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Testimony of the National Emergency Number Association, Keystone State Chapter

Presented to: The Pennsylvania Senate Veterans Affairs & Emergency Preparedness Committee

Presented by: John W. Geib, President of the Keystone State Chapter of NENA

Good afternoon, Chair Mastriano, Chair Muth, and members of the Senate Veterans Affairs & Emergency Preparedness Committee I am John Geib, Director of Emergency Communications for the County of Bucks, and President of the Pennsylvania Chapter of NENA – the National Emergency Number Association. I want to begin by first expressing my gratitude to the leaders and members of the committee for inviting representatives of the Commonwealth's 911 community to this important discussion. We appreciate your investment of time and effort as we navigate necessary changes to the 911 legislation set to expire in January of 2024.

I have spent 28 years in the emergency communications profession – 20 years at Montgomery County Department of Public Safety, five years with a public safety consulting firm, and the last three at the County of Bucks Department of Emergency Communications. In my tenure, there have been several attempts to modernize the 911 system in Pennsylvania. But no effort was as successful as Act 12 of 2015. Since the establishment of Act 12 of 2015, the Commonwealth's 911 community has made significant strides improving an aging infrastructure designed to function forty years ago. And just as important, a governance structure, strategic plan, and communications plan were all developed by the 911 Office in PEMA. The State 911 Office, under the leadership of Executive Deputy Director Jeff Boyle, created an environment of collaboration and trust among the statewide 911 community. Even when the 911 community was not in unanimous agreement, we were in alignment. We understood the strategy behind the decisions and had an open platform of communication to work through successful progress of the established goals.

Background: Pre-2015

Prior to the establishment of Act 12 of 2015, the 911 community was a loose assembly of counties and regions all moving in different directions and at different speeds. In addition, the 911 fee schedule was fractured, with different rates in different areas of the state. Spending eligibility and rules were inconsistent from wireline to wireless fees. On top of that, the 911 fee for voice over

Internet-protocol (VoIP) lines were sent directly to counties in some cases. All these inconsistencies made financial tracking, spending, and reporting a very confusing process. Likewise, project management was just as inconsistent and confusing. The migration to the Next Generation 911 environment was a real conversation nationwide during this time frame; however, that migration would not have been possible in the pre-2015 911 landscape in Pennsylvania.

In the realm of technology, systems were designed as a silo – meaning that dispatch systems in one county had no ability to communicate or share information with a neighboring county, except to pick up the phone and verbally relay relevant information. The ability to interface, or connect, to neighboring 911 centers was largely non-existent. In the legacy environment designed decades ago, this made sense. The small amount of information available to share could be relayed with that simple phone call between agencies. But even before 2015, the level of information flowing into the 911 centers began to grow. Calls from wireless devices quickly increased to 60-percent, 70-percent, and eventually to nearly 80-percent of all 911 calls. Text-to-911 capabilities began to emerge. A more mobile society required the public safety community to adapt and provide an ability for systems to share data and information across geopolitical borders. In the 911 landscape prior to Act 12 of 2015, there was no plan and no strategy to move that concept forward.

Act 12 of 2015: A New Path is Built

Shortly following the passage of Act 12 of 2015, a statewide inventory was conducted to understand exactly where each county was on the migration path to Next Generation 911. This included not only technology components and systems, but also items such as governance, staffing, and finances. This exploratory process provided the information required to develop a statewide strategic plan capable of successfully migrating every 911 center to the Next Generation 911 environment. Once completed, there would be one unified community operating individually in the best interest of the public within their county or region; but also operating corporately in the best interest of the public within the Commonwealth. The ability to increase the resiliency, redundancy, and information-sharing capacity of the 911 system statewide without interfering with the local public safety mission is the beauty and true value of the migration to Next Generation 911.

The strategic plan identified specific areas of development and created an order of priority. It was understood from the start that this was going to be a long process measured in years. But in the end, we would have a robust system capable of serving the public every second of every day in potentially some of the worst situations they face in their life. Technology would be implemented to support a Next Generation 911 operation. Geographic information system (GIS) data would be developed for call routing and location verification functions. Training and quality assurance programs would be standardized. Funding and budgeting practices would be consistent and transparent.

Specific areas of progress

<u>Technology</u>:

The foundation of a Next Generation 911 environment is an emergency services Internet-protocol network, or ESInet. This is a private IP network, separate from residential and commercial IP networks you or I would use to communicate. It maintains a very stringent level of service and the ability to reroute traffic using multi-redundant pathways. These networks can be established across counties and states, and have the ability to interconnect to a neighboring ESInet. The ultimate goal is a nationwide network of networks with the ability to share data and information among public safety first responders without restriction.

