



*Report for*  
**Public Safety  
Answering Point  
Consolidation**



*Prepared for*  
**Ohio Department of  
Administrative Services**

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## EXECUTIVE SUMMARY

In looking at PSAP operations in Ohio, there are 318 PSAPs that provide critical emergency communications functions for its citizens and emergency responders, yet, Ohio's neighbor to the east, Pennsylvania, performs the same functions for a larger population over a larger land mass with one quarter of the PSAPs. From a statistical perspective, Ohio operates one PSAP per 36,000 citizens, Pennsylvania, one per 159,000 citizens. Some may actually believe that Ohio can provide a higher quality of service with 318 PSAPs when, in actuality, the opposite is often true if smaller PSAPs can't keep pace with technology. Maintaining consistent operating standards, staff training levels and technological sophistication is far more difficult for those PSAPs that must rely on a smaller population and tax base to remain viable.

There is no set formula that can be applied that automatically calculates the exact number of PSAPs Ohio should have within its borders. However, from the analysis conducted by Kimball, a county-based model similar to what was adopted in Pennsylvania, may serve the citizens of Ohio very well. According to the FCC Registry of PSAPs, North Carolina, with roughly 3 million less citizens than Ohio, now has 158 PSAPs across its 100 counties. Virginia, with 8 million citizens, operates 151 PSAPs across its 95 counties, excluding state police and military bases. As the largest political sub-division below the state level, a county-based model provides a geographic and population focal point by which the state can concentrate its efforts in those areas that have an overabundance of PSAPs.

A county-based model should take into consideration regionalization in the form of multicounty consolidations and consolidation initiatives among municipalities across counties that cover geographic territories or population bases comparable to a county. This model could also account for those counties that have larger city PSAPs that should remain in operation and serve as a backup location for the county PSAP, if necessary. Ohio, in adopting this model, can set as its goal a reduction in the number of PSAPs to 93. This would provide for a primary PSAP in all 88 counties and each city with a population above 100,000, with the exception of Dayton, which has already merged with the Montgomery County PSAP.

Kimball is well aware that establishing goals does not ensure the political will, financial backing or technological wherewithal exists to make the goals become reality; however, there are proactive measures that can be taken at a state level that can be instituted to further these efforts. Before any of these efforts are undertaken, Kimball would highly recommend that the data previously collected by the ESnet Committee be refreshed with a full scale, mandatory audit. This would include any PSAP that is currently connected to the 9-1-1 system and any secondary PSAPs that receive call transfers or serve as a dispatch point for 9-1-1 calls, much like the voluntary assessment conducted by the ESnet committee. Participation in the audit should be mandated and is a much needed step in determining the technological sophistication of each primary PSAP's 9-1-1 call-talking system, whether all systems are fully Phase II compliant, and identify those PSAPs who will or will not be candidates for connection to the ESnet. The data in this assessment can also be used to better understand what future steps Ohio will undertake, at a state level, to promote, or assist by funding, consolidation among PSAPs.

It is commonly understood that any infrastructure that provides a service, should be properly sized to meet its business or operational needs. This is true with airports and hospitals that serve the needs of a given geographic area and the same principal, to a certain degree can be applied to public safety communications. In comparing the

emergency communications infrastructures that exists across Ohio to meet the same need, it's apparent that a widely diverse opinion exists regarding proper sizing. For instance, Greene County operates five PSAPs to serve its 161,000 citizens while Delaware County, with a population of 181,000 people, serves its community with one PSAP. Lake County operates ten PSAPs for its 230,000 residents, yet Hamilton County has nearly four times the population base with only four PSAPs, 97% of that population being served by two of those PSAPs. As a visitor to Lake County during the summer tourist season, can one be assured that they will receive the same level of service when dialing 9-1-1 across the ten PSAPs in that county?

Hamilton County is an ideal example of intra-county cooperation between a large city, Cincinnati, and the County PSAP. It's likely that they have experienced challenges in their relationship over the years; however, that was not apparent when Kimball personnel visited the Hamilton County PSAP. Currently, Hamilton County and the city of Cincinnati have a joint GIS department, the Cincinnati Area Geographic Information Services (CAGIS). The city and county are in the process of partnering to procure a new CAD system that will be common to both parties. It is impressive to see government cooperation on that scale to address common operational needs. But, on the other extreme, it is baffling to see a city in a nearby county procure two separate CAD systems within the same community, one for the fire services and one for police. Clearly, their citizens are not better served by having emergency services use two different systems to track fire and police units from both operational and fiscal perspectives. With two separate systems all the data of emergency events is being recorded and stored in two disparate databases. One would ask whether the taxpayers in that community are better served by storing the data from the same serious crash, which both fire and police responded to, in completely different computer systems that are purchased and maintained separately.

Kimball recommends the following:

- The schedule for PSAP consolidation found in ORC § 128.571 be removed.
- The State should decide what role it wishes to play in emergency communications statewide and work with local governments to implement it.
- Move forward with caution in regards to changes made to emergency communications statewide. Any proposed change must be based on full understanding of the impact on both the 9-1-1 call taking and dispatch functions of emergency communications. Increasing the number of 9-1-1 call transfers should be avoided.
- Use approximately 93 consolidated PSAPs as a goal for PSAP reduction statewide (county-based plus large cities). The recommended governance of these county-based PSAPs should be as a separate county department. The PSAP director should report administratively to the county commissioners. For operational issues, the director should report to a board comprised of representatives of the municipalities served by the PSAP. However, the board should not contain the heads of the served agencies (police or fire chiefs) as voting members. The director must be an equal from an authority perspective to the heads of the agencies served to allow him or her to properly manage PSAP resources and avoid "multi-bosses."
- With the implementation of an ESInet, the State should require PSAPs that wish to connect and provide NG9-1-1 services to:
  - Meet minimum staffing requirements of two on duty at all times.
  - Meet minimum training standards for call takers and dispatchers (to be set by the State)
  - Provide EMD either directly or through another agency

- Consider funding incentives for consolidation efforts that are in keeping with the State's overall service level goals
- Consider grants or other financial assistance for consolidation feasibility studies at the local level
- Restrict access to the ESInet to primary PSAPs only
- Conduct a mandatory statewide audit of primary and secondary PSAPs to benchmark levels of service currently being provided before proceeding with the ESInet.
- Wireless 9-1-1 calls should be routed directly to the appropriate PSAP to reduce the transfer of 9-1-1 callers.
- The State should revisit the current surcharge amount and consider bringing it in line with other states to enable:
  - Increased funding for primary PSAPs to attain the service levels implemented by the state
  - Implement a consolidation fund to award grants to PSAPs undertaking consolidation initiatives
  - Provide financial assistance to PSAPs conducting feasibility studies as a precursor to consolidation
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## 1. INTRODUCTION

In an effort to provide the highest level of emergency communications services possible moving towards Next Generation 9-1-1, the State of Ohio Department of Administrative Services (DAS) contracted with L.R. Kimball (Kimball) to examine the number of PSAPs statewide.

### 1.1 Key Definitions

**Public Safety Answering Point (PSAP)** – Also called a 9-1-1 center or dispatch center and is an emergency communications facility that receives 9-1-1 calls. Dispatching of police, fire, and emergency medical services (EMS) field personnel each may or may not be part of this facility.

**Full PSAP Consolidation** – Full consolidation is defined as the consolidation of police, fire, and EMS call handling and dispatch functions for a defined region into a single facility.

**Co-Located PSAPs** – PSAPs from separate entities sharing the same facility and critical PSAP systems such as computer aided dispatch, radio consoles, 9-1-1 answering equipment and logging recorders.

**Shared Technology** – May also be called virtual consolidation. Two or more PSAPs share key PSAP systems such as computer-aided dispatch (CAD), radio, 9-1-1 call answering equipment or logging recorders. Although technology is shared, each PSAP retains its existing organizational structure and remain in its own facility. This form of consolidation increases interoperability and allows for cost efficiencies through group purchases.

**Call taker** – Refers to a PSAP job function which includes the processing of incoming 9-1-1 and administrative calls. Call taker may also be a job title in PSAPs where an employee performs only call taking functions.

**Dispatcher** – Refers to a PSAP job function which includes the dispatching of field personnel via radio to calls for service. Dispatcher may also be a job title in PSAPs where an employee performs only dispatch functions.

**Primary PSAP** – A primary PSAP is the point at which a 9-1-1 call is first answered. A PSAP may be primary for one type of call, such as wireline, but not other types such as wireless or VoIP.

**Secondary PSAP** - A secondary PSAP is a PSAP that does not receive 9-1-1 calls directly from citizens. A PSAP may be secondary for certain types of calls, such as wireless, but primary for others. A secondary PSAP receives calls via a transfer from the primary PSAP.

### 1.2 Scope of Work Summary

Kimball's scope of work for this report includes the following:

- Benchmark, at a high level, the current emergency communications environment statewide
- Make high level recommendations as to how many PSAPs the state needs to provide the most efficient service to its citizens
- Provide recommendations for moving towards the goal of consolidation and reduction of the number of primary PSAPs.



## 1.3 Methodology

The information needed for this report was gathered using several different methods including:

- Data Collection Web Survey and Data Analysis
- Town Hall Meetings
- PSAP Site Visits
- Best Practices

The following sections will outline how each of these methods was employed.

### 1.3.1 Data Collection Survey and Data Analysis

In January, 2013 the Statewide ESInet Steering Committee created and distributed the 9-1-1 Systems Requirement Assessment survey to PSAPs and county 9-1-1 coordinators across the state. The purpose of this survey was to assess the readiness of the State's IP network and local 9-1-1 programs for NG9-1-1. The data collected through this survey overlapped with the data needed for this report. Therefore, in an effort to minimize the duplication of effort on the part of the PSAPs, Kimball created an on-line survey that was modified for those who had completed the initial Requirement Assessment, but asked a full range of questions of those who had not completed the initial survey. The Kimball survey contained questions in reference to two topics, PSAP consolidation and NG9-1-1.

The survey was available to primary PSAPs starting from August 5 until mid-October. Individual primary PSAPs were asked to fill out the surveys completely and accurately as possible. Information asked for included, but was not limited to, the following:

- Basic PSAP information (primary or secondary PSAP, wireline or wireless calls)
- PSAP Demographics
- PSAP Staffing Levels
- PSAP Call Volume
- PSAP Support Systems
- PSAP Telephony
- PSAP Radio
- Staff responsibilities outside of 9-1-1 call taking and dispatching functions

The survey was distributed to a total of 345 PSAPs. However, 27 of the PSAPs were removed from the list which brought the total number of PSAPs to 318. PSAPs were removed from the list for reasons including:

- PSAP no longer exists due to consolidation efforts
- PSAP is a secondary rather than a primary PSAP
- Ohio State Police PSAPs were not considered part of this effort

Of the approximately 318 primary PSAPs that received a survey, 153 PSAPs or 48.1 percent completed the survey and 165 PSAPs or 51.9 percent either did not respond or did not complete the survey. A list of PSAPs that responded to the survey is located in Appendix A. PSAPs that did not respond is located in Appendix B.



### 1.3.2 Town Hall Meetings and PSAP Visits

Whether on the local or state level, key to any discussion on consolidation is stakeholder feedback. Under ideal circumstances, each PSAP across the state would be visited to ensure that key stakeholders had an opportunity to provide feedback and ask questions. However, given the large number of primary PSAPs (318) and an additional unknown number of secondary PSAPs statewide, individual PSAP visits were not possible due to budget and time constraints.

