

*Prepared for State of Ohio 9-1-1
Program Office*

**Addendum to the Economic
Impact and Funding Analysis for
Next Generation 9-1-1**

June 29, 2017

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7. Final Recommendations

Federal Engineering presents its final recommendations and the next steps in the process for the State of Ohio 9-1-1 Program to move forward with a statewide Next Generation 9-1-1 (NG9-1-1) system. In making these recommendations, we used the Economic Impact and Funding Analysis presented to Ohio in October 2016 along with the responses to the RFP released in February 2017.

7.1 Network

The State of Ohio 9-1-1 Program Office released an RFP for developing a statewide NG9-1-1 system capable of supporting NG9-1-1 Core Services for all local governments within the State, who subscribe, with Next Generation geo-diverse controllers for those Public Safety Answering Points (PSAPs) needing a new answering system. This will be a highly redundant system that will provide Next Generation 9-1-1 capabilities interconnecting all participating PSAPs. PSAPs or Regional Systems that maintain their own NG9-1-1 i3 compliant CPE will have the ability to integrate with the State Core Services. Those Regions that maintain their own Core Services will have the option for interconnection capabilities with the State Core Services for interoperability with all participating PSAPs. The PSAPs will be required to meet the specifications set by the State if they choose to participate.

This NG 9-1-1 system must have the ability to convert to NG9-1-1 core functionality without interruption of any existing legacy functions and must provide seamless ingress and egress to and from the legacy network. The entire solution must provide 99.999 percent reliability, including during maintenance and other administrative activities. This solution must distribute the incoming services across multiple gateways and have the capability to accept calls from all classes of service.

The NG9-1-1 core functionality should be robust enough, or have the capability, to handle today's technology such as Voice over Internet Protocol (VoIP), wireless, Multi-Line Telephone Systems (MLTS), as well as incumbent local exchange carriers (ILECs) and competitive local exchange carriers (CLECs) and future voice, video, and data providers to connect directly to the ESInet without the use of the existing legacy selective routers.

7.2 Responses to RFP

The State of Ohio 9-1-1 Program Office received four responses to the RFP. Because the selection for the RFP will be made after this final report is submitted, no specific vendor names have been provided.

7.3 Potential Costs

Ohio's population 11,614,373 (from the U.S. Census Data July 2016).

Two examples of costs from other states:

- Indiana (population 6,633,053 From the US Census Data July 2016) annual cost of a similar system, \$15 Million
- Michigan (population 9,928,300 from US Census Data July 2016) Annual cost of similar system, \$15 Million

Because Ohio's population is higher, potential costs may be higher based on this information.

7.4 Legislative Changes and Funding Model

In 2014 the legislature established an ESInet Steering Committee and 9-1-1 Program Office within the Department of Administrative Services to oversee and administer the development of an Emergency Services Internet Protocol Network and to assess the feasibility of developing a statewide NG9-1-1 system.

With the State establishment of two pilot projects to demonstrate the efficacy of a centrally hosted NG9-1-1 System, Ohio is poised to begin development of a true statewide NG9-1-1 System capable of supporting all the state's Public Safety Answering Points.

Ohio currently assesses a twenty-five-cent fee on all wireless devices and a .05% pre-paid wireless fee to support wireless E9-1-1 capabilities. Expanding the assessment to cover all connected devices capable of contacting 9-1-1 will provide adequate funds to continue existing wireless 9-1-1 support and transition from existing E9-1-1 services to a statewide NG9-1-1 capable system.

For the Ohio 9-1-1 Program Office to move forward with development of a Next Generation 9-1-1 System, changes will need to be made to existing legislation. The enacting legislation that created the Steering Committee and the 9-1-1 Program Office also created a NG9-1-1 fund to accept funds and provided the Steering Committee with the authority to modify the current funding formula for the distribution of wireless monies. To date the Steering Committee has held firm with the recommendation to following the 2013 distribution guidelines until costs for a statewide NG9-1-1 system could be established and an equitable funding mechanism could be identified.

Legislatively allocated funding for a Next Generation 9-1-1 System is essential for establishing the infrastructure, purchasing the necessary equipment and software at the data centers, and for the ongoing costs for the operations and maintenance of this system.

7.4.1 Universal Device Fee

To build a statewide NG9-1-1 System, Ohio should modify existing legislation for wireless devices to include all devices that can access the 9-1-1 system. This is a best practice recommendation and will help to ensure all potential users of the 9-1-1 system share in the funding and maintenance of the system.

The extension of the existing wireless device fee to include the universe of all 9-1-1 capable devices will allow for the modified distribution of wireless funds to counties while enabling the State to develop the core services necessary to transition from legacy 9-1-1 to a NG9-1-1 environment.

Ohio should maintain the current wireless 9-1-1 fee of twenty-five cents but modify the language to a universal device fee. The universal device fee should not go lower than twenty cents for the fiscal health of the funding stream to support the system. The funds from the statewide fee should be collected at the state-level and remain in a dedicated account that allows any interest accrued to remain in the dedicated account. According to current statute, wireless service providers or resellers may retain as a billing and collection fee two per cent of the total wireless 9-1-1 charges it collects in a month. If this remains in the legislation and the definition for a universal device fee is added, to be consistent with the current law, the language would need to change to read “all companies that collect a universal device fee that can access 9-1-1, may retain a billing and collection fee of two per cent of the total fee it collects in a month”.