Pennsylvania has successfully migrated nearly two-thirds of the state's 911 centers to the statewide ESInet; with the remaining counties scheduled for migration over the next year. By August of 2024, all 911 calls will be routed on the statewide ESInet. Location information and accuracy is improved, and opportunities abound to improve operational call flow and information sharing processes. Subsequently, improved call flow and information sharing improves situational awareness for law enforcement, EMS, and fire responders.

<u>GIS</u>:

GIS data is one of the most vital components of a Next Generation 911 environment. Accurate and current mapping information assists in both call routing and location verification. The relationship between the 911 and GIS communities was virtually non-existent in the legacy environment, as most call routing was completed using static data bases maintained by phone companies. In Next Generation 911, local GIS professionals control the data utilized for call routing and address verification, and provide an ability for near real-time changes and updates. Additionally, GIS professionals at PEMA provide guidance and standardized data editing processes. A significant investment of time, effort, and funding was committed to ensure this new relationship was successful; and that all the necessary safeguards were developed to communicate from agency-to-agency and from all agencies to the state.

<u>Training and quality assurance</u>:

The best technology and infrastructure have no value without properly trained professionals. Our telecommunicators and support staff are our most valuable resource. The investment toward their initial onboard training, continuing education, and well-being is as important as any other investment in this migration. Pennsylvania is in a minority of states that have established statewide standards for both the training and quality assurance programs in a 911 center. Regardless of where a member of the public is in need of emergency services—Center City, Philadelphia or World's End State Park; Lake Erie or Lake Wallenpaupack—they should receive a consistent service and quick response to their emergency.

Counties develop and maintain their own training and quality assurance programs, allowing each agency to focus on specific training and evaluation criteria unique to their local needs. For example,

a county with a heavy presence of outdoor recreational activities will likely maintain a slightly different training program than a county with many miles of interstate highways. The standards allow for a sufficient level of autonomy within the structure.

<u>Funding and budgeting</u>:

The established funding formula distributes 83-percent of all remitted 911 fees directly to each county. An additional 15-percent was originally used to support a grant program focused on preparing each county for the migration to Next Generation 911. Now that a bulk of that preparation is completed, that section of the remitted fees will be used to implement and sustain the statewide ESInet. Additionally, after a full migration to the statewide ESInet has been achieved, PEMA will assume one of the major costs currently borne by the counties. Currently, each county maintains a substantial expense for the delivery of 911 traffic to their 911 center by their chosen service provider. In Bucks County for example, that amount is approximately $400,000, annually – paid to our local exchange carrier. Moving this cost out of the county's 83-percent funds will provide opportunities to refocus those funds on other eligible costs to sustain or improve their 911 center.

Through a collaborative process, PEMA and the counties developed and annually reviews a list of eligible expenses for the remitted 911 fees. Unlike other states, 911 centers in Pennsylvania have the ability to support a majority of the costs associated with operating a fully functional emergency communications center. Although other states may tout a lower 911 fee, it should be pointed out that 911 centers may only have the ability to pay for a fraction of the costs associated with operating an emergency communications center – relying on county or other local taxes to pay for the remainder of costs.

Moving Forward

Great progress has been achieved, and great progress will continue in the future. But what's next? When the migration to the Next Generation 911 environment is completed, where do we focus our time, effort, and fiduciary investments?

Our community is not immune to the rapid-paced evolution of communication technology. When I began my career in emergency communications in 1995, nearly every call we received originated from a wireline phone in a home, business, hotel, or other physical building. I still recall the first 911 call I received from a bag phone in a vehicle traveling on Route 422 in Montgomery County. We all wondered what they would think of next. In just a few short years, wireless service providers were completing tests to confirm the passage of rudimentary location information from mobile devices calling 911. VoIP technology provided unrestricted portability of phone service – allowing an individual to take their office phone registered in Philadelphia to a remote location in Redwood, California and place calls like they were back home. Text-to-911 emerged as a preferred method of communicating for situations where the caller was unable to speak or speaking placed them at an increased risk of danger. The deaf and hard-of-hearing community quickly adopted this mode of communication, abandoning obsolete and non-mobile technology such as the teletypewriter and telecommunication device for the deaf.