Kimball took a two-fold approach to gathering feedback from as many stakeholders as possible. First, Kimball conducted five Town Hall meetings; one each in the northeast, northwest, southeast, southwest and central regions of the state. These meetings provided PSAP representatives and other stakeholders with an overview of the Kimball study and the opportunity to ask questions and/or express concerns. A list of the meetings is provided in the following table:

Town Hall Meetings		
Region	Date	Location
Southeast	Monday, September 9	Cambridge, OH
Central	Wednesday, September 11	APCO/NENA Joint Meeting - Worthington, OH
Northwest	Thursday, September 12	Bowling Green, OH
Southwest	Friday, October 4	Batavia, OH
Northeast	Thursday, October 10	Boardman, OH

Table 1 – Town Hall Meetings

Second, Kimball visited a cross section of PSAPs statewide to talk directly with stakeholders from different sized PSAPs, geographical locations and operational models. The purpose of the visits was to gain feedback directly from the stakeholders and observe first-hand how emergency communications functions within the state. The following table lists the PSAPs that were visited and the date the visit took place.

PSAP Visits	
PSAP	Date
Muskingum County	Tuesday, September 10
City of Columbus Police / Fire	Tuesday, September 10
Montgomery County	Wednesday, September 11
Lucas County	Thursday, September 12
Hamilton County	Wednesday, October 2
Adams County	Thursday, October 3
Brown County	Thursday, October 3
Morgan County	Monday, October 7
City of Cleveland Police / Fire	Wednesday, October 9

Wayne County	Wednesday, October 9
City of Akron / Summit County	Thursday, October 10
Youngstown	Thursday, October 10

Table 2 – PSAP Visits

### 1.3.3 Data Analysis

Once the data surveys, Town Hall meetings and PSAP visits were completed, Kimball subject matter experts evaluated the data and applied industry best practices and their knowledge of coming challenges such as Next Generation 9-1-1 (NG9-1-1). The totality of this analysis was used as the basis for the recommendations found in this report.

### 1.3.4 Constraints and Assumptions

The following constraints were present and assumptions made in developing this report:

- Limited data due to a low survey response rate of approximately 48 percent
- Lack of an established set of goals and span of authority at the state level
- Language within ORC § 128.571 which outlines a schedule for PSAP consolidation is assumed to be changed or removed.
- Access to a statewide ESInet would be limited to a certain number of points or that certain criteria will need to be met by agencies wishing to connect to the network.
- 9-1-1 call taker and dispatch functions will be performed from within the same PSAP.

## 2. CONSOLIDATION OVERVIEW

This section provides a high level overview of what consolidation is, reasons to consider it, potential roadblocks and keys to a successful consolidation effort.

### 2.1 Historical Background

Historically, 9-1-1 call answering and dispatch services have been provided by small public safety answering points (PSAPs), except in larger urban areas. The PSAPs were commonly part of a larger law enforcement, fire or emergency medical services (EMS) agency. These PSAPs typically had a small staff that answered 9-1-1 calls and dispatched field units for a single primary agency in addition to a host of other non-9-1-1 or dispatch related job tasks. Little specialized training was necessary for the staff to perform these functions and advanced technology was not yet present. In fact, sworn personnel with no 9-1-1 training routinely filled temporary vacancies in the PSAP. However, over the last 25 years several key factors have caused public safety communications to evolve into a profession that requires highly skilled people with extensive on-going training and advanced technology. The key factors are:

- The explosion of cellular phone usage which created two major issues:
  1. A dramatic increase in 9-1-1 call volume.
  2. The need for Wireless 9-1-1 Phase I and II technology to locate cell phone callers and improved mapping abilities.
- Increased public awareness about available 9-1-1 technology and services such as the ability to locate 9-1-1 callers through technology and emergency medical dispatch (EMD) raised public expectations and drove the need for higher service levels.
- The terrorist attacks of September 11, 2001 raised awareness for the need for interoperability among responder agencies and the PSAPs that serve them.
- New technology such as wireless devices with video, photos, and text capabilities as well as automatic crash notification (ACN) through such companies as OnStar.

As this evolution progressed, those agencies managing PSAPs found that as training and technology needs increased so did the costs associated with operating a PSAP. In fact, the evolution is continuing as 9-1-1 service levels in the near future will include the ability to handle text messages, video, and photos over IP based networks also known as Next Generation 9-1-1 (NG9-1-1). As time progresses those agencies that maintain individual PSAPs will be faced with supplying even higher levels of training and procuring expensive new technology without which they will no longer be able to meet the 9-1-1 service level expectations of the community.

Key public safety industry organizations recognize that the on-going evolution of 9-1-1 requires establishing minimum standards for PSAP employee training, operations, technology, and facilities. These organizations include:

- International City/County Management Association (ICMA)
- National Emergency Number Association (NENA)
- Association of Public-Safety Communications Officials – International (APCO)
- International Association of Fire Chiefs (IAFC)
- Commission on Accreditation for Law Enforcement Agencies (CALEA)
- National Fire Protection Association (NFPA)

The evolution of 9-1-1 and the associated technology coupled with difficult economic times have encouraged state and local governments and public safety agencies to investigate the concept of shared services or consolidation of emergency communications services.

The simplest definition of consolidation is the combining of two or more PSAPs into a single facility and/or organization with a single set of critical PSAP technology and protocols. Different consolidation models exist and are customized to meet unique regional and stakeholder needs. The consolidation process is a complex and difficult process that can yield substantial improvements in service levels, responder safety, employee retention, and potential cost savings if implemented correctly.

## 2.2 Reasons to Consider Consolidation

At the state level, consolidation is often driven by two key reasons: consistent and efficient service levels statewide and cost efficiencies. Consistent service levels that meet national standards of care is an outcome of consolidation. When multiple PSAPs combine into a single organization, employees are trained according to the same standards and procedures which ensures the same service level for the geographic region served by that PSAP. Generally, the fewer PSAPs there are in a given geographical area, the fewer variations that will exist in the service levels that are provided to the community.

As NG9-1-1 technology and the ability for PSAPs to accept images, audio, video and text messages becomes a reality, it is becoming apparent that implementation challenges lay ahead for many PSAPs. First, the technology needed to receive these new data forms must be in place. NG9-1-1 capable networks and phone systems are already available although equipping a primary PSAP with the appropriate equipment can be costly and possibly prohibitively so for smaller agencies. In addition, secondary PSAPs will require a compatible IP-based system to receive the new data forms from the primary PSAPs and forward them to field units as needed.

At the local level, counties, municipalities and agencies consider consolidation for a number of reasons. Commonly cited reasons are:

1. Service level improvements – An important benefit of consolidation is service level improvements. The degree and nature of the improvements will vary depending on the efficiency of each individual PSAP considering consolidation. However, one key improvement is the reduction or, preferably, the elimination of the transfer of 9-1-1 callers.

9-1-1 call takers and dispatchers are truly the “first responder on the scene” and can substantially affect the outcome of an incident. The types of service improvements typically achieved include:

- An improvement that will be realized for even the most efficient existing PSAP is regional awareness of workload and the deployment of field personnel. This awareness leads to improved usage of resources regionally and better management of large scale or multi-jurisdictional events from a single point of control.
- Reduction or elimination of the transfer of 9-1-1 calls between PSAPs improves response times and lowers the potential for human or technology errors.

- Quicker call processing and dispatch times, resulting in potentially faster on-scene times for field personnel. Although studies substantiating this statement are not available, support of this statement is found in an examination of the typical call process taking process where one dispatcher performs both call taking and dispatch functions. Typically, when one person (the telecommunicator) is performing both functions, he or she answers the 9-1-1 call, interviews the caller long enough to confirm basic information and identify if the call has a high priority. The telecommunicator then turns to the radio and dispatches field personnel and handles the initial brief flurry of radio traffic. During this time, however short it may be, the caller is essentially on-hold, perhaps not mechanically, but certainly has been asked to hold on while units are dispatched and no further information is being obtained by the telecommunicator. Once the field units are enroute and the initial radio traffic is handled, then the telecommunicator can turn his or her full attention back to the caller and obtain additional information. However, from this point forward the telecommunicator must split his or her attention between the caller and the radio.
- When call taking and dispatch functions are split, the call taker answers the 9-1-1 call and does the same basic interview in the first example. When a call is identified as a high priority, the call is entered into CAD while the call taker continues to gather information. The CAD incident is instantaneously received by the dispatcher(s) and field personnel is sent. There is no lag in gathering information, potentially critical information, from the caller while the telecommunicator balances two tasks. As the call taker gathers new information, it is added to the CAD incident and sent to the dispatcher(s) to be communicated to the responding units. In Kimball's experience, this call processing methodology is highly efficient and more accurate. In reality, a telecommunicator, no matter how experienced or talented, is still limited in the number of tasks he or she can do efficiently by virtue of simple human limitations.

In further support of this model, the 2013 version of NFPA 1221 Standard for Installation, Maintenance and Use of Emergency Communications Systems Section A.7.3.1 (Annex to Chapter 7 Staffing) states "...Consider the following two concepts of communications center operations:

1. Vertical Center. A telecommunicator performs both the call taking and dispatching functions
2. Horizontal Center. Different telecommunicators perform the call taking and dispatch functions.

*Telecommunicators working in a vertical center are known to engage in multitasking that can inhibit their ability to perform assigned job functions. Routine evaluation of telecommunicator staffing..."*

- Sharing of physical space enables communications between call takers, law enforcement and fire dispatchers to be virtually instantaneous. This improved communications enables field personnel to receive information more quickly and accurately which is particularly important in multi-jurisdictional incidents. This communication is the least tangible or quantifiable benefit of consolidation, but is one of the most substantial.
- If large enough, a consolidated PSAP can utilize a call taker / dispatcher organizational structure. This structure enables the call takers to focus solely on the incoming call and obtain the best information possible. The dispatcher's ability to focus solely on field personnel improves field personnel safety.
- Standardized training of all PSAP employees increases regional consistency.
- A consolidated environment will offer the opportunity for smaller participants to benefit from state-of-the-art technology, improved training, and expanded career opportunities that would not be otherwise financially or organizationally feasible.

2. Individual agencies no longer wish to or are able to support the training and technology needed or handle the personnel issues for PSAP staff. Reassigning sworn personnel functioning as PSAP management and support staff to other positions is possible by eliminating the PSAP.
3. Another primary reason cited for consolidation is cost savings. While cost savings are possible, it is critical that potential participants understand two points. First, not all consolidations result in cost savings. A common misconception is that consolidating will result in significant personnel reductions thus significant cost savings. Consolidations do not normally involve large staff reductions. The real cost savings come from the elimination of redundant and expensive technology such as CAD, 9-1-1 answering equipment, radio consoles, and logging recorders. The single set of technology and systems found in a consolidated environment reduces costs associated with procurement, connectivity, and maintenance costs.

Second, in those scenarios where cost savings are achievable the actual realization of the savings may not occur for several years. The consolidation process can be expensive and can generate substantial one-time start-up and capital costs for facility and technology needs. These costs delay the actual cost savings.

## 2.3 Roadblocks to Consolidation

PSAP consolidation is a complex process and one has potentially negative or *perceived* negative aspects as well as positive aspects. The negative aspects most commonly raised are:

1. Loss of control. Depending on the consolidation model and organizational structure chosen, law enforcement and fire agencies that have had 9-1-1 call taking and dispatch staff as part of their organizations must often relinquish control of the PSAP employees as they become part of the new organization. Complaint and other personnel investigations and any resulting training or disciplinary actions become the responsibility of the new PSAP management which can be seen as a negative by participating agencies.

Often, the level of control the new PSAP would have over the responses of the participating agencies is misunderstood as well. The role of any PSAP is to implement dispatch plans developed by each individual agency not to dictate response levels to each agency. For example, a law enforcement agency will still have complete control over the type or nature of the incidents they respond to and the level of that response. While standardization among participating agencies is recommended to the degree possible, each agency is still able to customize its responses to the unique needs of the community it serves. Finally, the PSAP dispatches calls for service according to each agency's dispatch plan, but any dispatch can be overridden by an agency command officer if he or she feels it necessary.