States that utilize a universal device fee:

Alabama	Illinois	New Jersey
Arkansas	Indiana	New York
Arizona	Kansas	Oregon
California	Kentucky	Pennsylvania
Colorado	Maine	Rhode Island
Connecticut	Maryland	South Carolina
Delaware	Massachusetts	South Dakota
Florida	Michigan	Tennessee
Georgia	Minnesota	Texas

Hawaii	Nebraska	Utah
Iowa	Nevada	Virginia
Idaho	New Hampshire	Washington

(Eighth Annual Report to Congress on State Collection and Distribution of 9-1-1 Enhanced Fees and Charges, December 30, 2016)

7.4.2 Definition for Universal Device

Potential definition for a Universal Device:

“Any device capable of accessing the 911 system through a service provider, public or private, that transports information, including but not limited to, wireless, wireline, internet, cable, or satellite”.

7.4.3 Sunset “Bill and Keep” for Legislative Review

A universal device fee will allow Ohio to transition from the current “bill and keep” method currently in place for wireline 9-1-1 expenses. Legislation for the current “bill and keep” should be sunset within five years of the establishment of the statewide NG 9-1-1 system requiring legislative review. This provides time for the wireline carriers to transition from the current network to the NG 9-1-1 ESInet and for the carriers to understand the NG 9-1-1 implementation plan and meet timelines established by the State.

7.4.4 Distribution of Funds

Current distribution of funds:

- Wireless Government Assistance fund (97%)
- Wireless 9-1-1 Administrative Fund (1%)
- 9-1-1 Program Fund (2%)
- Next Gen 9-1-1 Fund (0%)

Projected distribution of funds:

- 9-1-1 Government Assistance Fund \$27,700.000 (47%)
- 9-1-1 Administrative Fund (1%)
- 9-1-1 Program Fund (2%)

- Next Gen 9-1-1 Fund (50%)
 - Includes Annual Vendor Operation/Maintenance costs, OARnet, SOCC fees, etc.

Table 1 - Distribution of Funds Tables

Current Wireless Funding Distribution	Surcharge Collected	Distribution
	\$25,000,000.00	
Wireless Government Assistance Fund	\$24,250,000.00	97%
Wireless 911 Administrative Fund	\$250,000.00	1%
911 Program Fund	\$500,000.00	2%
Next Gen 911 Fund		0%

Table 2 – Projected Funding Distribution at \$0.25 Universal Device Fee

Projected Funding Distribution at \$0.25 under a Universal Device Fee	Surcharge Collected	Distribution
	\$59,426,604	
9-1-1 Government Assistance Fund	\$27,700,000	47%
911 Administrative Fund	\$594,266	1%
911 Program Fund	\$1,188,532	2%
Next Gen 911 Fund	\$29,943,806	50%

Table 2 shows the change in distribution will provide a slight increase for the counties to help pay for the connectivity from the PSAP to the State Core Services. The State Core Services will be provided at no cost to the counties. The wireless government assistance fund can remain stable to provide continued support to locals for training, staff, and equipment purchases and upgrades.

This also provides the Next Gen 9-1-1 Fund with committed funding to support the installation, operation, and maintenance of the system as well as funds to support future technology advances to enhance the system along with adding additional revenue to the 9-1-1 Program Fund that will cover administrative increases in running a live system.

Table 3 - State Surcharge Fees (Data from the Eight Annual Report to Congress on State Collection and Distribution of 9-1-1 and Enhanced 9-1-1 Fees and Charges, December 30, 2016)

Table 3 – State surcharge fees

State	Fee	State	Fee
West Virginia	\$3.00	Kentucky	\$0.70
Alaska	\$2.00	Hawaii	\$0.66
Alabama	\$1.75	Arkansas	\$0.65
Pennsylvania	\$1.65	South Carolina	\$0.62
Rhode Island	\$1.26	Delaware	\$0.60
Massachusetts	\$1.25	Kansas	\$0.60
South Dakota	\$1.25	North Carolina	\$0.60
New York	\$1.20	Connecticut	\$0.51
Tennessee	\$1.16	New Mexico	\$0.51
Georgia	\$1.00	Oklahoma	\$0.50
Iowa	\$1.00	Texas	\$0.50
Idaho	\$1.00	Maine	\$0.45
Indiana	\$1.00	Nebraska	\$0.45
Maryland	\$1.00	Colorado	\$0.43
Montana	\$1.00	Florida	\$0.40
North Dakota	\$1.00	Nevada	\$0.25
New Jersey	\$0.90	Ohio	\$0.25
Louisiana	\$0.85	Washington	\$0.25
Minnesota	\$0.78	Arizona	\$0.20
Utah	\$0.76	Michigan	\$0.19
California	\$0.75	Vermont	2% customer charges
New Hampshire	\$0.75	Mississippi	N/A
Oregon	\$0.75	Missouri	N/A
Virginia	\$0.75	Wisconsin	N/A
Illinois	\$0.73	Wyoming	Did not respond

