

# STATE OF MICHIGAN

## STATE 9-1-1 PLAN



Compiled and Presented by the  
Emerging Technology Subcommittee  
as adopted by the State 9-1-1 Committee

DATE: JUNE 23, 2009

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## 1. EXECUTIVE SUMMARY

### 1.1 Background and Purpose Summary

Providing optimum 9-1-1 services for its citizens is a long established priority for the state of Michigan. For more than 20 years, a collaboration of legislators, state, county / Public Safety Answering Point (PSAP) agencies, and telecommunication providers have worked together to provide the necessary enhanced 9-1-1 framework. This framework is a multi-dimensional system composed of landline, wireless, and internet communication providers that allows delivery of 9-1-1 calls through a complex network of routers, switches, databases, and emergency dispatch communication centers. All parts of this network must be able to seamlessly integrate and interact with each other.

Just as 9-1-1 technology continues to evolve and change, the Michigan laws that determine the architectural network, 9-1-1 legislative and regulatory oversight, training standards, and funding mechanisms need to transform and adapt. The State 9-1-1 Plan will provide one more tool to help guide Michigan through this process by providing professional vision and leadership that will lead Michigan to a Next Generation (NG 911) system. The plan is designed to be used by all the 9-1-1 stakeholders, state, county/ local 9-1-1 authorities, and emergency communication centers. Local law enforcement, fire services and emergency medical service (EMS), Homeland Security, the military, and State and Federal legislators will also utilize this planning aid.

The plan will not only identify and monitor Michigan's 9-1-1 goals and objectives, it will be a "living document" that will be updated biennially. Adoption of a statewide plan for the coordination and implementation of 9-1-1 will allow Michigan to apply for Federal funds.

Michigan's 9-1-1 service is enabled and governed by Public Act 32 of 1986<sup>1</sup> and its subsequent amendments. This Act created the State 9-1-1 Committee and provided the mechanism for the public/private collaboration of subject matter experts that have worked to identify and resolve numerous key 9-1-1 issues.<sup>2</sup> Recommendations from the State 9-1-1 committee and its various subcommittees have been incorporated into several 9-1-1 statutes.<sup>3</sup>

Since the 1980's Michigan has moved from receiving and processing wireline Enhanced 9-1-1 (E9-1-1) calls, through Enhanced Phase I and Phase II (wireless call processing and routing) to its recent deployment of Voice over Internet Protocol (VoIP) 9-1-1 calls.

Soon, Michigan's 9-1-1 framework will have to provide access to public emergency services by any communication device (video, photographs, and automatic crash notification). To facilitate future planning efforts for Michigan's 9-1-1 system, a comprehensive feasibility study of Next Generation 9-1-1 (Internet Protocol IP-Based network) is currently underway. This study will provide an inventory of both the PSAP and network needs and capabilities

The State 9-1-1 Committee asked the Emerging Technology Subcommittee to assist the state 9-1-1 administrator in the development of the Plan. The Subcommittee is comprised of fourteen (14) members who represent the various stakeholders in the Michigan 9-1-1 community:

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<sup>1</sup> P.A. 32 of 1986 [http://legislature.mi.gov/doc.aspx?mcl-Act\\_32\\_-\\_of\\_1986](http://legislature.mi.gov/doc.aspx?mcl-Act_32_-_of_1986)

<sup>2</sup> P.A. 249 of 2006 <http://www.legislature.mi.gov/documents/2005-2006/publicact/pdf/2006-PA-0249.pdf>

<sup>3</sup> P.A. 379 of 2008 <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0379.pdf>

- Seven (7) public sector representatives:
  - Ms. Marsha Bianconi (Conference of Western Wayne County)
  - Ms. Cathy Brandimore (City of Troy)
  - Ms. Patricia Coates (Oakland County)
  - Mr. Ralph Gould (City of Grand Rapids)
  - Ms. Harriet Miller-Brown (State 9-1-1 Administrator)
  - Ms. Christina Russell (Oakland County Sheriff Department)
  - Mr. Mike Szor (Alpena County)
  
- Seven (7) private sector representatives:
  - Ms. Patricia Anderson (AT&T)
  - Mr. Philip Bates (Verizon Business)
  - Mr. Robert Currier (Intrado)
  - Mr. John Hunt (OnStar)
  - Mr. Todd Jones (Advanced Wireless Telecom)
  - Ms. Susan Sherwood (Verizon Wireless)
  - Mr. Scott Temple (AT&T Mobility)

The subcommittee conducted independent research, and utilized information compiled by Kimball Corp (IP-Based feasibility study) to assist them in developing this Plan. The draft plan was presented to the State 9-1-1 Committee for review in March 2009, the draft plan was further reviewed by the Executive Committee of the State 9-1-1 Committee in May of 2009, and approved by the full Committee in June 2009.