2. Start-up costs or increased operational costs. It is important to understand that comparing the cost of current, non-consolidated PSAP operations with that of a consolidated environment is not an apples-to-apples comparison. The typical emergency communications system that has been in place for the last 25 years cannot provide the level of service expected by today's technologically savvy citizens.

- Ancillary or non PSAP related duties. In many small PSAPs where the call volume is low, staff members are often responsible for a host of other non-9-1-1 or dispatch related responsibilities. These include tasks such as handling walk-in complaints, holding cell monitoring, dispatchers performing jail duties, releasing impounded animals and vehicles, management of business key holder/contact files, entering records, tickets, and permits, tracking municipal fees such as dog licenses, and functioning as a receptionist and switchboard for the parent agency and/or the entire municipality.

Not only do PSAP staff perform necessary functions outside what would be considered 9-1-1 and dispatch duties, but also often provide a 24/7 presence within the public safety agency. Many agencies consider this 24/7 presence to be a vital part of the service level provided to the community and do not wish to lose it. Not having a 24/7 presence can be managed in a number of ways such as a direct phone in the lobby of the agency that dials the consolidated PSAP or installing “safe room” capabilities in the facility entrance. However, each community will need to assess if compromises such as these are acceptable when considering consolidation.

Each entity considering consolidation must determine how these types of tasks will be managed if consolidation becomes a reality. This may mean adding tasks to current non-PSAP employees within the entity, hiring new employees or altering the service levels provided. The hiring of new staff will affect the potential cost savings for the municipality and should be considered when assessing whether to consolidate.

The Kimball survey asked the question; “Does the PSAP staff perform any duties not related to the processing of 9-1-1 calls and dispatching calls for service?” The results indicate that employees in 76.47 percent of the 153 PSAPs that responded are responsible for a variety of ancillary duties outside what is considered emergency communications. The following table provides complete survey results for this question.

Performance of Ancillary Duties		
Response	Number of Responses	% of Responses
Yes	117	76.47%
No	21	13.73%
Question Not Answered*	15	9.80%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was completed by the PSAP, but a specific question was not answered.		

**Table 3 – Performance of Ancillary Duties**

- Loss of geographical knowledge of the community and/or personal knowledge of callers. There is no question that PSAP staff in small communities often know the local citizens and geography well. When moving to a larger, consolidated environment, it is also true that some of this knowledge will be lost. However, it is important to recognize that the employees from the small PSAP will likely move over to the



consolidated center, taking their knowledge with them to share with other employees. In addition, mapping software is commonly available which reduces the need for a high level of local geographical knowledge.

## 2.4 Requirements for Successful Consolidation

Stakeholder buy-in, funding, and a champion are the three requirements for a successful co-location or consolidation. The desire and expectation that 9-1-1 call taking and dispatching (emergency communications) will improve is the primary driver behind public policy change. In Kimball's experience, where emergency communications has been fragmented and provided by disparate systems and agencies for many years, it is difficult and sometimes nearly impossible for those that own and operate the disparate centers to envision a shared services model. Indeed, it is hard for any change to be seen as necessary, or better than what is currently provided. Many times the local experts/agency heads are not confident that their specific requirements can be met in an operation that appears to be out of their direct control. Typically key decision-makers acknowledge the opportunity to improve service, but see funding needs as a roadblock. Operational staff are the most impacted by any converging of operations or technology, thus their primary concerns are about basic needs, such as job security, seniority, pay and benefits protection. It is a difficult process, but one that provides consistent and efficient service levels to both the community and the agencies the consolidated PSAP serves.

## 2.5 Consolidation Models

When discussing how to achieve the most efficient and effective level of emergency communications service, it is helpful to understand different types of consolidation models before evaluating the current environment statewide. This section provides an overview of the most common PSAP consolidation models and an overview of call taker and dispatch functions.

### 2.5.1 Full Consolidation

Full consolidation refers to the consolidation of all 9-1-1 answering (wireline and wireless) and emergency dispatch functions (law enforcement, fire, and EMS) within a defined geographical area into a single organization. This geographical area can include one or more units of government (e.g., county, city, village or township). The highest level of service level improvements occurs under this model. Model characteristics include:

- Services for law enforcement, fire, and EMS call taking and dispatching.
- The structure of the consolidated PSAP is often a stand-alone agency, a separate department either within an existing county or as an independent organization (e.g. joint powers authority).
- A full consolidation houses employees in a single facility or among two or more regional facilities.
- Commonly configured as a single organizational or reporting structure, which may include a board, advisory and/or user group as a mechanism for served agencies to provide input and resolve issues.

### 2.5.2 Partial Consolidation

A partial consolidation is the combining of emergency communications for multiple public safety agencies within a specified geographical area, but not all agencies. For example, several Sheriff's Offices may combine

communications into a single PSAP, but fire and EMS handle communications individually. Model characteristics include:

- Communications services for one or two disciplines (law enforcement, fire, and/or EMS), but not all.
- Typically set up as part of an existing agency. For example, three Sheriff's Offices decide to combine 9-1-1 call taking and dispatch functions, so expansion of an existing facility and systems takes place to include the new agencies.
- Usually falls under the organizational structure of the host agency. However, in urban areas the new consolidated PSAP may be large enough to be a stand-alone agency or department.

### 2.5.3 Co-location

A co-location of PSAPs refers to the sharing of physical space and, at times, critical PSAP technology such as CAD, 9-1-1 answering positions, radio consoles, and logging recorders, while remaining completely separate entities. For example, communications for a city police and fire department reside in the same physical space but each remains part of its original organization. Governance for each department remains under its original organization as well. Model characteristics include:

- Participants that are seeking cost efficiencies by the sharing physical space and technology without giving up direct control of actual call taking and dispatching. This model most often occurs when variables do not allow for an actual full or partial consolidation of services.
- Can be used as precursor to a full consolidation. For example, communications for multiple law enforcement departments could be co-located as the initial step in a full consolidation. The agencies work side by side while cross training is completed and issues associated with creating a single organization are resolved.

### 2.5.4 Shared Technology or Virtual Consolidation

As technology evolves the ability for PSAPs to share key systems with or without sharing physical space is now a reality. In this model participating agencies jointly procure or share through agreements key PSAP systems such as 9-1-1 answering equipment, CAD, and radio consoles. Although not actually a PSAP consolidation in the same manner as the other alternatives, sharing of space and creation of a single organization, this alternative does offer participants some consolidation benefits including:

- May include co-located PSAPs as well as separate stand-alone PSAPs
- Potential cost efficiencies by purchasing single systems for use by all participants rather than separate systems for each PSAP.
- Improved situational awareness through a shared CAD system.
- Improved interoperability if a single radio system was used. Cost efficiencies associated with a collective purchase of radio consoles would be achievable even if separate radio systems are used.

### 2.5.5 9-1-1 Call Taker and Dispatch Functions

In recent years, difficult economic times, planning for NG 9-1-1 and the realization that regionalization has many service level benefits has encouraged all levels of government to consider consolidation of PSAPs.

In many states the 9-1-1 surcharge applied to wireline and wireless telephones is received by and administered by each state. Commonly, the State will have control over the 9-1-1 call receipt technology (9-1-1 answering positions and network connectivity), but not the technology or staffing associated with dispatch functions such as radio infrastructure, consoles and training of personnel. *It is absolutely critical that 9-1-1 call taking and dispatch functions be viewed as two overlapping and intertwined halves of the same whole. Legislation or any other wholesale changes made to either 9-1-1 call taking or the dispatching field personnel impacts the other. Therefore, it is critical to carefully consider and understand the emergency communications systems as a whole when implementing changes.*

In parts of the nation where the 9-1-1 technology is in control of the State, the State will sometimes force the consolidation of the 9-1-1 call taking portion of the emergency communications system. In other words, the number of PSAPs that will receive 9-1-1 calls directly from callers is reduced to a more “efficient” number from the State’s perspective. While this process does lower equipment and network costs for the State, it can severely fragment the system as a whole and create a system of primary and secondary PSAPs. Often a municipality will give up its ability to receive 9-1-1 calls directly, if mandated to do so, but will retain the dispatch functionality. When this happens, the 9-1-1 equipment and network costs are reduced, but the number of call transfers increases and overall effectiveness of the emergency communications system is reduced. In summary, this approach fails to take into account the larger public safety picture and results in an emergency communications system that is less effective than would have been in place without any reduction in the number of answering points.

Throughout this document Kimball assumes that call taking and dispatch functions will be performed by the same PSAP.

## **2.5.6 Recommended Consolidation Model**

The consolidation model that provides the most effective emergency communications system, including call taking and dispatch functions, is a full consolidation. In Kimball’s opinion, this model represents the “perfect world” solution that should be the focus of any incentives designed to encourage PSAP consolidation statewide. Full consolidation among a group of participants provides the community and the law enforcement, fire and EMS user agencies with the following:

- A “one-stop shop” for citizens calling 9-1-1. The callers receive the law enforcement, fire and/or EMS responses needed and any necessary emergency medical dispatch (EMD) instructions as a result of a single interview by the PSAP call taker.
- A minimization of 9-1-1 call transfers.
- Standardized training levels for all PSAP staff which means the community receives the same standard of care within a specific region.
- Law enforcement, fire and EMS agencies all receive the same level of service from the PSAP
- Potential for cost efficiencies when purchasing a single set of critical PSAP technology rather than multiple PSAPs each purchasing their own systems.
- A high level of regional awareness and the ability to better coordinate multi-jurisdictional and discipline (police, fire and EMS) responses to major incidents and manage regional resources.

- The ability for PSAP staff to function as a team and instantaneously react simultaneously to new incoming information or situational changes. This allows field personnel to be better informed and increases field responder safety.

Although other consolidation models do provide many of these same benefits, none achieve as many benefits as a full consolidation. For example, co-located PSAPs often transfer callers between the agencies even though the PSAPs occupy the same physical space. Time delays and caller frustration increase in this model. In addition, the more times a call is transferred, the more chance for human error or technological failure. However, the type of consolidation must be decided at the local level and be a model that the participating agencies feel best fits their needs.

In a partial consolidation, where two of the three primary (police, fire and EMS) services are consolidated and one is not, the transfer of 9-1-1 callers is reduced, but not eliminated; situational awareness and communication within the PSAP is improved, but not ideal and some cost efficiencies are possible.

In a co-location model the degree of benefits realized will hinge on the degree that the agencies share technology and information. In some cases, technology is shared and agencies work very well together. However, in other cases there is a literal or figurative wall or partition between agencies, technology is not shared and cooperation is minimal.

In the case of a shared technology model, today's technology does mitigate some of the delays inherent with caller transfer, but does not provide the same level of coordination between PSAP employees and during major incidents. Managing a major incident will never be as effective when there is multiple points of control that must be contacted, even with excellent technology in place, as it will be when there is a single point of control and communication is instantaneous within the same room. Added to this scenario are staff that are trained according to the same training program and operating under the same set of policies and procedures which only enhances the efficiency of the fully consolidated PSAP.

The value of having PSAP staff in the same room is difficult to quantify, but is a key benefit of full consolidation. When call takers and dispatchers can hear each other and react instantly, before they receive added information via CAD, text or other mechanism, to high priority situations, time is saved and safety is increased. A real-life example includes the immediate escalation and dispatching of an upgraded response to a call for a small fire when subsequent calls reported people trapped in a house. The increased response was on the way before the call ended and the new information added to the CAD incident because the fire dispatch and call taker were in close proximity to each other. Sharing of technology is beneficial, but it does not replace being in the same room and having access to all sources of information simultaneously.

