tariffs enable system components to be shared among the participating agencies and that there is a mechanism for these agencies and entities to share the costs.

The funds from the statewide fee would be collected at the state level and remain in a dedicated account that allows any interest accrued to remain in the dedicated account. As discussed in the "Regulatory Review" section 3.1.1, L.R. Kimball recommends that staff will be needed to support the work of the 9-1-1 Coordinator. For purposes of this report, L.R. Kimball refers to the 9-1-1 Coordinator and staff as the Ohio 9-1-1 Coordinating Entity. The Ohio 9-1-1 Coordinating Entity should create distribution rules to specify what expenditures would be allowable expenses for money distributed to the counties. L.R. Kimball recommends that in order to facilitate the transition to an NG9-1-1 network the funds cover limited expenses initially and are then revisited after the state is operating on the new network. Initially the funds should be distributed for:

- Costs to cover administrative expenses for the Department of taxation.
- A percentage for the carriers to retain to cover the costs of collecting and remitting the fee.
- An amount to fund administrative and staffing costs for the Ohio 9-1-1 Department.
- The Ohio 9-1-1 Coordinating Entity should pay the costs to build, maintain and operate the IP network and the PSAP connections to the IP network directly. This will allow the State to obtain better pricing for the network and to ensure a unified approach to deployment of the network.
- The Ohio 9-1-1 Coordinating Entity should establish a Capital Expenditures account for future network upgrades and expenses.
- The Ohio 9-1-1 Coordinating Entity should create a PSAP consolidation incentive account.
- The remaining funds should be allocated to the counties for distribution to the PSAPs that meet the technical and operational standards established by the ESInet Steering Committee and PSAP Operations Committee and within the statutory PSAP limits of 5507.571.

L.R. Kimball recommends the Ohio 9-1-1 Coordinating Entity establish a training committee to determine the minimum statewide training standards for Ohio telecommunicators. Once the training standards have been established the Ohio 9-1-1 Coordinating Entity would determine how best to allocate and distribute funding to pay for the training.

L.R. Kimball recommends the PSAP funds be used for 9-1-1 related expenses, such as:

- 9-1-1 Network
- 9-1-1 Equipment and Equipment Maintenance
- GIS and GIS maintenance
- Telecommunicator Training and Certification
- Emergency Back Up Equipment

The Ohio 9-1-1 Coordinating Entity might consider allowing additional PSAP expenditures to some areas as part of a consolidation incentive. For example, furniture/work station expenses or a percentage of personnel expenses.

L.R. Kimball strongly encourages the Ohio 9-1-1 Coordinating Entity to consider procuring certain key functionality at the State level. By procuring a network backbone and NG9-1-1 core functionality at the State level, L.R. Kimball believes that there is a potential for a reduction in cost of 9-1-1 across the State. The actual figures for cost savings are not available and further analysis will need to be performed in order to estimate what the future costs and savings will be. There are still important decisions that need to be made regarding what the State will provide to the regions/counties/PSAPs and how, however, having the State provide the network backbone (ESInet) and core functionality is the best way to monitor the funds expended on that effort. Further, having the State provide certain core functions and a backbone could provide savings to the counties and PSAPs because they will be able to connect to the network and have access to these core services as opposed to purchasing the equipment and services themselves.

Once the NG9-1-1 network is in place and operational for at least a year; L.R. Kimball recommends the Ohio 9-1-1 Coordinating Entity do a distribution study to revisit the distribution of funds; based at least partly on total 9-1-1 call volume. This can't be done until the new network is in place and call statistics are being tracked consistently in the same manner across the state.

L.R. Kimball recommends that the Department of Taxation audit service provider fee remittances annually to ensure accuracy and compliance with legislative intent. In addition, the Ohio 9-1-1 Department should audit state and local use of 9-1-1 revenues annually in order to ensure compliance with statute and requirements established by the ESInet Steering and PSAP Operations Committees.

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5. CONCLUSION

The limitations of the existing revenue model, along with rapidly emerging technology, drive the need for a new funding model in Ohio. Creating a robust funding model that will secure the transition to NG9-1-1 while allowing for future technology changes is a very time intensive process. This is not something that can be undertaken in a matter of months, but rather requires extensive data gathering and analysis. L.R. Kimball recommends that the ESInet Steering Committee continue the work begun with this review.

5.1 Considerations

The Funding Distribution Model presented relies on a statewide service fee assessed on all devices that are capable of accessing 9-1-1. In addition, L.R. Kimball suggests funds be set aside for both capital improvement and PSAP consolidation incentives. L.R. Kimball recommends that until the ESInet is in place and PSAPs have transitioned onto the NG9-1-1 platform; 9-1-1 service fee monies should be spent only on those expenditures directly related to 9-1-1. L.R. Kimball believes if PSAPs are allowed to pay expenses such as furniture and personnel from the 9-1-1 service fee; the transition to an NG9-1-1 network will take longer and may not ever be deployed Statewide.