## 2. INTRODUCTION

This section will provide a brief background of Michigan's 9-1-1 system and an introduction to the 9-1-1 Plan and its purpose.

### **2.1 National Overview of the History and Background of 9-1-1**

The concept of a nationwide emergency telephone number was first adopted in Great Britain in 1937. In the United States in 1967, President Johnson's Commission on Law Enforcement and Administration of Criminal Justice recommended a nationally uniform three-digit emergency telephone number. In November of that year, the FCC met with the American Telephone and Telegraph Company (AT&T) and shortly thereafter AT&T announced it had reserved the numbers 9-1-1 for emergency use nationwide.

The nation's first 9-1-1 system was implemented by the Alabama Telephone Company in Haleyville, Alabama. On February 16, 1968, Alabama Speaker of the House, Rankin Fite, made the first 9-1-1 call from the Haleyville city hall. Congressman Tom Bevill answered the call on a red-colored telephone located in the police department.<sup>4</sup>

When 9-1-1 service was first introduced, 9-1-1 calls were sent to a single destination based on the caller's telephone exchange. Since there was and is little or no correlation between a telephone exchange boundary and the emergency responder's jurisdiction, a 9-1-1 call could end up at a public safety answering point (PSAP) that did not serve the caller's location. This early 9-1-1 service, now known as Basic 9-1-1, did not provide any telephone number or location information with the call - it was a voice service only; the caller had to provide his or her location and call back information.

Significant advancement in 9-1-1 technology occurred with the introduction of E9-1-1 in the 1980s. This level of service enabled a 9-1-1 call to be selectively routed to the PSAP serving the caller's location, and delivered that call with automatic number identification (ANI) and automatic location identification (ALI). Other features, such as selective transfer, further streamlined the call handling process.

The pace of change in telecommunications technology continues to increase rapidly. Voice over Internet Protocol (VoIP), text messaging, and picture messaging are being enthusiastically adopted by consumers for their everyday communications – and these same consumers expect to be able to use these technologies to communicate with 9-1-1.

### **2.2 Overview and Background of Michigan 9-1-1**

In 1986, the Michigan Legislature enacted Public Act 32, also known as the Emergency Telephone Service Enabling Act. (The act is commonly referred to as PA 32 in the Michigan 9-1-1 community.) While there had been 9-1-1 programs in several jurisdictions throughout the state, PA 32 facilitated the onset of enhanced

9-1-1 systems through the state. PA 32 set out several requirements for the establishment of 9-1-1 systems, including empowering counties as the local unit of government to enact the 9-1-1 plan and serve as 9-1-1 in the service districts<sup>5</sup>; provisions for the telephone service providers to recover recurring and non-recurring costs through a technical surcharge on the service subscribers' and, minimally, system requirements for operational, managerial, technical, and fiscal considerations. The act also required that plans identify the public safety answering points (PSAPs) within the service district, public notice and hearing for the initial plan and subsequent changes to it, and provisions for units of government to "opt out" of participation in the plan. PA 32 also established the Emergency Telephone Service Committee<sup>6</sup> to provide guidance on policy and technical issues regarding 9-1-1.

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<sup>4</sup> Alabama Chapter of NENA website, "World's First 9-1-1 Call" [http://www.al911.org/first\\_call.htm](http://www.al911.org/first_call.htm) (April 18, 2008)

<sup>5</sup> Wayne County is recognized by PA 32 as the exception and it has four separate service districts. These service districts

currently are: Conference of Western Wayne, Conference of Eastern Wayne, Detroit, and Downriver Mutual Aid.

<sup>6</sup> PA 165 of 2007 removed the word "telephone" from the committee's title to reflect changing technology. It is now commonly known as the State 9-1-1 Committee (SNC).