At \$0.25 per device, Ohio would be the same level as Nevada and Washington. West Virginia is the highest at \$3.00

7.4.5 ESInet Steering Committee Authority for Surcharge Increase

Once established, the cost of operations for the NG9-1-1 system will be better defined and the Steering committee should seek to maintain an adequate cash flow and percent

of operations contingency balance in the NG9-1-1 account to cover contingencies, and the Committee should be granted the latitude to adjust the fee downward if revenues and account balances exceed projected amounts. In anticipation of system upgrades, the committee should also have the latitude to increase the fee for a set period up to the current \$0.25 cap to collect funds necessary for future maintenance upgrades and system expansion.

This legislation should include a provision that if the surcharge is modified by the Committee, it would need to be approved by a majority vote, clearly define the reason for the modification, and the effective time for the modification.

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8. NEXT STEPS

Federal Engineering (**FE**) recommends that the Department of Administrative Services work with the Legislature to affect changes to reflect the Next Generation 9-1-1 environment. Moving to a universal device fee will capture surcharge from entities that are not included in the current law. This will allow the State to maintain the current monthly surcharge for subscribers, but still provide the necessary funds for the implementation, operation, and maintenance of a Next Generation 9-1-1 Emergency Services IP Network.

Ohio should transition from the “wireless” only descriptor among the 9-1-1 operations and make the following governance changes to reflect the new NG 9-1-1 environment:

The Ohio Emergency Services Internet-Protocol Network (ESINet) Steering Committee should become the Ohio 9-1-1 Steering Committee. All PSAP Operations rules should be mandated for all Ohio PSAPs, not just PSAPs receiving wireless calls. This is in line with the universal device fee and ensures the same quality of service by anyone answering a call for help to 9-1-1.

FE applauds the efforts of the State of Ohio 9-1-1 Program Office to update the legacy system to a Next Generation 9-1-1 Emergency Services IP Network. This transition will provide the citizens of Ohio with the latest technology and increase the capability of the current 9-1-1 system by establishing an infrastructure capable of handling text, pictures, video, future devices, and applications the current legacy system cannot accommodate. These network updates seek to improve the redundancy of the existing network, the access to it, especially for the deaf and hard of hearing community and to meet the public’s perception of how it can access 9-1-1 emergency services.

Appendix A - Surcharge Projections

Appendix A provides projected surcharge rates and funding distributions. Projections show that funding below twenty cents per subscriber will not provide enough funding to support the ongoing costs.

Projections on Surcharge and Distribution @ \$0.25		
Funding Distribution @ \$0.25	\$59,426,604	Annually
9-1-1 Government Assistance Fund	\$27,700,000	47%
9-1-1 Administrative Fund	\$594,266	1%
9-1-1 Program Fund	\$1,188,532	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$29,943,806	50%

Projections on Surcharge and Distribution @ \$0.20		
Funding Distribution @ \$0.20	\$47,541,283	Annually
9-1-1 Government Assistance Fund	\$27,700,000	58%
9-1-1 Administrative Fund	\$475,412	1%
9-1-1 Program Fund	\$950,825	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$18,415,046	39%

Projections on Surcharge and Distribution @ \$0.19		
Funding Distribution @ \$0.19	\$45,164,219	Annually
9-1-1 Government Assistance Fund	\$27,700,000	61%
9-1-1 Administrative Fund	\$451,642	1%
9-1-1 Program Fund	\$903,284	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$16,109,293	36%

Projections on Surcharge and Distribution @ \$0.18		
Funding Distribution @ \$0.18	\$42,787,154	Annually
9-1-1 Government Assistance Fund	\$27,700,000	65%
9-1-1 Administrative Fund	\$427,872	1%
9-1-1 Program Fund	\$855,743	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$13,803,539	32%

Projections on Surcharge and Distribution @ \$0.17		
Funding Distribution @ \$0.17	\$40,410,090	Annually
9-1-1 Government Assistance Fund	\$27,700,000	69%
9-1-1 Administrative Fund	\$404,101	1%
9-1-1 Program Fund	\$808,202	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$11,497,787	28%

Projections on Surcharge and Distribution @ \$0.16		
Funding Distribution @ \$0.16	\$38,033,026	Annually
9-1-1 Government Assistance Fund	\$27,700,000	73%
9-1-1 Administrative Fund	\$380,330	1%
9-1-1 Program Fund	\$760,660	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$9,192,036	24%

Projections on Surcharge and Distribution @ \$0.15		
Funding Distribution @ \$0.15	\$35,655,962	Annually
9-1-1 Government Assistance Fund	\$27,700,000	77%
9-1-1 Administrative Fund	\$356,559	1%
9-1-1 Program Fund	\$713,119	2%
Next Gen 9-1-1 Fund (includes vendor/OARnet/SOCC, etc.)	\$7,886,284	20%