The following table compares consolidation models and the benefits typically found in each one.

Consolidation Model Comparison						
Model*	Minimization of Call Transfers	Shared Technology	Single Point of Coordination	Potential Cost Efficiencies	Standardized Training Program	Standardized Polices / Procedures
Full	Yes	Yes	Yes	Yes	Yes	Yes
Partial	No	Possibly	No	Some	No	No
Co-Location	No	Possibly	No	Possibly	No	No
Shared Technology	No	Possibly	No	Yes	No	No
*Table is based on how each of these models is typically organized. Individual PSAPs of any of these models may be different.						

Table 4 – Consolidation Model Comparison

### 3. CURRENT ENVIRONMENT

This section provides an overview of the current emergency communications environment within the State of Ohio. The information in this section was taken from the Kimball on-line survey as well as from Town Hall meetings and PSAP visits discussed in Sections 1 and 4.

The following table provides an overview of the response to the survey Kimball distributed.

Overall Survey Response		
	Number of Responses	% of Total Number of PSAPs
Number of PSAPs that <b>did not</b> respond to the survey	165	51.90%
Number of PSAPs that <b>did</b> responded to the survey	153	48.10%
<b>Total Number of Primary PSAPs</b>	<b>318</b>	<b>100.00%</b>

Table 5 – Overall Survey Response

As indicated in the table, response to the survey was low at 48.10 percent. The low response limited Kimball somewhat in the conclusions and assumptions that could be made regarding the current emergency communications environment. Listings of which PSAPs did and did not respond to the survey are located in Appendices A and B respectively.

#### 3.1 Definitions

The following definitions are a duplication of those found in Section 1.1, but are repeated here for reader convenience.

**Public Safety Answering Point (PSAP)** – Also called a 9-1-1 center or dispatch center and is an emergency communications facility that receives 9-1-1 calls. Dispatching of police, fire, and emergency medical services (EMS) field personnel each may or may not be part of this facility.

**Full PSAP Consolidation** – Full consolidation is defined as the consolidation of police, fire, and EMS call handling and dispatch functions for a defined region into a single facility.

**Co-Located PSAPs** – PSAPs from separate entities sharing the same facility and critical PSAP systems such as computer aided dispatch, radio consoles, 9-1-1 answering equipment and logging recorders.

**Shared Technology** – May also be called virtual consolidation. Two or more PSAPs share key PSAP systems such as computer-aided dispatch (CAD), radio, 9-1-1 call answering equipment or logging recorders. Although technology is shared, each PSAP retains its existing organizational structure and remain in its own facility. This form of consolidation increases interoperability and allows for cost efficiencies through group purchases.

**Call taker** – Refers to a PSAP job function which includes the processing of incoming 9-1-1 and administrative calls. Call taker may also be a job title in PSAPs where an employee performs only call taking functions.

**Dispatcher** – Refers to a PSAP job function which includes the dispatching of field personnel via radio to calls for service. Dispatcher may also be a job title in PSAPs where an employee performs only dispatch functions.

**Primary PSAP** – A primary PSAP is the point at which a 9-1-1 call is first answered. A PSAP may be primary for one type of call, such as wireline, but not other types such as wireless or VoIP.

**Secondary PSAP** - A secondary PSAP is a PSAP that does not receive 9-1-1 calls directly from citizens. A PSAP may be secondary for certain types of calls, such as wireless, but primary for others. A secondary PSAP receives calls via a transfer from the primary PSAP.

### 3.2 Primary and Secondary PSAPs

The survey asked the following questions in regards to the type calls answered by each PSAP and whether each is a primary or secondary PSAP. The following table indicates the breakdown of the 153 responses received.

1. Is your PSAP a primary or secondary PSAP for wireline calls?
2. Is your PSAP a primary or secondary PSAP for wireless/VoIP calls?
3. If a primary PSAP, do you receive both wireline and wireless 9-1-1 calls directly from citizens?

Call Types Answered by PSAPs						
PSAP Type	Wireline 9-1-1 Calls	% of Responses	Wireless / VoIP	% of Responses	All Call Types	% of Responses
Primary	139	90.85%	101	66.01%	105	68.63%
Secondary	1	0.65%	39	25.49%	32	20.92%
Question Not Answered*	13	8.50%	13	8.50%	16	10.46%
Totals	153	100.00%	153	100.00%	153	100.00%

\*Indicates that a survey was completed by the PSAP, but a specific question was not answered.

Table 6 – Call Types Answered by PSAPs

When evaluating the responses to these questions, it is significant that while approximately 91 percent of the responses received function as a primary PSAP for wireline calls, only 66 percent function as the primary PSAP for wireless / VoIP calls. Since wireless calls in Ohio are handled by those PSAPs designated to receive them (up to five PSAPs per county), this result is not surprising. When PSAPs do not receive their own wireless calls a transfer of the caller to the appropriate secondary PSAP must take place. Based on the responses received, the transfer of wireless 9-1-1 callers increases almost 25 percent compared to wireline calls.

The next survey question was “Does your PSAP routinely transfer 9-1-1 calls to other PSAPs or dispatch centers for dispatch of field personnel? For example, all calls received for a specific agency are always transferred to that agency for dispatch.” The following table reflects the responses to this question.



Routine Transfer of 9-1-1 calls		
Response	Number of Responses	% of Responses
Answered Yes	102	66.67%
Answered No	38	24.84%
Question Not Answered*	13	8.50%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was completed by the PSAP, but a specific question was not answered.		

Table 7 – Routine Transfer of 9-1-1 Calls

The results of this question also indicate that 66.67 percent of the PSAPs, at least among those that responded to the survey, routinely transfer 9-1-1 callers.

### 3.2.1 Wireless PSAPs

In the State of Ohio not every PSAP receives its own wireless 9-1-1 calls directly. Instead, the calls are routed to PSAPs that are specifically designated to receive them, up to five per county. This call routing methodology ensures that 100 percent of calls for PSAPs that do not receive them directly will be transferred at least one time. As discussed later in this section, the transfer of 9-1-1 calls should be minimized whenever possible.

Whether PSAPs proceed with some form of consolidation in the future, each one should strongly consider receiving directly its own wireless 9-1-1 calls. Trends show that not only is the cell phone usage is still increasing while the wireline usage is decreasing. In the not-to-distant future, if not already, PSAPs that do not receive their wireless calls directly will be receiving the vast majority of their calls via transfer from a primary wireless PSAP.

### 3.3 PSAP Size and Minimum Staffing Levels

The Kimball survey asked respondents to identify how many physical workstations are located within their PSAPs. Of the 140 PSAPs that responded to the question, sixty PSAPs or 43 percent have only one or two workstations. Sixty-nine of those PSAPs only staff one person during slow periods of the day. Even if the person on duty has been provided mandated training and has the most technologically advanced software and equipment, that person alone cannot provide the level of service necessary to both caller and the emergency responder as well as handle other incoming calls for service. The following table summarizes the survey responses.

Physical Workstation Summary		
Number of Physical Workstations	Number of PSAPs	% of PSAPs
1 Workstation	10	6.54%
2 Workstations	50	32.68%
3 Workstations	32	20.92%
4 Workstations	15	9.80%
5 Workstations	13	8.50%
6 Workstations	6	3.92%
7 Workstations	3	1.96%
8 Workstations	2	1.31%
9 Workstations	1	0.65%
11 Workstations	1	0.65%
12 Workstations	2	1.31%
16 Workstations	1	0.65%
19 Workstations	1	0.65%
22 Workstations	1	0.65%
28 Workstations	1	0.65%
29 Workstations	1	0.65%
Question Not Answered*	13	8.50%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was submitted, but this specific question was not answered.		

**Table 8 – Physical Workstation Summary**

In this instance, clinging to an outdated mode of operation will not propel Ohio's emergency communications system into the future.

The survey also asked respondents to identify the minimum number of workstations that would be staffed during the slowest time of the day. Of the 135 responses to this question sixty-nine PSAPs or 45.10 percent staff a single workstation during the slowest times of the day.

Minimum Staffing Levels During Slowest Hour		
Number of Staffed Workstations	Number of PSAPs	% of PSAPs
1 Workstation	69	45.10%
2 Workstations	42	27.45%
3 Workstations	12	7.84%
4 Workstations	6	3.92%
5 Workstations	1	0.65%
6 Workstations	2	1.31%
7 Workstations	1	0.65%
8 Workstations	1	0.65%
9 Workstations	1	0.65%
11 Workstations	1	0.65%
Question Not Answered*	17	11.11%
Totals	153	100.00%
*Indicates that a survey was submitted, but this specific question was not answered.		

Table 9 – Minimum Staffing Levels Summary

### 3.4 Emergency Medical Dispatch

Emergency medical dispatch (EMD), the provision of medical instructions to 9-1-1 callers, has become the expected standard of care nationally. EMD has three main focuses; providing medical instructions, determining the appropriate level of field response and quality assurance. The first focus is the provision of medical instructions to the caller, based on strict guidelines and protocols, which are designed to improve patient outcome and responder safety. The instructions range from applying direct pressure to stop minor bleeding to full cardiopulmonary resuscitation (CPR) or child birth instructions.

The second focus of EMD is to gather enough information from the caller to determine what the appropriate level of response to the scene by ambulance crews. Depending on the nature of the problem, the appropriate response ranges from the ambulance driving to the scene along with the normal flow of traffic to a full lights and sirens response for true life-threatening emergencies. An appropriate response level increases the safety of the community and responders and decreases liability for the EMS agency. The third focus is an on-going quality assurance program.

The survey asked PSAPs to indicate whether they provide EMD. The following table reflects the survey responses to this question.

Provision of Emergency Medical Dispatch		
Response	Number of Responses	% of Responses
Answered Yes	67	43.79%
Answered No	70	45.75%
Question Not Answered*	16	10.46%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was completed by the PSAP, but a specific question was not answered.		

**Table 10 – Provision of Emergency Medical Dispatch**

Of the 153 survey responses received almost 46 percent of PSAPs either do not provide EMD at all or transfer the 9-1-1 caller to another agency or PSAP who provides the instructions. Both of these scenarios are cause for concern and are not in keeping with an efficient and effective emergency communications system. In the first scenario where EMD is not being provided at all, the PSAP's liability increases as EMD is now the nationally recognized standard of care for PSAPs.

In the second scenario EMD is provided, but by an agency other than the PSAP receiving the call. After an initial interview to determine whether police, fire and/or EMS are needed, the call must then be transferred to the agency providing the EMD. The receiving dispatcher then must re-interview the caller, provide EMD and dispatch EMS field personnel. The average length of time added to a call for the second interview process can be approximately 30 seconds for each transfer.

The benefits of providing EMD at the point at which the 9-1-1 is first answered include:

- Elimination of 9-1-1 call transfers which will improve service levels to the community.
- Control of the application of EMD to ensure it is being consistently applied. Failure to consistently apply EMD can be a liability issue for the PSAP.
- Quality assurance would be in-house and the PSAP staff involved.

Provision of Emergency Medical Dispatch		
Response	Number of Responses	% of Responses
Answered Yes	67	43.79%
Answered No	70	45.75%
Question Not Answered*	16	10.46%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was completed by the PSAP, but a specific question was not answered.		