PA 32 has been amended a number of times since its inception in 1986, the most notable of those amendments included the following:

PA 29 of 1994:

- Permitting counties to enact operational surcharges by geographical boundaries of the county by commission vote<sup>7</sup>, ballot proposal<sup>8</sup>, or a combination of the two<sup>9</sup>.
- Giving powers of county commission to establish an emergency 9-1-1 district board for a consolidated dispatch and determine that board's scope of authority.

PA 78 of 1999:

- Imposing a surcharge on wireless devices for the purposes of implementing Phase I and II wireless 9-1-1.
- Establishing a cost recovery mechanism for wireless providers to deliver wireless 9-1-1.
- Setting amounts for distribution of wireless surcharge to counties for costs of 9-1-1 service and to PSAPs for training dispatch personnel.

PA 244 of 2003:

- Set date deadlines for counties to deploy Phase I and II wireless 9-1-1.
- Funded the State 9-1-1 Office.
- Set date to end cost recovery for wireless providers.

PA 164 & 165 of 2007:

- Changed local landline operational 9-1-1 surcharge to a local "all-device" surcharge.
- Changed statewide wireless 9-1-1 surcharge to a statewide "all-device" surcharge.
- Gave rule making to the Michigan Public Service Commission over multi-line telephone service (MLTS) location information, 9-1-1 dispatcher training, and standards for operational policies for PSAPs, and receipt and use of 9-1-1 funds.

By October of 2005 every county in the state of Michigan except for one<sup>10</sup> had county-wide enhanced 9-1-1 services and by the end of 2005 all counties in the state were capable of processing wireless Phase II calls. In May of 2008, the final county without enhanced 9-1-1 became fully enhanced with 9-1-1 service, making the state of Michigan fully capable of enhanced 9-1-1 for both landline and wireless 9-1-1<sup>11</sup>.

In addition to the statewide delivery of enhanced 9-1-1 on both wireless and landline communications services, it has also reached broad delivery of VoIP 9-1-1 and telematics 9-1-1 routing. Even with this progress, changes in technology are presently being experienced by Michigan's 9-1-1 community, as well as the ones that are known near-future changes such as text messages, streaming video, and video relay services (VRS). These changes have made it clear that the current 9-1-1 network will need to change also.

The purpose of this plan is to outline the process toward a NG 9-1-1 system that is capable of delivering and transferring a 9-1-1 call for help on any device that can initiate a 9-1-1 call within the state. It is also the purpose of this plan to address operational issues that the State 9-1-1 Committee recognizes as key to the successful overall delivery of 9-1-1 in the state. It is the intent of the State 9-1-1 Committee to leverage all resources available to the 9-1-1 community to reach that end.

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<sup>7</sup> Up to 4% of the highest monthly base rate in the service district not to exceed \$.80.

<sup>8</sup> Up to 16% of the highest monthly base rate in the service district not to exceed \$3.20.

<sup>9</sup> Total not to exceed \$4.00.

<sup>10</sup> Baraga County in Michigan's Upper Peninsula.

<sup>11</sup> Mackinac Island is still in the process of completing its addressing work for enhanced 9-1-1 under the Mackinac County 9-1-1 Plan and Bois Blanc Island opted out of the Mackinac County Plan at the plan's onset in 1997.

Those resources include: funding, through both state and federal sources; the utilization of impartial contracted services<sup>12</sup>; and the long-standing collaborative system involving stakeholders at every level in the 9-1-1 community. Michigan's 9-1-1 history is a demonstration of progress and adaptability and as we move into the challenges of NG 9-1-1, this next chapter in technology will continue that legacy.

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<sup>12</sup> Under PA 164 of 2007, MCL 484.1408(5) appropriated \$500,000 for a feasibility study for an IP-based 9-1-1 system in Michigan. In 2008, the state contracted with the Kimball Corp. to conduct that study. The final recommendations will be presented to the State 9-1-1 Committee in December of 2009. Based on a satisfactory and comprehensive report, it is the intent of the Committee to use that information to guide the forward progress of Michigan's NG 9-1-1 system.

### **3. CURRENT 9-1-1 ENVIRONMENT**

#### ***3.1 Current Legislative and Regulatory Environment and Program Structure***

The state-level 9-1-1 coordinating function is lead by the State 9-1-1 Committee, which is a statutorily created committee under Michigan's Public Act 32, of 1986, as amended. The Committee is tasked with providing assistance in the implementation of 9-1-1 systems in Michigan.