However, it is important to note that until at least a high level estimate for NG9-1-1 is known; any fund distribution decision is premature. In order to know what the 9-1-1 service fee rate should be, it is essential to know both the true total costs of 9-1-1 in Ohio along with the NG9-1-1 estimate.

5.2 Next Steps

L.R. Kimball recommends that the ESInet Steering Committee be given permission and funding to complete the remaining work needed prior to making a decision on a new funding model. The ESInet Steering Committee has done a lot of hard work on this to date; and additional work is needed to complete the process.

L.R. Kimball recommends the following next steps.

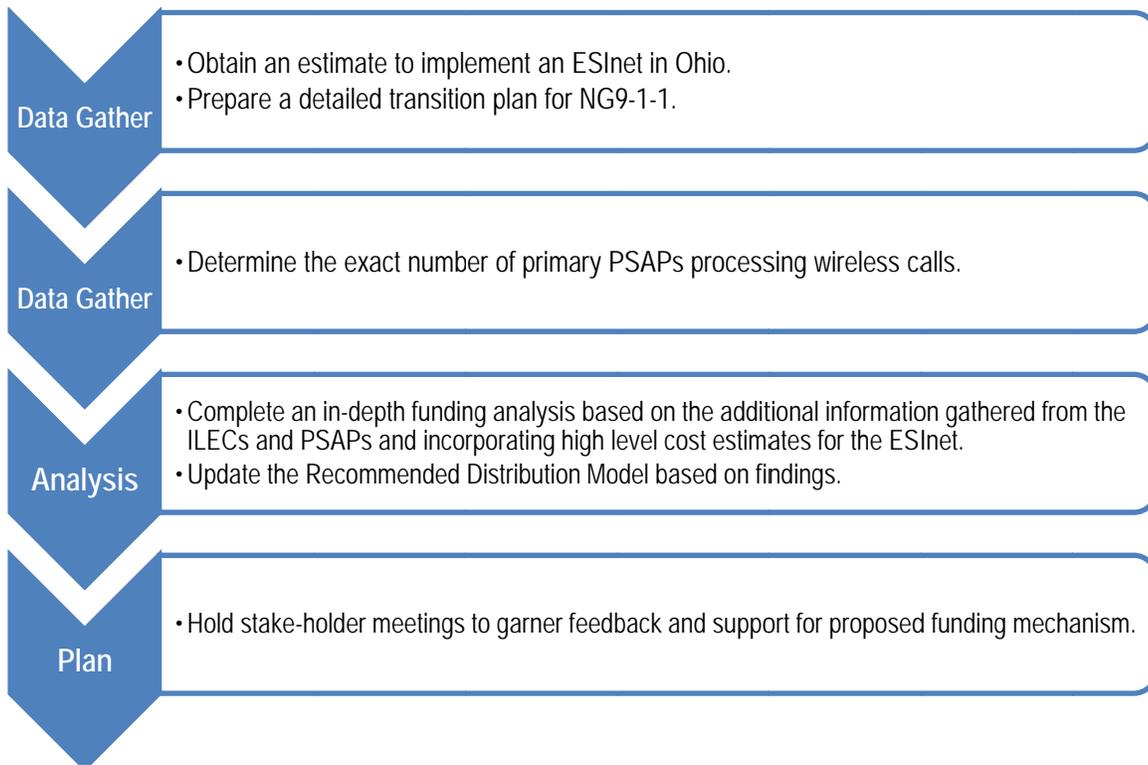


Figure 2—Next Steps

APPENDIX A—STATE FEES

State	Wireline	Wireless	VoIP
Alabama	\$1.60	\$1.60 \$1.60 Prepaid	\$1.60
Alaska	\$0.00 - \$2.00	\$0.00 - \$2.00	
Arizona	\$0.20	\$0.20	\$0.20
Arkansas	5% - 12% of Tariff Rates	\$0.65 \$0.65 Prepaid	\$0.65
California	.50% of intrastate calls	.50% of intrastate calls	.50% of intrastate calls
Colorado	\$0.43 - \$1.50 (max)	\$0.43 - \$1.50 (max) 1.4% of Sale - Prepaid	\$0.43 - \$1.50 (max)
Connecticut	\$0.67	\$0.67 \$0.67 Point of Sale - Prepaid	\$0.67
Delaware	\$0.60	\$0.60	\$0.60
District of Columbia	\$0.76 Wireline \$0.62 Centrex \$4.96 PBX Trunk	\$0.76 2.0% Point of Sale - Prepaid	\$0.76
Florida	\$0.50 (Max)	\$0.50	\$0.50
Georgia	\$1.50	\$1.00 - \$1.50 \$0.75 Prepaid	\$1.50
Hawaii	\$0.27	\$0.66	\$0.66
Idaho	\$1.00 (max)	\$1.00 (max)	\$1.00 (max)
Illinois	\$0.25 - \$5.00	\$0.73 \$2.50 City of Chicago 7.0% of Sale City of Chicago - Prepaid 1.5% of Sale - Prepaid	\$0.25-\$5.00
Indiana	\$0.90	\$0.90 \$0.50 of Sale- Prepaid	\$0.90
Iowa	\$1.00 Max	\$0.65 \$0.33 Point of Sale - Prepaid	\$0.65
Kansas	\$0.53	\$0.53 1.06% of Retail Sale -Prepaid	\$0.53
Kentucky	\$0.36 - \$4.50	\$0.70 \$0.70 Prepaid	\$0.36 - \$4.50
Louisiana	\$0.62 - \$1.00 Residential \$1.30 - \$2.00 Business	\$0.85 - \$1.50 (max) 2% of Retail Sale - Prepaid	\$1.00
Maine	\$0.45	\$0.45 \$0.45 Point of Sale- Prepaid	\$0.45
Maryland	\$1.00	\$1.00	\$1.00

State	Wireline	Wireless	VoIP
Massachusetts	\$0.75	\$0.75 \$0.75 Prepaid	\$0.75