The legacy 911 environment was designed to support wireline 911 service. The evolution that already has occurred is just the start of communication capabilities for emergency situations; and the investment Pennsylvania has committed to Next Generation 911 places us in a proactive position to properly support the continued evolution. Technologies such as video-to-911 and auto-crash/auto-fall notifications are just the start of the next wave of possibilities. Several counties in Pennsylvania have implemented video-to-911 capabilities and additional counties are looking to implement that capability in the near future. Many 911 centers already are receiving the auto-crash/auto-fall notifications being sent by some service providers.

This doesn't include systems such as shot detection, wearable notification devices, and the ability to communicate through over the top (OTT) mobile device applications. All of the communication methodologies currently being implemented or concepts of future implementations are based on digital IP technology. Fully implementing and sustaining Pennsylvania's ESInet needs to be a priority for statewide 911 funding moving forward.

Sustainment of the Pennsylvania ESInet provides opportunities to conduct methodical implementation of future communication capabilities that bring value to both the 911 centers and the public they serve. If there is a cultural shift to common communication methods—as we experienced with the preference of text sessions over voice calls—it stands to reason that an individual may likely attempt that communication avenue in a time of crisis. Additionally, the presence of a statewide ESInet provides many opportunities for 911 agencies to consider consolidation of technology, systems, and infrastructure. This reduces duplicative hardware without diminishing the resiliency and redundancy of the operation; and potentially reduces third-party maintenance costs and the investment of time required by agency personnel to perform first tier maintenance activities.

Outside of ESInet sustainment, the 911 fee is a main source of funding for eligible expenses in each 911 center across the state. This includes personnel costs and system sustainment associated with daily operation. There are four main systems that each agency must implement and maintain to adequately function – a phone system, a radio system, an incident management system (typically called a computer-aided dispatch system), and a record/data logger. Just these two cost categories (personnel and system sustainment) represent a large majority of funds a 911 center receives from the state through 911 fee remittance. The sustainment and licensure costs from supporting vendors continue to increase significantly, with inflation-based surges and built-in annual escalators. As an example, Bucks County realized an increase of $1 million in annual sustainment costs in 2022 just between our radio system and computer-aided dispatch system. This doesn't even take into account the various other increases in items such as radio tower rental, pay rate increases, and network connectivity. That scenario is not unique to Bucks County and is being played out in every county and regional 911 center across the state. Without a sufficient 911 fee funding stream, counties would be required to cover an exponentially growing financial gap.

It is not our organization's position that the established 911 fee should cover 100-percent of all costs reported by the 911 centers. A county or region of counties should take an active stewardship role in

support of the 911 centers that serve their public. However, multiple counties have reported that county contributions have steadily risen over the last five years and in some cases have grown to 40- or 50-percent of total reported costs. This is a direct result of a fee that has remained stagnant for eight years while inflation rose 27.99-percent (an average annual inflation rate of 3.24-percent), subsequently raising the mission critical products and services we purchase from vendors and service providers.

It is our organization's position that the proposed fee increase of $1.97 should be the lowest rate considered for the re-authorized 911 legislation. Anything less would result in an unsustainable local contribution. Counties would be forced into a funding model that would resemble the landscape prior to Act 12 of 2015. If our community drifted toward that model, the statewide alignment would wane, and individualized efforts and trajectories would overtake the landscape as they did prior.

Closing Remarks

Pennsylvania has emerged as an example to other states exploring the same Next Generation 911 migration with a desire to build alignment and trust across their 911 community. During my tenure as a public safety consultant, I had the fortune of providing guidance to state 911 leaders based on the model developed and executed in our great Commonwealth. The plan worked and it continues to work. An implementation strategy was developed and followed. A communication plan was established, and new relationships were forged. A fair, equitable, and predictable funding structure sustained the program.

Before closing my remarks, it is worth mentioning that the significance of this day in US history has not escaped me. We are meeting to discuss the health and future of the state's 911 system on a day when many first responders and members of the general public sacrificed all to save some. We are meeting to discuss the sustainment of a vital public safety service on a day when communication interoperability gaps and a lack of disaster preparation were in the spotlight. May the sacrifice of the brave never be forgotten; and may we, as members of the public safety community, do everything in our power to protect our first responders and protect all members of the public every minute of every day.

That is why we're here. That is why we do what we do. Our mission is "every call, every time". As communication technology evolves, the expectations and means by which the public contacts 911 on potentially the worst day of their life will change – and has changed. It's inevitable. The 911 community must continue to evolve – giving our professionals the ability to adapt to the caller's situation rather than the caller attempting to adapt to our system. Any attempt less than this will result in a degradation of capability and eventually public trust in the public safety community.

Again, thank you for the opportunity to join this highly valuable conversation. I am eager to be a subject matter resource for your committee and available to answer any questions you may have regarding my testimony.