

**Legislative Budget and Finance Committee**

**A Study Pursuant to SR 96:  
911 Communication Services**

**Report Comments by Stephen Fickes, Project Manager**  
**September 13, 2022**

Good morning. Mr. Chairman and members of the Committee, it is a pleasure to be here today to discuss the results of our study pursuant to Senate Resolution (SR) 96. SR96 asked us to review certain aspects of the commonwealth's 911 communication system, including how these services are provided, a review of data metrics from county providers, and the capacity for what will be the latest evolution of 911 services, known as Next Generation 911 or simply "Next Gen 911." With many of the provisions of the 911 Emergency Services Code set to expire in 2024, it is important to examine the condition of the commonwealth's emergency communication system to ensure that citizens will continue to receive the level of service that is expected and required for years to come.

Before I begin with the major findings of the report, allow me to first provide an overview of 911 services in the commonwealth, and highlight some of the notable aspects about how the system is maintained and administered in Pennsylvania. This context will supplement the discussions that follow later.

At a high level, emergency service call-taking and response is a straightforward process. When an emergency occurs and an individual dials 911, a communications provider, such as a cell phone operator or telephone company, directs the call to an emergency call response center, known formally as a “public safety answering point” or “P-SAP.” After the call is received by the PSAP, the telecommunicator determines the precise location of the emergency and asks a series of questions, usually pertaining to an event description - for example, the type of emergency, time, identities involved, etc. -- as well as the existence of any impediments to first responders arriving at the scene. The telecommunicator will also obtain contact information from the individual placing the 911 call. Based on the description of the emergency provided, the telecommunicator determines the type of services that need to be dispatched – such as fire, medical, police, or a combination of the three, and then sends the information to a dispatcher or directly dispatches the services.

While the concepts of this process have remained the same since the 911 system’s inception, advancements in technology have impacted the duties performed by telecommunicators and dispatchers at PSAPs. This technology is most evident for determining the *location* of 911 calls, which is perhaps the most significant component of the emergency call process. Knowing precisely where a call is originating from

determines to which PSAP a 911 call will be routed, which in turn impacts how quickly emergency responders arrive on site.

In terms of administering 911 services, in Pennsylvania the process has traditionally been a county-designated function; however, program oversight has been provided since the passage of Act 78 in 1990 at the state level. In terms of state oversight, in 2015, Act 12 tasked the Pennsylvania Emergency Management Agency (PEMA) with increased authority over statewide 911 system governance, funding, and planning. With this statutory responsibility in place, today, PEMA can best be described as the “steward” of the commonwealth’s 911 program – establishing the system guardrails for the counties to follow. PEMA does not act alone in this responsibility. The 911 Advisory Board, which was also created by Act 12, consists of 42 members with a wide array of experiences, backgrounds, and skillsets that assist PEMA in developing planning guidelines, performance standards, training policies, and Next Gen 911 deployment strategies. In addition, the Board reviews PSAP performance to ensure compliance with federal regulations and industry standards.

As you can tell, Act 12 was a significant advancement in 911’s evolution as it brought changes to how 911 services were funded. Most notably, Act 12 implemented a uniform \$1.65 surcharge on wireline, wireless, and Voice over Internet Protocols , known as VoIP

services. The Act also streamlined the collection process for these surcharges. Fees are still collected by communications providers, but fees are now remitted to the state Treasury for deposit into the 911 Fund on a quarterly basis. Compared to other states, we found that Pennsylvania generated the most average annual 911 service fee revenue in the country between 2016 and 2020.

Act 12 also established the basis by which 911 Funds are distributed. Per the Act, 83 percent of 911 revenue, which is approximately \$271 million per year, is distributed via a distribution formula created by PEMA and the 911 Advisory Board. Another 15 percent of 911 revenue is distributed to improve statewide interconnectivity of 911 systems. This aspect has been carried out via a competitive grant program overseen by PEMA and the Board. PEMA awarded over \$170 million in grants to the counties for the five-year observation period, in addition to supporting statewide interconnectivity through the Next Gen 911 project. The final two percent is retained by PEMA for its administrative expenses, of which we found most goes toward operating expenses, primarily for professional services to carry out the more specialized system requirements under the Act.

I'll next move to a discussion of our review of data from the County Public Safety Answering Points. We reviewed the areas of call volume, staffing, expenditures, and

regional partnerships. Our review covers the period 2016 to 2020, and the data used in this analysis comes directly from the counties via PEMA's annual report; however, we also supplemented our analysis with data that we obtained from a questionnaire of county 911 (PSAP) coordinators. We found that 911 call volume across the state decreased by 15 percent, including declines in wireline and wireless calls by 34 percent and nine percent, respectively. This occurrence was counterbalanced slightly by increases in text-to-911 calls, and Vo-IP (Voy-ip) calls. Additionally, 69 percent of counties reported receiving more non-emergency calls than 911 calls for the period, a trend that many county 911 coordinators stated is becoming increasingly burdensome for their PSAPs. We were unable to provide more granularity on this issue though because the data is either lacking or not uniform.

In the area of county PSAP expenses, we found that total expenses grew by 22 percent, the majority of which were covered by the 911 Fund. Although some counties expressed that they would like to see more expenses qualify for Fund reimbursement, we concur with PEMA's assessment that areas not fully covered -- for example radio equipment or for certain facility expenses -- should remain that way to keep Pennsylvania eligible for federal 911 grant funding. Looking at expenses more specifically by expenditure group, we found that personnel and operating expenses accounted for nearly 90 percent of all spending by the counties. While personnel

spending is the main driver in many counties, operating expenses increased by 66 percent over the five years, primarily because of the need to update 911 equipment. We did find it concerning that 84 percent of counties in classes 6, 7, and 8 spent at least half their budgets over the period on operating costs. With the migration to NG911 underway, there is an opportunity for these lesser populated counties to leverage technology and explore cost-sharing options in the future.