Administrative support to the State 9-1-1 Committee is provided by the State 9-1-1 Administrator's Office located in the Michigan State Police (MSP) Administrative Services Bureau (ASB). The Committee may recommend technical and operational standards for PSAPs and model 9-1-1 systems, as well as provide assistance for the design, implementation and operation of those systems. The Committee does not have rulemaking authority. Rather, that authority rests with the Michigan Public Service Commission (MPSC), in consultation with the Committee, for the following specific 9-1-1 matters:

- Uniform policies, procedures, and protocols for 9-1-1 services in counties and public safety answering points (PSAPs) in the state
- Training standards for PSAP personnel
- Standards for the receipt and use of 9-1-1 funds
- Requirements for multi-line telephone systems

The mechanisms for coordinating the implementation of 9-1-1 system(s) and monitoring those operations and progress by the Committee include a diverse set of subcommittees. These subcommittees, which make recommendations to the Committee, draw from both the public and private sectors of the 9-1-1 community in Michigan. These subcommittees include Emerging Technology, Certification, Dispatcher Training, and Legislative Action. Subcommittees often utilize additional work groups for matters requiring more specific technical and policy input. Participation in these groups is guided by the Committee by-laws. Subcommittee meetings are posted in advance and open to the public and work group participation is active and encouraged. Activity of the Committee and its subcommittees are posted on the State 9-1-1 web site at [www.michigan.gov/etsc](http://www.michigan.gov/etsc).

All PSAPs have methods of access to communication that allow them to coordinate and operate with each other; examples of this include data, telephony, and radio. Radio communications between PSAPs is varied. In some areas of the state there are high levels of radio interoperability between PSAPs and in others areas radio interoperability has not been achieved. There are efforts in these areas of the state to achieve interoperability.

At the current time Michigan has recently updated its 9-1-1 statute (PA 379 of 2008) and it recognizes that updates will likely be needed based on the progress of NG 9-1-1 system in Michigan. An annual report on the status on Michigan 9-1-1 is presented to the legislature each year, as well as legislative recommendations that may need to be considered in the forthcoming year.

#### ***3.2 Current 9-1-1 Technology***

##### ***3.2.1 Overview***

Michigan has two 9-1-1 Service Providers:

- AT&T – providing service in both the Upper and Lower peninsulas
- Verizon – providing service in the Lower Peninsula only

AT&T is the 9-1-1 Service Provider for 154 Primary, 7 Secondary, and 25 Back-up (combination of fully featured and voice only) PSAPs. AT&T also provides trunk routing to 16 Verizon-hosted Primary PSAPs.

Verizon is the 9-1-1 Service Provider for 20 Primary PSAPs, and 4 back-up PSAPs. Verizon also provides trunk routing to 16 AT&T-hosted Primary PSAPs, 2 AT&T-hosted Secondary PSAPs, and 1 AT&T-hosted Back-up PSAP.

### **3.2.2 Landline E9-1-1 Infrastructure**

#### **3.2.2.1 System Level of Service**

All telephone subscribers of ILEC or CLEC service providers are served by PSAPs capable of receiving and processing Enhanced 9-1-1 calls.

#### **3.2.2.2 PSAPs**

PSAPs utilize multiple CPE vendors throughout the state.

The majority of the PSAPs have their wireline and wireless traffic delivered via one incoming trunk group from their respective 9-1-1 service provider.

#### **3.2.2.3 LEC 9-1-1 Selective Routers**

AT&T uses five Lucent 5ESS 9-1-1 tandem switches in Michigan's Lower Peninsula located in Ann Arbor, Bay City, Cadillac, Grand Rapids, and Rochester. AT&T uses a Nortel DMS100 9-1-1 tandem switch in Marquette to serve the Upper Peninsula.

Verizon uses a Lucent 5ESS 9-1-1 tandem switch in Muskegon, a Nortel DMS100 9-1-1 tandem switch in Alma, a CML ECS1000 tandem switch in Bellaire, and a CML ECS1000 tandem switch in Adrian.

#### **3.2.2.4 ALI Database**

AT&T provides ALI service to Michigan PSAPs through redundant centralized ALI databases located in Southfield and Northbrook, Illinois. Each PSAP is served by two ALI circuits, one connected to each database. The network provides redundancy and flexibility for future enhancements.