**Table 11 – Provision of Emergency Medical Dispatch**

### 3.5 Transfer of 9-1-1 Calls

In emergencies, seconds count. This means that information critical to responding agencies' safety and ability to effectively manage the emergency is delayed, as the call must be processed by the receiving PSAP first. These lost seconds can literally mean the difference between survival or not and/or impact the patient's quality of life. For example, 30 seconds to a minute of lost time can mean the difference between not surviving and being able to resuscitate a heart attack or drowning victim and whether that person will have a meaningful quality of life. In another example, a delay in receiving information regarding suspects with weapons or the presence of hazardous materials on-scene can have potentially fatal consequences for responders. While these examples are dramatic, they accurately illustrate the types of emergencies handled every day in PSAPs across the state.

Transfers increase the likelihood that human and/or technological errors will occur. High levels of training can minimize the amount of human errors, but even the best trained employees will still make errors from time to time. When a caller must speak with multiple two call takers, the potential for human error rises. The quality of technology available today has reduced issues such as calls lost during the transfer process, but the possibility still exists and increases with each transfer.

Operationally, two key concerns occur in an environment where 9-1-1 calls are routinely transferred. First, is the time delay, although it may only be approximately 20-30 seconds, and how that time delay is perceived by the 9-1-1 caller. As mentioned above, seconds count in a true emergency. When a family member is in dire distress is any delay acceptable? The second concern is the inefficient use of personnel typically found when calls are transferred. In some cases a caller could be transferred up to two times. An example of a worst-case scenario is as follows.

The parameters, which are commonly found, include three separate PSAPs; a primary law enforcement PSAP and two secondary fire and EMS PSAPs and a call type that requires police, fire and EMS such as an unresponsive person or person not breathing. The call would typically be processed as follows:

1. 9-1-1 call is answered by the primary PSAP.
2. The call taker conducts an abbreviated interview to determine what services are needed. Depending on local protocols, the example incident would likely be handled one of two ways. First, the call taker would fully interview the caller for all police related information before transferring the call to fire or EMS. Second, the call taker would conduct an abbreviated interview and then transfer the call to fire (who would be sent as a first responder) or EMS and be required to stay on the line post-transfer to gather any information needed by law enforcement.
3. The secondary PSAP receives the transferred call and, after a verbal hand-off between primary and secondary call takers, conducts a full interview.
4. The secondary PSAP will need to notify the remaining fire or EMS agency in one of two ways. First, the 9-1-1 caller could be transferred a second time and be subjected to the same re-interview process. More typically, fire would be the final agency to be notified and the secondary PSAP would not keep the caller on the phone but notify fire via radio or telephone to respond.

Imagine the frustration of being the 9-1-1 caller trying to get assistance for their family member and having to navigate this process. Imagine having to navigate this process while the police, fire and EMS agencies are all

located in the same room as would be the case in a co-location, but remain separate entities. This methodology is a disservice to the public in terms of effectiveness, efficiency and, at times, from a fiscal perspective as well.

A shared technology solution among the example primary and secondary PSAPs would help mitigate the delays in dispatching field units by allowing a CAD incident to be entered by the primary PSAP. This CAD incident would generate notifications to each of the secondary PSAPs of the incident. Field personnel could then be dispatched based on the preliminary information provided by the primary PSAP. However, police, fire and EMS incidents require that different sets of information be gathered from the caller in order to provide the appropriate level of response. The caller would still need to be transferred so that each secondary PSAP can gather the information needed by the responding field personnel.

Finally, this transfer process often requires that the primary PSAP call taker remain on the phone while the secondary PSAP(s) conduct their own interviews to ensure that all information required for safety and appropriate response is obtained. The result of this necessity is that multiple call takers are tied up on a single 9-1-1 call rather one call taker who is trained to obtain all needed information for police, fire and EMS, as would be found in a fully consolidated PSAP.

The public is not typically aware of the fragmented nature by which emergency communications is provided in their communities. What cannot be measured directly is the amount of time lost in multi-jurisdictional or discipline responses, or in the relay of vital information among the PSAPs. The call taking and dispatching functions are not visible to the public. As such, the public does not realize that the method by which their emergency is handled from 9-1-1 call taking to dispatching may not be the most efficient process. The lost time attributed to an inefficient process or communication among disparate centers is not typically revealed unless it is found to contribute to a loss. The public is largely unaware that the level and quality of service varies. Multiple dispatch agencies provide different levels of service; medical emergencies may be transferred and the fire services require a second transfer or relay of the call information depending on the response area. The public would be surprised to know that depending on where they live, they are not receiving the same level of service as their neighbors.

Shared services models have existed for decades in school districts and public utilities, while public safety communications has remained tightly tied to the local provision of emergency response. With the technological capabilities now available, it is no longer necessary to confine communications to a single specific agency. This service can be provided via a more cost and service efficient operation; pooling of resources in this area is becoming a necessity to meet the technological and interoperability needs of today. The caveat to this trend is that local governments must understand that this type of initiative is best driven by the public safety agencies and without proper planning and implementation, the initiative will fail and could result in a degradation of service and/or increased costs without service improvements.

### 3.6 Interest in Consolidation

The Kimball survey asked respondents if they were currently considering consolidation with other PSAPs. The following table summarizes the responses.

Interest in Consolidation		
Response	Number of Responses	% of Responses
Considering Consolidation	127	83.01%
Not Considering Consolidation	8	5.23%
Question Not Answered*	18	11.76%
<b>Totals</b>	<b>153</b>	<b>100.00%</b>
*Indicates that a survey was completed by the PSAP, but a specific question was not answered.		

**Table 12– Interest in Consolidation**

Of the 153 responses received, 83 percent of the PSAPs indicated they are currently considering some form of consolidation. The survey results as well as the Town Hall meetings and PSAP visits indicate that there is widespread interest in examining consolidation in some form. The reasons given during the Town Hall meetings and PSAP visits were in line with the typical reasons for consolidation listed in Section 2.2 with one exception. Although specific numbers are not available, a number of the respondents stated that compliance with the State mandated reduction in PSAPs through ORC § 128.571 was the reason for considering the change.

Nationally, there are common themes against consolidation heard from agencies that are considering consolidation including:

- A single consolidated PSAP cannot meet the very different needs of rural, suburban and urban communities.
- Our small community doesn't want to lower the level of service it currently provides
- Only firefighters or EMS personnel are capable of properly receiving 9-1-1 calls for these call types and dispatching the correct units.
- Only paramedics can effectively perform EMD
- Call takers in a consolidated PSAP cannot not learn to effectively receive calls for police, fire and EMS.
- The PSAP staff handle much more than emergency communications . Additional staff would have to be hired to cover these tasks if consolidation took place.
- Loss of direct control of the employees within the PSAP will lower the level of service provided to the field personnel
- Only "our" dispatchers know the local geography. This knowledge would be lost in a consolidated environment.

In reality, few, if any, of these bullet points hold any validity. For example:



- Successful consolidation of PSAPs has been occurring since the late 1970's and early 1980's. Many successful examples exist of urban PSAPs that serve not only their urban environment, but the surrounding suburbs and agricultural areas.
- Smaller communities that pride themselves in the high level of service they provide typically don't have to change. The field personnel can still respond to the same types of calls for service as they always have. While standardization during the consolidation process is recommended to the degree possible, agencies can still choose whether to respond to certain call types. For example, in a suburban or rural environment assisting with vehicle lock-outs is common, while cities typically don't respond to these types of calls. In short, the majority of the perceived higher level of service comes from the field rather than the PSAP. It is true that every 9-1-1 call taker or dispatcher in a consolidated PSAP may not know residents by name when they call. However, the consistency in service levels, in Kimball's opinion, suggest that some trade-offs should be made.
- Civilians have staffed consolidated PSAPs for many years very successfully. The key to success is proper training in call taking and dispatch protocols for all disciplines; police, fire and EMS.
- Most highly regarded EMD programs state that paramedics actually are the least successful in providing EMD in terms of adhering to the protocols set in place by the programs. At first statement this seems counter intuitive. However, providing medical instructions over the phone as opposed to in the field with a live patient are two completely different tasks. EMD programs are set up to account for these differences and walk the call taker through a supportable and tried and true methodology. Following the protocols is key to minimizing liability and maximizing effective call handling. Paramedics, more than any other group of employees, have been found to be more likely to veer off script and provide their own instructions based on their field experience. This tendency increases liability for the PSAP.
- 9-1-1 call takers have been effectively processing police, fire and EMS calls for many years without issue. Again, the key is proper training.
- It is common for PSAP staff to perform other non-emergency communications tasks in smaller PSAPs. Kimball recognizes that there was a time when this made good sense from productivity and fiscal perspectives. However, emergency communications is far more complex than it was years ago. Smaller communities may need to consider alternatives to how the ancillary tasks could be handled to allow their communities to benefit from a modern emergency communications system.
- Loss of direct control of PSAP is simply that; a control issue. Most roadblocks to consolidation can be reduced to fear of change and/or loss of control. Again, consolidated PSAPs have been functioning successfully for many years under separate civilian control. Agency heads need to consider whether retaining control at the cost of the best possible communications system is a valid reason to reject consolidation.
- It is true that all employees in a consolidated PSAP will not have the same level of geographical knowledge as an experienced small town dispatcher. However, mapping technology available today compensates for this shortcoming to a large degree. In addition, typically the experienced small town dispatcher becomes part of the larger consolidated PSAP, brings his or her pool of knowledge and shares it with new co-workers.

A consolidation requires an open mind and a willingness to try new methodologies for accomplishing the tasks associated with emergency communications.

## 4. STAKEHOLDER INPUT

Obtaining input from key stakeholders is critical anytime the feasibility of PSAP consolidation is considered. The technological aspects of combining multiple PSAPs into a single organization are comparatively simple to the organizational and local political issues that are present in any consolidation effort. Failure to reach consensus among potential consolidation partners on governance and funding is one of the most prevalent reasons that consolidations do not move forward after a feasibility study is conducted. Failure to solicit input and include in the process all key stakeholders is one of the most prevalent reasons for failure of an actual consolidation effort.

As part of any local level feasibility study meeting with various stakeholders is always strongly recommended. For the purposes of this higher-level state assessment, Kimball was not able to visit each primary and secondary PSAP statewide. Kimball invited stakeholders, primarily those involved in public safety, to attend Town Hall meetings held across the state. In addition, Kimball visited a cross section of small, medium and large PSAPs as well as urban, suburban and rural PSAPs. Tables containing the dates and locations of the Town Hall meetings and the PSAP visits are located in Section 1.3.

Attendance at the five meetings ranged from very low to high. These meetings provided PSAP representatives and other stakeholders with an overview of the larger Kimball study and the PSAP consolidation task in particular. The meetings focused on the providing an opportunity for the attendees to ask questions and/or express concerns.

During the PSAP visits Kimball was able to discuss questions and concerns one-on-one with PSAP representatives. Kimball was also able to tour the various PSAPs to gain an understanding of how emergency communications is provided statewide.

The questions and concerns that were generated both the Town Hall meetings and the PSAP visits mirrored each other therefore the questions, concerns and general feedback from each was combined into the lists in the following section.

### 4.1 Stakeholder Questions

The questions and concerns listed in this section reflect stakeholder input. Where possible, Kimball provided answers or explanations. However, many of the questions and concerns were not able to be answered by either Kimball or ESInet Committee members that may have been present since the answers hinge on future actions that may or may not be taken by the state.

1. What is the definition of a PSAP?  
This question was one that was repeated over and over again and relates back to funding and the consolidation schedule in ORC § 128.571. Meeting attendees expressed concern over the potential loss of funding should the State's PSAP definition not recognize a specific organizational model or shared technology solution as a PSAP. Specific examples include co-located PSAPs that may or may not share technology and remain separate entities and PSAPs that share technology but remain in separate facilities and are separate entities.
2. Will funding be available to assist in consolidation?