Staffing is perhaps the most significant issue currently facing the county PSAPs.

Although a statewide database on staffing does not currently exist, responses to our survey as well as a PEMA survey indicate that many PSAPs are struggling to fill open telecommunicator positions. Staffing ranked as the most important issue in our survey of 911 coordinators, and PEMA reports that at least 23 counties have telecommunicator vacancy rates above 20 percent.

Moving to the final section of the report, we discuss some of the opportunities and challenges for the 911 system. This discussion is somewhat difficult, however, because within the next few years the backbone of the 911 system will look significantly different than it does today with the evolution of Next Gen 911. Further, we found that it was difficult to project future system needs based on data that is several years old, may not be consistent from PSAP to PSAP, and does not reflect the dynamics of a Next Gen 911

environment. Nevertheless, there are perennial themes that became apparent to us – the first of which is funding.

While program expenses have increased each year, funding has remained constant. One potential cause for this occurrence is the unexpected lack of growth in VoIP revenue over time, which is occurring at a time when IP-based technology and related “smart” devices are rapidly increasing. As a result, PEMA has reported difficulty in determining if the VoIP surcharge is being assessed appropriately. Further, this lack of standardization also impacts the ability of PSAPs to properly measure telecommunicator workload, as we believe a portion of these devices are currently outside the commonwealth’s call data tracking system.

The funding gap is perhaps exacerbated by another issue: adoption of a new funding formula. Most of Pennsylvania’s 911 stakeholders agree that the current 911 Fund distribution formula – or the 83 percent of 911 revenue that is distributed to the counties -- does not adequately address the needs of the commonwealth’s 911 system. Many of the considerations that are used in the formula are now over a decade old and do not reflect the changing technological landscape or the transition to Next Gen 911. A fund formula revision was proposed in 2020, but the Board lacked a necessary three quarters’ majority to move the formula forward. As a result, the funding formula

continues to use outdated metrics and does not reflect the newer technological landscape of Next Gen 911. We recommend the implementation of a formula with population as its main consideration, as this is the most equitable way to distribute 911 Fund revenue. This conclusion is supported by the correlation between population and key 911 metrics such as call volume, PSAP staff size, and county system spending, as well as the perspective that the 911 system is most accurately demonstrated as a public good when funding is tied to the citizens the program serves.

In a related, but very complicated issue, we found that demarcation – or the splitting of costs between originating service providers and 911 entities -- may present obstacles to the progression of Next Gen 911. At the heart of the issue is how legacy cost recovery mechanisms for service providers could be used in a Next Gen 911 environment. More specifically, the previous demarcation points for cost recovery are not relevant precedents for the IP-based environment of Next Gen 911 and the efforts spearheaded to date with developing the supporting emergency network. PEMA has reported working with providers to determine points of interconnection, but the lack of a universally accepted demarcation point could lead to confusion, strain the 911 Fund, and create delays in implementing Next Gen 911 across Pennsylvania. Currently the Federal Communication Commission is deliberating rulemaking on this issue, but we

recommend that the General Assembly consider establishing a demarcation point and cost recovery mechanism for Next Gen 911, if no federal standards are implemented.

Moving beyond challenges in funding and distribution issues, another area for opportunity is regionalization and consolidation. Act 12 encourages the counties to consider the efficiencies of regionalization and consolidation. We found that most regional partnerships to date have been based on existing equipment sharing agreements -- primarily phone systems -- as well as previous working relationships. Pennsylvania currently has 61 primary PSAPs, which is down from 69 prior to the passing of the Act. Although we believe these efforts will result in cost savings for the counties without sacrificing 911 services for the commonwealth's citizens, due to the current transitory state of the 911 program, this issue warrants further review following the migration to Next Gen 911, which will have more robust data to analyze through its MIS solutions.

As I mentioned previously, staffing is a significant challenge within the 911 system. Despite many anticipated efficiencies for PSAP staffs from Next Gen 911, challenges for telecommunicators in the areas of training, call complexity, and mental health will be present going forward. However, the transition also presents the opportunity for PSAPs to leverage technology to overcome staffing deficiencies. As the commonwealth's

PSAPs continue to become more connected in terms of equipment and systems, opportunities to pool resources in efforts to find regional – or even statewide – solutions to staffing issues will become more viable. To this end, our report presents several recommendations to ensure that PEMA expands its capacity in this area.

Finally, SR 96 asked us to determine the capacity for Next Gen 911 development in the commonwealth. We found that PEMA has identified priorities needed for Next Gen 911, including the creation of a statewide Emergency Services Internet-Protocol Network and related Next Generation Core Services. These priorities will be used to migrate Pennsylvania into the first phase of Next Gen 911 implementation, which pertains to call delivery. To date, the dedicated emergency services network development began in 2021, and the first phase of Next Gen 911 implementation is scheduled to be completed in 2023. Although we found there is no universal method to achieve Next Gen 911 capable systems, we assessed the progress of Pennsylvania's Next Gen 911 project to be similar to that of other initiatives across the country.

In conclusion, I want to thank PEMA, the 911 Advisory Board, and the county 911 coordinators who took the time to assist us in providing the information we needed to complete this report. I would like to further acknowledge a special thanks to Jeff Boyle, PEMA's Deputy Director for 911. Jeff was instrumental in providing us with the access

we needed – and you will be hearing from him shortly to answer any questions you may have. I would also like to extend thanks to Matt Thomas, of our staff, who worked tirelessly compiling the volumes of data that went into this report. Thank you.