Verizon provides ALI service to Michigan PSAPs through redundant centralized ALI databases located in Ft. Wayne and Tampa. Service is provided by redundant IP circuits to each database.

The state statute authorizes each county board to implement a county 9-1-1 plan. The plan is then required to designate the Operational, Fiscal, Technical, and Managerial consideration of that county's 9-1-1 system. This includes designation of the PSAPs, services providers, and the funding for the 9-1-1 structure within the county. All eighty-three (83) counties in Michigan have a 9-1-1 service plan in place and provide enhanced

9-1-1 for wireline, wireless Phase II, and VoIP. There are one hundred and eighty-four (184) PSAPs networked in the state and seven (7) secondary PSAPs.

### **3.3 PSAP Integration with Emergency Communications, Telecommunications, and Information Networks**

Michigan has currently contracted with Kimball Corp to conduct a comprehensive feasibility study of NG 9-1-1. This includes an inventory of both PSAP and network capabilities and needs. An assessment of necessary system changes including integration with emergency communications, telecommunications, and information networks are pending based on the outcome of that study and its recommendations. However, preliminary steps in system changes and upgrades may be able to be made through near-future resources.

### **3.4 Economics**

#### **3.4.1 Current Funding Mechanisms**

In 2007, Michigan amended its 9-1-1 statute to require all communications services that can provide access to 9-1-1 to collect and remit the 9-1-1 surcharge, regardless of technology. This was a significant advancement as it broadened the surcharge base by making it technology neutral, which will help provide a more solid foundation for the future.

Under MCL 484.1401, Michigan currently has three statutory funding provisions for 9-1-1: 1) a statewide “all devices” surcharge, 2) a county “all devices” operational surcharge, and 3) and a technical fee (which is wireline-based).

Michigan’s statewide 9-1-1 surcharge, is set forth in MCL 484.1401 and collected by the communication service providers and remitted to the Michigan Department of Treasury (Treasury). A separate fee on pre-paid wireless services is also remitted to the Treasury. The Treasury is responsible for the financial distribution of those funds. This includes processing remittances from the communications service providers: depositing them into the Emergency 9-1-1 Fund; distributing the funds to the counties, LECs, and the PSAPs as directed by the Committee; and accounting for all transactions from the 9-1-1 Fund.

Funds generated by the State 9-1-1 surcharge of \$0.19 on all devices that can access 9-1-1 are outlined in MCL 484.1408 and distributed as follows:

- 82.5% - To counties distributed in two manners: 40% on an equal share basis and 60% on a per capita basis
- 7.75% - To fund 9-1-1 network costs for delivery of wireless calls to PSAPs
- 6.0% - To 9-1-1 training program
- 1.87% - To administer the act and fund the State 9-1-1 Office
- 1.88% - To the Michigan State Police (MSP) to operate a regional dispatch center that receives and dispatches 9-1-1 calls

In addition to 9-1-1 surcharges, some counties in Michigan also use general fund money to support PSAP operations. Other counties utilize special millage funds (a voter-approved tax rate on property, expressed in mills per dollar of value of the property) to support their 9-1-1 programs.

Michigan statute under MCL 484.1401 also provides for a technical charge that allows landline providers within the 9-1-1 service district to assess an emergency telephone technical charge on their subscribers to cover the cost to provide the E9-1-1 network, databases, and trunking in that 9-1-1 service district. The amount is calculated by dividing the provider’s actual costs by the number of exchange access facilities within the 9-1-1 service district. The landline provider can bill and keep the technical charge. The Telecommunications Association of Michigan (TAM) contracts with a CPA firm (McCartney and Associates) to conduct a true up at the end of each year and each provider pays its portion of the accounting costs.

#### **3.4.2 Current Revenues and Costs**

Using the information available to the State 9-1-1 Committee, in 2007 the operational costs to the counties for providing 9-1-1 was approximately \$203,502,587 and was funded by the sources as follows:

<b>Category</b>	<b>Amount</b>
Total Budget	\$203,502,587.01
Local Operational Surcharge	\$54,533,248.93
Millage	\$27,108,738.67
General	\$84,042,734.96
State	\$16,946,721.85
Other Revenues	\$7,986,201.23* *Sources include: grants, interest earned, sale of equipment, tower rental, etc.