3. Will funding be available to assist in acquiring the technology needed to connect to the State ESInet?
4. What requirements will need to be met to connect to the State ESInet?
5. Is the State planning to add performance standards to requirements for funding and/or connection to the ESInet? If so, what are the requirements and will the State pay for any training needed to meet the standards?
6. What agency will manage the ESInet?
7. Will counties that are already i3 compliant be penalized through a loss of funding because the State is farther behind?
8. Is the State considering a statewide CAD system?
9. Will the State be considering multi-county consolidations in its concept of consolidation in the future?
10. Will the State be conducting an audit/assessment of each 9-1-1 system before allowing it to connect to the statewide ESInet backbone?
11. Will the State take more proactive measures to incentivize consolidation by small PSAPs that could easily be consolidated with a county PSAP?
12. Will the State be considering the universal device fees that are in place in neighboring states and making an adjustment to Ohio's fee?
13. Is there any plan in place to add a fee to pre-paid wireless cellphones being used statewide to generate additional revenue for 9-1-1?

## 4.2 Concerns and Comments

1. Local loss of control of PSAP staff
2. Loss of the in-house geographical knowledge held by existing PSAP staff
3. Coverage of non-emergency communications tasks currently performed by PSAP staff may result in additional costs if additional staff must be hired to perform these functions
4. Maintenance of service levels provided to the community and user agencies
5. High capital costs that may be associated with a consolidation
6. Existing consolidation legislation penalizes PSAPs that are willing and able to consolidate, but are prevented from achieving the progress stated in the legislation due to a single PSAP that does not want to consolidate at all.
7. The surcharge in the State of Ohio is far lower than other areas of the country. The State should consider raising it to be on par with other comparable states nationally.
8. The State is behind the curve on preparing for and implementing NG9-1-1. PSAPs are looking for guidance from the State in regards to the path it plans to take so the PSAPs are in penalized for being proactive in their NG9-1-1 preparations.

## 4.3 State Level Involvement

A common sentiment expressed universally during Kimball's site visits and town hall meetings was that, essentially, the state legislature has been unwilling to step up and levy appropriate fees to bring about a more technologically advanced emergency communications system in Ohio. In fact, PSAP directors throughout the state commented that, rather than raising fees, Ohio legislators chose to lower fees on wireless devices, further reducing much needed funds to their operations. Kimball representatives heard this theme expressed in varying forms, "the state needs to get more skin in the game," "the fees Ohio charges are archaic," "the state wants state-of-the art technology, but does nothing to help fund it" and so on.

In reviewing the National Emergency Number Association's (NENA) 9-1-1 Surcharge by State (9-1-1 Funding by State), Ohio's \$.25 surcharge is among the bottom three states of the 47 states that charge a wireless fee. One PSAP director opined, "the state needs to hear that citizens are open to new charges, \$.25 is not enough." Directors advised that now, more than ever, their budgets are strapped and technological advancements are occurring at a much quicker pace. "The citizens' expectation in the level of service they will receive when they dial 9-1-1 is growing exponentially," offered one director, yet the "legislature won't step up and get what we need." This director's PSAP once received 18 percent of its budget from 9-1-1 surcharges; soon it will be less than 10 percent. The recurring message received was that the state wants to adopt technological and service level standards, but will not help the PSAPs get there. Stakeholders at the local level expressed that building an ESInet backbone alone is insufficient for many local PSAPs when they have to bear the burden of telephony equipment upgrades, the cost and operational impacts due to personnel training and other software costs that may result.

## 5. STATEWIDE PSAP RECOMMENDATIONS

Those directors from advanced PSAPs, some with certified APCO staff and others who maintain high quality control standards, were quick to point out, and in some cases identify, other PSAPs that do not come close to their level of service or technological sophistication. The State of Ohio must take a more proactive role in ensuring PSAPs that serve as community switchboards rather than true emergency communications operations are phased out in their future plans. Legislatively mandating technology and personnel training standards is not enough to make real change happen quickly.

### 5.1 PSAP Configuration

In looking at PSAP operations in Ohio, there are 318 PSAPs that provide critical emergency communications functions for its citizens and emergency responders, yet, Ohio's neighbor to the east, Pennsylvania, performs the same functions for a larger population over a larger land mass with one quarter of the PSAPs. From a statistical perspective, Ohio operates one PSAP per 36,000 citizens, Pennsylvania, one per 159,000 citizens. Some may actually believe that Ohio can provide a higher quality of service with 318 PSAPs when, in actuality, the opposite is often true if smaller PSAPs can't keep pace with technology. Maintaining consistent operating standards, staff training levels and technological sophistication is far more difficult for those PSAPs that must rely on a smaller population and tax base to remain viable.

There is no set formula that can be applied that automatically calculates the exact number of PSAPs Ohio should have within its borders. However, from the analysis conducted by Kimball, a county-based model similar to what was adopted in Pennsylvania, may serve the citizens of Ohio very well. According to the FCC Registry of PSAPs, North Carolina, with rough 3 million less citizens than Ohio, now has 158 PSAPs across its 100 counties. Virginia, with 8 million citizens, operates 151 PSAPs across its 95 counties, excluding state police and military bases. As the largest political sub-division below the state level, a county-based model provides a geographic and population focal point by which the state can concentrate its efforts in those areas that have an overabundance of PSAPs.

A county-based model should take into consideration regionalization in the form of multicounty consolidations and consolidation initiatives among municipalities across counties that cover geographic territories or population bases comparable to a county. This model could also account for those counties that have larger city PSAPs that should remain in operation and serve as a backup location for the county PSAP, if necessary. Ohio, in adopting this model, can set as its goal a reduction in the number of PSAPs to 93. This would provide for a primary PSAP in all 88 counties and each city with a population above 100,000, with the exception of Dayton, which has already merged with the Montgomery County PSAP.

Kimball is well aware that establishing goals does not ensure the political will, financial backing or technological wherewithal exists to make the goals become reality; however, there are proactive measures that can be taken at a state level that can be instituted to further these efforts. Before any of these efforts are undertaken, Kimball would highly recommend that the data previously collected by the ESInet Committee be refreshed with a full scale, mandatory audit. This would include any PSAP that is currently connected to the 9-1-1 system and any secondary PSAPs that receive call transfers or serve as a dispatch point for 9-1-1 calls, much like the voluntary assessment conducted by the ESInet committee. Participation in the audit should be mandated and is a much needed step in

determining the technological sophistication of each primary PSAP's 9-1-1 call-taking system, whether all systems are fully Phase II compliant, and identify those PSAPs who will or will not be candidates for connection to the ESInet. The data in this assessment can also be used to better understand what future steps Ohio will undertake, at a state level, to promote, or assist by funding, consolidation among PSAPs.

It is commonly understood that any infrastructure that provides a service, should be properly sized to meet its business or operational needs. This is true with airports and hospitals that serve the needs of a given geographic area and the same principal, to a certain degree can be applied to public safety communications. In comparing the emergency communications infrastructures that exists across Ohio to meet the same need, it's apparent that a widely diverse opinion exists regarding proper sizing. For instance, Greene County operates five PSAPs to serve its 161,000 citizens while Delaware County, with a population of 181,000 people, serves its community with one PSAP. Lake County operates ten PSAPs for its 230,000 residents, yet Hamilton County has nearly four times the population base with only four PSAPs, 97% of that population being served by two of those PSAPs. As a visitor to Lake County during the summer tourist season can one be assured that they will receive the same level of service when dialing 9-1-1 across the ten PSAPs in that county?

Hamilton County is an ideal example of intra-county cooperation between a large city, Cincinnati, and the County PSAP. It's likely that they have experienced challenges in their relationship over the years; however, that was not apparent when Kimball personnel visited the Hamilton County PSAP. Currently, Hamilton County and the city of Cincinnati have a joint GIS department, the Cincinnati Area Geographic Information Services (CAGIS). The city and county are in the process of partnering to procure a new CAD system that will be common to both parties. It is impressive to see government cooperation on that scale to address common operational needs. But, on the other extreme, it is baffling to see a city in a nearby county procure two separate CAD systems within the same community, one for the fire services and one for police. Clearly, their citizens are not better served by having emergency services use two different systems to track fire and police units from both operational and fiscal perspectives. With two separate systems all the data of emergency events is being recorded and stored in two disparate databases. One would ask whether the taxpayers in that community are better served by storing the data from the same serious crash, which both fire and police responded to, in completely different computer systems that are purchased and maintained separately.

Some may believe that the above described scenario is no real problem, especially from a citizen's perspective. Yet, from an emergency responder point-of-view, it's a serious matter. EMS personnel responding to a residence of an unresponsive individual need to be aware of police responses to the same residence for drug violations with weapons involved. Kimball believes this type of information exchange is critical for emergency responder safety and situational awareness. If this information is not shared or resident in the same CAD system, EMS personnel are put in a perilous situation, which is most unfortunate, especially if it's the result of non-cooperation among public safety agencies within the same community.



## 5.2 Governance Models

One of the most difficult aspects of a consolidation effort is the development of a governance structure under which the new PSAP will operate. This governance model must be developed and agreed to at the local level among specific consolidation participants. Two governance models will provide the most effective and efficient emergency communications services. Kimball recommends that the PSAP be governed by a separate department within a county or municipality or a joint authority.

### 5.2.1 County Governance Model

In this governance model, the consolidated PSAP is part of the organizational structure of one of the participating counties. The PSAP is its own independent department and reports to either a county manager or county board of commissioners. This model is also endorsed by the County Commissioners Association of Ohio (CCAO) in its 2013-2014 Legislative Program<sup>1</sup>. Completely independent from any law enforcement, fire, or EMS agency it serves, a civilian director manages the PSAP. The director is a department head reporting to the same position within the organization structure as other department heads.

The primary positives of this structure include:

- A clean reporting structure for not only the PSAP director, but for the participating agencies as well. Since the director reports to a senior management position within the parent organizational structure, there is a single point of contact for disputes that cannot be resolved otherwise. This model provides protection for the PSAP from politics that can affect the PSAP under other governance structures. This model also provides the PSAP protection from changes in direction that result from personnel changes in decision-making positions, thus creating a more stable environment for the PSAP long-term.
- Independent leadership that allows the director to effectively manage PSAP resources and provide equitable service to all participating law enforcement, fire, and EMS agencies.
- A board comprised of participating agency and/or municipal representatives, and, if desired, community leaders. It is important that members representing agencies served by the PSAP are not voting members to ensure the director is able to manage resources equitably. If agency heads such as police and fire chiefs are voting members of this board, then the director is, in essence, must report to multiple “bosses.” This puts the PSAP at risk of being impacted by political issues.
- Utilizing civilian staff rather than sworn personnel creates a more developed career path for PSAP staff.
- As part of a county or municipal structure, the PSAP has access to administrative support such as human resources, building facilities, and computer and network support.
- The department director will need specific technical and operational skills related to 9-1-1. Ideally, the director should be a 9-1-1 professional.

The primary negatives of this structure include:

- The adjustment to the loss of direct control of PSAP staff by participating agency personnel.
- The cost of a civilian director as opposed to managing the PSAP with lower level sworn command personnel can be more expensive.

<sup>1</sup> <http://www.ccao.org/userfiles/Platform%20Aug%202013.pdf> Pages 26-27.



## 5.2.2 Joint Powers Authority

The development of a governance agreement must be done at the local level and the model must be one that is acceptable to all participants. When establishing the consolidated PSAP as a county department is not politically feasible a joint powers authority is an excellent alternative.

In a joint powers authority style of governance model, the consolidated PSAP is an independent agency headed by a civilian director. Under this type of structure, the PSAP is not part of any larger government structure, but is in fact an independent entity. The director traditionally reports to a board comprised of representatives of the participating members.