Michigan	\$0.19 State Fee \$0.00 - \$3.00 by County	\$0.19 State Fee \$0.00 - \$3.00 by County 1.92% Point of Sale - Prepaid	\$0.19 State Fee \$0.00 - \$3.00 by County
Minnesota	\$0.80	\$0.80	\$0.80
Mississippi	\$1.00 Res \$2.00 Commercial	\$1.00 \$1.00 Prepaid	\$1.00
Missouri	2% - 15% of Base Rate (52 Counties) 1/8% - 3/4% of Sales Tax (44 Counties) General Revenue (2 Counties) Unfunded (16 Counties)	None	
Montana	\$1.00	\$1.00	\$1.00
Nebraska	\$0.50 - \$1.00	\$0.45 - \$0.70 (Max) 1.1% of Retail Sale - Prepaid	
Nevada	Varies by Jurisdiction – Property tax and/or Surcharge	Must be equal to wireline Surcharge	
New Hampshire	\$0.57	\$0.57	\$0.57
New Jersey	\$0.90	\$0.90	\$0.90
New Mexico	\$0.51	\$0.51	
New York	\$0.35 - \$1.00	\$1.20	\$0.35
North Carolina	\$0.60	\$0.60 \$0.60 Point of Sale – Prepaid *	\$0.60
North Dakota	\$1.00 - \$1.50 (max)	\$1.00 - \$1.50 (max) \$1.00 - \$1.50 max) - Prepaid	\$1.00 – 1.50 (max)
Ohio	\$0.50 (Max) (Legally limited to a few Counties, no general surcharge.)	\$0.25 0.2% Point of Sale – Prepaid *	
Oklahoma	3-15% of Base Rate	\$0.50 (Approx. 42 Counties) \$0.50 Prepaid	\$0.50
Oregon	\$0.75	\$0.75	\$0.75
Pennsylvania	\$1.00 - \$1.50	\$1.00 \$1.00 Point of Sale - Prepaid	\$1.00
Rhode Island	\$1.00	\$1.26	\$1.26
South Carolina	\$0.30 - \$1.00	\$0.61 \$0.61 Prepaid	\$0.30 - \$1.00
South Dakota	\$1..25	\$1.25 2% Point of Sale - Prepaid	\$1.25
Tennessee	\$0.45 - \$1.50 Res./ \$1.52 - \$3 Bus	\$1.00	\$1.00

State	Wireline	Wireless	VoIP
		\$0.53 Point of Sale - Prepaid	
Texas	\$0.50 State Program Fees Vary – District	\$0.50 2% of Sale - Prepaid	\$0.50
Utah	\$0.61 Local Fee plus \$0.08 State Fee	\$0.61 Local Fee plus \$0.08 State Fee 1.9% Point of Sale - Prepaid	\$0.61 Local Fee plus \$0.08 State Fee
Vermont	Universal Service Funding	Universal Service Funding	
Virginia	\$0.75	\$0.75 \$0.50 Prepaid	\$0.75
Washington	\$0.25 Statewide \$0.70 by Counties	\$0.25 Statewide \$0.70 by Counties	\$0.25 Statewide \$0.70 by Counties
West Virginia	\$0.98 - \$6.40 by County	\$3.00 6% Point of Sale - Prepaid	\$0.98 - \$6.40 by County
Wisconsin	\$0.40 - \$1.00	None	
Wyoming	\$0.25 - \$0.75	\$0.25 - \$0.75	\$0.25-\$0.75