While not all landline providers participate in the technical surcharge pooling process, based on the annual accounting of the landline providers and the “true up” performed by McCartney and Associates, the estimated total figure for technical costs in 2007 was \$10,562,728.20. However, information was not provided to the State 9-1-1 Committee by Charlevoix, Cheboygan, Emmet, Dickinson, Grand Traverse, Livingston, Luce, Montmorency, and Wexford counties. Wireless and VoIP 9-1-1 technical costs cannot be determined because they are self-recovered and unique to each provider).

### **3.4.3 Next Generation Considerations**

While the costs of NG 9-1-1 are not known at this time, nor is the final method of a Next Generation solution determined. (The methods for initiating implementation are spelled out in further detail in Section 9 of this plan.)

### **3.4.4 Allocation/Distribution of State and Federal Funding for Equipment and Operations** **Allocation of State Funding**

The statutory framework of the distribution of state-collected 9-1-1 funds is detailed in section 3.4.1 above. MCL 484.1401b(14) recognizes the allowable and disallowable uses of the 9-1-1 funds, collected both by the counties and the state. That list is included as Appendix B and generally states:

Allowable Uses:

- 9-1-1 call handling equipment
- Master logging recorders
- Instant call check recorders
- TeleTypewriter/Telecommunications Device for the Deaf (TTY/TDD)
- Mapping
- Back-up power
- Training
- Public education
- Contracted services

### ***3.4.5 Allocation of Federal Funding***

At this time, federal funding of 9-1-1 systems in Michigan has been limited and usually in the form of Homeland Security grants through local Emergency Management programs. These projects, while very beneficial, have been local either at the county or municipal level, and are limited in scope and size. Any federal funding received as a part of the implementation of this plan's goals and objectives towards NG 9-1-1 (see Section 5 on page 17) will be utilized within the requirements of the receipt of those funds.

## **4. FUTURE ENVIRONMENT**

### ***4.1 Vision Statement***

Michigan shall utilize evolving technology to enable all PSAPs to receive, process, and dispatch 9-1-1 requests for emergency services effectively and efficiently to meet the needs of the citizens, public safety, and the service providers.

### ***4.2 Services and Capabilities***

Michigan PSAPs will maintain their current excellent standard of 9-1-1 service delivery as they migrate to NG 9-1-1. Historically governance and control of 9-1-1 at the County level of government has proven efficacious in Michigan, as County Boards of Commissioners are in the best position to understand the needs and operations of the local emergency services providers and citizens. However, new regional or other models of governance and control may emerge as technology evolves.

With migration to the NG 9-1-1 Emergency Services Internet Protocol-enabled network (ESInet), access will be enabled to public emergency services by any communication device and will enhance response by providing responders access to video, photographs, automatic crash notification data, etc.

The ESInet will also enable service arrangements by minimizing the need for some PSAPs to be in one physical location, promoting flexibility in the form of virtual PSAPs and virtual back-up PSAPs. While physical consolidation of PSAPs is often cost prohibitive, the flexibility to share services, equipment, and functions on an interconnected network will lead to more effective and efficient call processing.

### ***4.3 Infrastructure, Equipment and Technology***

The National Emergency Number Association (NENA) defines NG 9-1-1 as “A system comprised of Emergency Services IP networks (ESInets): IP-based Software Services’ and Applications, Databases and Data Management processes that are interconnected to Public Safety Answering Point premise equipment. The system provides location-based routing to the appropriate emergency entity. The system uses additionally available data elements and business policies to augment PSAP routing. The system delivers geodetic and/or civic location information and the call back number. The system supports the transfer of calls to other NG 9-1-1 capable PSAPs or other authorized entities based on and including accumulated data.

NG 9-1-1 provides standardized interfaces for call and message services, processes all types of emergency calls including non-voice (multi-media) messages, acquires and integrates additional data useful to call routing and handling for appropriate emergency entities. NG 9-1-1 supports all E9-1-1 features and functions and meets current and emerging needs for emergency communication from caller to Public Safety entities.”

Michigan will achieve NG 9-1-1 through a phased approach, including the development of local and regional intranets capable of supporting an IP-Based 9-1-1 system: the development of public and/or private networks capable of transferring IP data between and among local networks: the development of appropriate inter local agreements and supporting legislation: the technology to interconnect multiple networks seamlessly, and the replacement of PSAP customer premises equipment (CPE) with equipment capable of receiving and processing IP data, resulting in an interconnected and interoperable system of local, regional, and national emergency services networks.