The primary positives of this structure include:

- Independent leadership allows the director to best manage PSAP resources and provide equitable service to all participating agencies.
- Offers a developed career path for PSAP staff as civilian personnel generally fill supervisory and management positions.
- A degree of neutrality in that it is independent of law enforcement, fire or EMS. This neutrality allows the PSAP to provide equal service to all participating agencies and avoid the perception of bias or favoritism.
- Total organizational and single mission focus on PSAP services without resource competition.

The primary negatives of this structure include:

- Since the PSAP is not part of a larger municipal entity, real and intangible costs for support services such as computer/network services, human resources, and facilities are perceived to be higher and, in fact, may be more transparent. A poorly crafted governance structure can result in a director that has to answer to multiple bosses. This situation can be difficult for the director and can prevent the director from effectively managing the PSAP.
- Political infighting among the participating agencies can impact the PSAP and/or entities represented on the oversight board. Although, initially all agencies and entities may agree on the direction for the PSAP, over time, as the people and political agendas change, the PSAP can become the focus of political disputes. This structure requires a carefully crafted governance agreement to protect the PSAP from the impact of political disputes. Such an agreement will ensure that the PSAP can focus on its primary mission.

## 5.3 Encouraging PSAP Consolidation

A reduction in the number of primary and secondary PSAPs will without question reduce the number of 9-1-1 call transfers, increase interoperability and provide potential cost efficiencies. As a strong “home rule” state, the question becomes how can the state encourage consolidation to create the most efficient, consistent and effective emergency communications possible? Kimball recommends the following:

With the implementation of an ESInet, the State should require PSAPs that wish to connect it (and provide NG9-1-1 services to:

- Meet minimum staffing requirements of two on duty at all times.

- Meet minimum training standards for call takers and dispatchers (to be set by the State)
- Provide EMD either directly or through another agency
- Consider a funding incentive for consolidation efforts that are in keeping with the State's overall service level goals
- Consider grants or other financial incentives for consolidation feasibility studies at the local level
- Restrict access to the ESI-net to primary PSAPs only
- Revisit surcharge levels

## 6. SUMMARY AND RECOMMENDATIONS

Ohio is not unlike the majority of states across the country where emergency call taking and dispatching evolved at a local level. For many years this model satisfactorily met the needs of citizens and emergency responders. All that was needed from a technology standpoint were telephones and a radio system to meet operational needs. Initially, calls for service were received via seven digit phone lines, information was gathered from the caller and an emergency responder was subsequently dispatched via the local or countywide radio system.

With the advent of E9-1-1, computerization, computer-aided dispatching (CAD) software, geographic information systems (GIS), and in-vehicle computing devices the technological landscape has drastically changed. It is a daunting task for a local PSAP to remain current with the latest technology, especially considering the rising cost and the pace at which new innovations are developed.

Apart from the technology, there are a myriad of personnel and facility costs that must be absorbed by the taxpayers in order to keep their PSAP operation functioning at acceptable performance levels. Considering the foregoing, the average citizen in the United States, uninvolved with public safety, would reasonably question why a dozen PSAPs are needed within a county, when one would suffice. Unbeknownst to the average citizen, this situation is commonplace and the State of Ohio is no exception.

We have discussed obstacles and roadblocks to PSAP consolidation within this report. Regrettably, the most common obstacle encountered by Kimball throughout the country is politics - unwillingness of officials to relinquish local control. In various parts of the country, local officials have made conscious choices to maintain a lower quality of service rather than merge with a more advanced neighboring PSAP. Often, these decisions to maintain one's turf, to the detriment of citizens and emergency responders, are unknown to the general public. Unfortunately, the mindset that the local police or fire station is the community switchboard as well as the emergency communications center is alive and well, even within Ohio's borders.

A new ad campaign for a major American airline addresses technological change by advising the audience, "you can't cling to the past if you want to create the future." It is unlikely that an airline ad campaign will change the minds of many officials, a good number of whom were born in an age before computers and cell phones. Yet, there are measures that can be instituted, at a statewide level, to ensure that those PSAPs whose leaders embrace the future are incentivized to do so; conversely, those leaders "clinging to the past" can be given little choice if standards are imposed that must be met to continue PSAP operations.

Hamilton County was cited earlier as an ideal example of collaboration between large PSAPs within a single county, yet Hamilton County serves as another example as well. It is an example of a situation that is commonplace in Ohio, small PSAPs co-existing in the same County with much larger PSAPs. Because Hamilton County has only 4 PSAPs, they all receive funding, and will so even when the new provisions of the Ohio Revised Code take effect. To provide perspective to those unfamiliar with population served by the four Hamilton County PSAPs, refer to Table 13 below.

Hamilton County, Ohio – Population Served by PSAP	
PSAP	Population (2010 Census)
Hamilton County	482,000
City of Cincinnati	297,000
City of Norwood	19,200
Village of Amberley	3,600

**Table 13– Performance of Ancillary Duties**

In reviewing 9-1-1 call statistics (statistics of the City of Norwood were not reported in the ESInet Committee’s March 2013 Assessment Report), it was reported that the Village of Amberley received a total of 6,464 wireline and wireless 9-1-1 calls in 2012. However their total number of calls, with administrative calls included, was 6,464. Based on the data in the Assessment Report, it appears that Amberley and many other PSAPs reported 7/10 digit calls in their 9-1-1 statistics, where others did not. This further emphasizes the need for a mandatory assessment of all PSAPs throughout the state.

Despite the anomaly in the data, the Village of Amberley is one of 98 PSAPs that reported a combined total of less than 10,000 wireline and wireless 9-1-1 calls per year. Ten thousand 9-1-1 calls per year equates to roughly 27 per day or approximately 1 per hour. It’s understood that these PSAPs may receive calls-for-service via conventional 7/10 digit lines, but the larger question will be if these PSAPs will be permitted to connect to the ESInet if they have the financial wherewithal to do so. Knowing that there were PSAPs that did not provide call statistics, it is likely that a full third of all PSAPs throughout the state may average less than 28 calls a day. When considering the ability of a larger neighboring PSAP to easily absorb this call volume, one would question why such communities continue to procure equipment, hire and train personnel and maintain facilities to answer one 9-1-1 call per hour.

Adopting the position that it is not the State’s concern what communities do at a local level is untenable if the state wants to limit the connections to the ESInet, ensure its PSAP partners have the ability to train, equip, and maintain a high level of operational proficiency. Standing on the sidelines and allowing local control is what resulted in the current state of affairs. Legislatively limiting the number of PSAPs who receive wireless funding does not serve as an impetus to accelerate consolidation statewide. Most of the 98 PSAPS mentioned previously don’t receive any funding, their concern about legislatively imposed funding cuts have no effect on them. If the State of Ohio adopts a “come one, come all” approach in allowing connectivity to the statewide ESInet, as long as personnel and technology standards are met, it will have taken no real proactive measures to ensure the reduction in the number of PSAPs statewide.

## 6.1 Recommendations

Kimball recommends the following:

- The schedule for PSAP consolidation found in ORC § 128.571 be removed.
- The State should decide what role it wishes to play in emergency communications statewide and work with local governments to implement it.

- Move forward with caution in regards to changes made to emergency communications statewide. Any proposed change must be based on full understanding of the impact on both the 9-1-1 call taking and dispatch functions of emergency communications. Increasing the number of 9-1-1 call transfers should be avoided.
- Use approximately 93 consolidated PSAPs as a goal for PSAP reduction statewide (county-based plus large cities)
- With the implementation of an ESInet, the State should require PSAPs that wish to connect it (and provide NG9-1-1 services to:
  - Meet minimum staffing requirements of two on duty at all times.
  - Meet minimum training standards for call takers and dispatchers (to be set by the State)
  - Provide EMD either directly or through another agency
  - Consider a funding incentive for consolidation efforts that are in keeping with the State's overall service level goals
  - Consider grants or other financial incentives for consolidation feasibility studies at the local level
  - Restrict access to the ESInet to primary PSAPs only
  - Revisit surcharge levels
- Conduct a mandatory statewide audit of primary and secondary PSAPs to benchmark levels of service currently being provided before proceeding with the ESInet.
- Wireless 9-1-1 calls should be routed directly to the appropriate PSAP to reduce the transfer of 9-1-1 callers.
- The State should revisit the current surcharge amount and consider bringing it in line with other states.

## APPENDIX A – COMPLETED SURVEY PSAP LIST

The following PSAPs completed the Kimball on-line survey:

PSAP Name	County
Adams County Sheriff's Office	Adams County
Akron Combined Fire And Police	Summit County
Ashland County Sheriff's Office	Ashland County
Ashtabula County Sheriff's Department	Ashtabula County
Ashtabula Police Department	Ashtabula County
Athens County Emergency Communications	Athens County
Auglaize County Sheriff's Office	Auglaize County
Bainbridge Township Police Department	Geauga County
Barberton Police Department	Summit County
Bath Police Department	Summit County
Bay Village Police Department	Cuyahoga County
Beachwood Police Department	Cuyahoga County
Beavercreek Police Department	Greene County
Bellbrook Police and Fire	Greene County
Bellevue Police Department	Huron County
Belmont County Communications Center	Belmont County
Belpre Police Department	Washington County
Berea Police Department	Cuyahoga County
Bexley Police Department	Franklin County
Bowling Green Police Department	Wood County
Brecksville Police	Cuyahoga County
Broadview Heights Police Department	Cuyahoga County
Brook Park Police and Fire	Cuyahoga County
Brown County 9-1-1	Brown County
Brunswick Police Department	Medina County
Bryan Police Department	Williams County
Butler County Sheriff's Office	Butler County
Carroll County Sheriff's Office	Carroll County
Cedar Point Police Department	Erie County
Chagrin Falls Police	Cuyahoga County
Chardon Police Department	Geauga County

City of Canton Police	Stark County
City of New Franklin Police Department	Summit County
City of Sylvania-Police Division	Lucas County
Clermont County Communications Center	Clermont County
Cleveland Division of Police	Cuyahoga County
Cleveland Heights Police	Cuyahoga County
Clyde Police Department	Sandusky County
Columbiana County Sheriff's Office	Columbiana County
Columbiana Police Department	Columbiana County
Conneaut Police Department	Ashtabula County
Copley Police Department	Summit County
Crawford County Sheriff's Office	Crawford County
Cuyahoga Emergency Communications	Cuyahoga County
Cuyahoga Heights Police	Cuyahoga County
Defiance County Communications	Defiance County
Delaware County 9-1-1 Center	Delaware County
Dublin Police Communications Center	Franklin County
East Liverpool Police Department	Columbiana County
East Palestine Police Department	Columbiana County
Englewood Police	Montgomery County
Erie County Sheriff's Office	Erie County
Euclid Police	Cuyahoga County
Fairfield Police Department	Butler County
Fayette County Sheriff's Department	Fayette County
Findlay Police Department	Hancock County
Franklin County Sheriff's Office Communications Center	Franklin County
Franklin Police Department	Warren County
Fremont Police Department	Sandusky County
Fulton County Sheriff's Office	Fulton County
Gahanna Police Department	Franklin County
Geauga County Sheriff's Office	Geauga County
Geneva Police Department	Ashtabula County
Grandview Heights Police Department	Franklin County
Grove City Police Department	Franklin County
Hamilton County Communications Center	Hamilton County



Hancock Sheriff's Office	Hancock County
Hardin County Sheriff's Office	Hardin County
Highland County Sheriff's Office	Highland County
Hudson Police Department	Summit County
Huron County Sheriff's Office	Huron County
Huron Police Department	Erie County
Jefferson County 9-1-1	Jefferson County
Knox County Sheriff's Office	Knox County
Lake County Communications Center	Lake County
Lancaster Police Department	Fairfield County
Lawrence County 9-1-1	Lawrence County
Lebanon Police Department	Warren County
Lyndhurst Police	Cuyahoga County
Macedonia Police Department	Summit County
Madison County Sheriff	Madison County
Malta - McConnelsville Fire Department (M&M Fire Department)	Morgan County
Mansfield City 9-1-1	Richland County
Margareta Township Fire and Police Department	Erie County
Marietta Police Department	Washington County
Marion Police Department	Marion County
Mayfield Heights Police	Cuyahoga County
Mayfield Village Police and Fire	Cuyahoga County
Medina County Sheriff	Medina County
Mentor On The Lake Police	Lake County
Mentor Police	Lake County
Mercer County Sheriff's Office	Mercer County
Middlefield Police Department	Geauga County
Montgomery County Sheriff	Montgomery County
Moraine Police and Fire	Montgomery County
Morgan County Sheriff's Office	Morgan County
Morrow County 9-1-1 Center	Morrow County
Mt Vernon Police	Knox County
New Albany Communications Center	Franklin County
North Royalton Police	Cuyahoga County
Norwalk Police Department	Huron County

Oakwood Police Department	Montgomery County
Olmsted Township Police	Cuyahoga County
Orange Valley Police Department	Cuyahoga County
Orrville Police Department	Wayne County
Oxford Police Department	Butler County
Parma Communications Center	Cuyahoga County
Parma Heights Police and Fire	Cuyahoga County
Parma Police	Ashtabula County
Paulding County Sheriff's Department	Paulding County
Perkins Township Police Department	Erie County
Pickerington Police Department	Fairfield County
Preble County Sheriff's Office	Preble County
Richfield Village Police Department	Summit County
Richland County Dispatch Center	Richland County
Richmond Heights Police	Cuyahoga County
Rittman Police Department	Wayne County
Rocky River Police Department	Cuyahoga County
Ross County Sheriff's Office	Ross County
Salem Police Department	Columbiana County
Sandusky County Sheriff	Sandusky County
Sandusky Police Department	Erie County
Scioto County Sheriff's Office	Scioto County
Shelby County Sheriff's Office	Shelby County
Sidney Police Department	Shelby County
South Euclid Police Department	Cuyahoga County
Springboro Police Department	Warren County
Springfield Communications Center	Clark County
Stark Emergency Management Agency	Stark County
Stow Police and Fire Department	Summit County
Strongsville Police Department	Cuyahoga County
Summit County Sheriff's Office	Summit County
Tuscarawas County Sheriff's Office	Tuscarawas County
Twinsburg Police Department	Summit County
Union County Sheriff's Office	Union County
Union Township Police Department	Clermont County

University Heights Police Department	Cuyahoga County
Upper Arlington Police Department	Franklin County
Van Wert County 9-1-1 Operations	Van Wert County
Vandalia Division of Police	Montgomery County
Vermilion Police Department	Erie County
Wadsworth Police	Medina County
Warren County Communications Center	Warren County
Warrensville Heights Police and Fire Department	Cuyahoga County
Washington County Sheriff's Office	Washington County
Washington Township Fire Department	Montgomery County
Wayne County Justice Center	Wayne County
West Chester Township Communications	Butler County
Westerville Communications Center	Franklin County
Westlake Police Department	Cuyahoga County
Willard Police Department	Huron County
Williams County Communications	Williams County
Wyandot County Sheriff's Office	Wyandot County

## APPENDIX B – INCOMPLETE SURVEY PSAP LIST

The following PSAPs did not complete the Kimball on-line survey:

PSAP Name	County
Allen County Sheriff's Office	Allen County
Amberley Village Police Department	Hamilton County
Athens Police Department	Athens County
Aurora Police Department	Portage County
Austintown Police Department	Mahoning County
Barnesville Police Department	Belmont County
Beaver Township Police Department	Mahoning County
Bedford Heights Police Department	Cuyahoga County
Bedford Police Department	Cuyahoga County
Bellaire Police Department	Belmont County
Bellefontaine Police Department	Logan County
Boardman Township Police Department	Mahoning County
Bratenahl Police	Cuyahoga County
Bridgeport Police Department	Belmont County
Bucyrus Police Department	Crawford County
Cambridge Police Department	Guernsey County
Campbell	Mahoning County
Canfield Police Department	Mahoning County
Centerville Police	Montgomery County
Champaign Countywide Communications Center	Champaign County
Chester Township Police Department	Geauga County
Chillicothe Police Department	Ross County
Circleville Police Department	Pickaway County
City of Brooklyn Police Department	Cuyahoga County
City of Cincinnati 9-1-1 Center	Hamilton County
Clark County Sheriff's Office	Clark County
Clinton County Sheriff's Office	Clinton County
Columbus Police Department	Franklin County
Columbus Regional Airport Authority	Franklin County
Coshocton County Sheriff's Office	Coshocton County
Crestline Police Department	Crawford County

Cuyahoga Falls Police Department	Summit County
Darke County Sheriff's Office	Darke County
Dayton Police	Montgomery County
Defiance Police Department	Defiance County
East Cleveland Fire and Police	Cuyahoga County
Eastlake Police and Fire	Lake County
Eaton Police Department	Preble County
Fairborn Police Department	Greene County
Fairfield County Sheriff's Office	Fairfield County
Fairlawn Police Department	Summit County
Fairview Park Fire and Police	Cuyahoga County
Fostoria Police Department	Wood County
Galion Police Station	Crawford County
Gallia County E9-1-1	Gallia County
Garfield Heights Police	Cuyahoga County
Gates Mills Police	Cuyahoga County
Germantown Police	Montgomery County
Girard City Police Department	Trumbull County
Greenville Police Department	Darke County
Guernsey County Sheriff's Office	Guernsey County
Hamilton Police and Fire Communications Center	Butler County
Harrison County Sheriff's Office	Harrison County
Heath Police Department	Licking County
Henry County Sheriff's Office	Henry County
Highland Heights Police Department	Cuyahoga County
Hilliard Police Department	Franklin County
Hinckley Township Police Department	Medina County
Hocking County 9-1-1	Hocking County
Holmes County Sheriff's Office	Holmes County
Hubbard City Police Department	Trumbull County
Huber Heights Police	Montgomery County
Independence Police and Fire	Cuyahoga County
Ironton Police Department	Lawrence County
Jackson County Sheriff's Department	Jackson County
Jackson Police Department	Jackson County

Kent Police Department	Portage County
Kent State University Police	Portage County
Kenton Police Department	Hardin County
Kettering Police	Montgomery County
Kirtland Police Department	Lake County
Lake Township Police Department	Wood County
Lakewood Police	Cuyahoga County
Liberty Township Police Department	Trumbull County
Licking County 9-1-1 Communications Center	Licking County
Licking County Sheriff's Office	Licking County
Lima Police Department	Allen County
Logan County Sheriff	Logan County
London Police	Madison County
Lorain County 9-1-1 Agency	Lorain County
Lorain County Sheriff	Lorain County
Lordstown Township Police Department	Trumbull County
Loudonville Police Department	Ashland County
Lucas County Sheriff's Office	Lucas County
Mahoning County Communications Center	Mahoning County
Mantua Village Police and Fire	Portage County
Maple Heights Police Department	Cuyahoga County
Marion County Sheriff's Department	Marion County
Martins Ferry Police Department	Belmont County
Maumee Police Department	Lucas County
Medina Police Department	Medina County
Miami County Communications Center	Miami County
Miamisburg Police and Fire	Montgomery County
Middleburg Heights Police Department	Cuyahoga County
Middletown Police Department	Butler County
Millersburg Police Department	Holmes County
Monroe County Sheriff Department	Monroe County
Morrow County Sheriff's Office	Morrow County
Mt Sterling Police	Madison County
Muskingum County Sheriff	Muskingum County
New Boston Police Department	Scioto County

New Lexington Police Department	Perry County
Newark Police Department	Licking County
Newton Falls Village Police Department	Trumbull County
Noble County Sheriff's Office	Noble County
North Olmsted Police	Cuyahoga County
North Randall Police	Cuyahoga County
Northwood Police Department	Wood County
Norwood Police Department	Hamilton County
Ohio State University Police	Franklin County
Olmsted Falls Police	Cuyahoga County
Oregon Fire-Police	Lucas County
Ottawa County Sheriff's Office	Ottawa County
Ottawa Hills Police Department	Lucas County
Parma Police	Cuyahoga County
Perry County Sheriff's Office	Perry County
Perrysburg City Police and Fire	Wood County
Perrysburg Township Police and Fire	Wood County
Pickaway County Sheriff	Pickaway County
Pike County Sheriff	Pike County
Portage County Sheriff's Office	Portage County
Portsmouth Dispatch	Scioto County
Putnam County Sheriff's Office	Putnam County
Ravenna Police Department	Portage County
Reynoldsburg Police Department	Franklin County
Sagamore Hills Police Department	Summit County
Sebring Police	Mahoning County
Seneca County Department of Public Safety	Seneca County
Seneca County Sheriff	Seneca County
Shadyside Police Department	Belmont County
Shaker Heights Police	Cuyahoga County
Solon Police	Cuyahoga County
St Clairsville Police Department	Belmont County
Stark County Sheriff	Stark County
Streetsboro Police and Fire	Portage County
Struthers Police Department	Mahoning County



Sugarcreek Township Police Department	Greene County
Sylvania Township	Lucas County
Tallmadge Police Department	Summit County
Tiffin Police Department	Seneca County
Toledo Police Department Communications	Lucas County
Trumbull County Dispatch	Trumbull County
Upper Sandusky Police Department	Wyandot County
Van Wert Police Department	Van Wert County
Vinton County Sheriff's Office 9-1-1	Vinton County
Warren Police Department	Trumbull County
Washington Court House Police Department	Fayette County
Waverly Police	Pike County
Wellston Police Department	Jackson County
West Carrollton Police	Montgomery County
West Jefferson Police	Madison County
Westlake Fire Department	Cuyahoga County
Whitehall Police Department	Franklin County
Wickliffe Police	Lake County
Willoughby Hills Police Department	Lake County
Willoughby Police	Lake County
Willowick Police	Lake County
Wilmington Police Department	Clinton County
Wood County Sheriff's Office	Wood County
Woodmere Village Police Department	Cuyahoga County
Wright-Pat Air Force Base Fire Department	Greene County
Wright-Pat Air Force Base Security	Greene County
Xenia-Greene Central Communications	Greene County
Youngstown Fire and Police	Mahoning County
Zanesville Police	Muskingum County

## ACRONYMS

Acronym	Definition
ACN	Automatic Crash Notification
ALI	Automatic Location Identification
ANI	Automatic Number Identification
ANSI	American National Standards Institute
APCO	Association of Public-Safety Communications Officials
AVL	Automatic Vehicle Location
CAD	Computer Aided Dispatch
CALEA	Commission on Accreditation for Law Enforcement Agencies
CCAO	County Commissioners' Association of Ohio
CEMP	Comprehensive Emergency Management Plan
CPE	Customer Premise Equipment
CPR	Cardiopulmonary Resuscitation
DHS	Department of Homeland Security
E9-1-1	Enhanced 9-1-1
EMD	Emergency Medical Dispatch
EMS	Emergency Medical Services
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
IAFC	International Association of Fire Chiefs
ICMA	International City/County Management Association
ICS	Incident Command System
LERMS	Law Enforcement Records Management System
MIS	Management Information System
NCIC	National Crime Information Center
NENA	National Emergency Number Association
NFPA	National Fire Protection Association
NG9-1-1	Next Generation 9-1-1
PSAP	Public Safety Answering Point
QA/QC	Quality Assurance and Quality Control
RMS	Records Management System
UHF	Ultra-high Frequency
VHF	Very-high Frequency