Considerations are:

- Infrastructure must be scalable and extensible.
- Infrastructure must be public safety grade: i.e, it must meet a higher level of availability, resiliency, reliability, security, and survivability than non-mission critical enterprise network infrastructure.
- Not all PSAPs/counties/regions will migrate at the same time. The Legacy Network and Selective Routers supporting the circuit switched network must continue to function. In concept, the legacy system would eventually connect to an ESNets gateway and convert legacy wireline/wireless 9-1-1 calls from analog into Session Initiation Protocol (SIP), attaching the caller's location information and presenting the call to the ESNets.
- Local, regional, and state ESNets must avoid potential single points of failure. Lack of redundancy and diversity in the 9-1-1 network can impact the reliability of 9-1-1 systems.
- Sufficient bandwidth and speed for data sharing between PSAPs.
- GIS data services should be considered for database sharing across the network using centralized databases while existing systems should be interfaced as deemed necessary. The network's increased capacity and speed will allow efficient transfer of mapping, CAD, and CPE call data.
- Regional 9-1-1 ESNets will require connectivity and plans should be carefully established. Plans and agreements should also be established for 7 X 24 X 365 monitoring and maintenance on interconnected ESNets.

#### ***4.4 Operations, Staff, and Training***

Operations, staffing and training are the responsibility of the Michigan PSAPs, within the guidelines and standards established by the Michigan Public Service Commission upon recommendation of the State 9-1-1 Committee. It is critical that PSAP Administrators remain current on evolving multimedia technology and standards throughout the transition to NG 9-1-1 and adjust operational procedures and policies, staffing levels, and training programs accordingly.

#### ***4.5 Governance***

Governance and control of 9-1-1 has historically resided with the County Board of Commissioners, local governmental entities, and Authority Boards. It is envisioned that this model will continue, although evolving technology may lead to regional and other cooperative governance mechanisms.

The Michigan statute (PA 32 of 1986, as amended) defines a Consolidated Dispatch within a 9-1-1 Service District and the mandatory members of an Authority Board governing such an entity. Other models may evolve as technology reduces geographical limitations.

The State 9-1-1 Committee will monitor the maturing system and propose statutory amendments that address more flexible governance models and Committee structure as necessary.

Governance of 9-1-1 should not only focus on the basics of how and whom oversees the provision of services, but also provide broad guidance on a statewide basis given Michigan's "local" control environment of today. Items that should be considered in future rule making with evolving technology and competition in the provision of 9-1-1 services should include, but not be limited to:

#### **4.5.1 Public Access to Emergency Communications**

- Include the requirements for provision of 9-1-1 service
- Definition of emergency communications system(s)
- Definition of communications service provider
- All communications service providers are subject to 9-1-1 rules and regulations
- Requirements for multiple line telephone systems (MLTS); requirement for all new technologies to provision emergency communications services

#### **4.5.2 Data Privacy**

- Ensure privacy protections of citizens who call 9-1-1 to the extent guaranteed by statute
- Develop and maintain rules for use of 9-1-1 data for:
  - All agencies necessary to have access to the appropriate data for calls in progress
  - Provisions for use of 9-1-1 data for outbound notification systems for public safety purposes

#### **4.5.3 Data Service Standards**

- Promulgate appropriate service standards for provisioning of emergency communications system and services
- All communications service providers shall have minimum service standards for provisioning of emergency communications systems and services

#### **4.5.4 Funding to Achieve the Vision**

Funding for 9-1-1 service is historically the responsibility of the County Board of Commissioners. A number of funding mechanisms have been available to the counties, including special mileages and surcharge on communication devices. The State of Michigan also collects a surcharge on communication devices, a portion of which is returned to the counties to help offset costs.

It is imperative that the NG 9-1-1 ESInets be cost effective and competitive so that no additional costs are placed on Michigan taxpayers. The ability of many types of emergency services to share the ESInet should result in economies of scale. Fair cost allocation methodologies among all stakeholders will need to be developed.

Future work to ensure adequate and appropriate funding to, support the provision of 9-1-1 services should include the historical groundwork already laid here in Michigan, but also look to embrace these key principles:

- Ability to authorize fee assessment and collection process
- A robust, yet flexible means for adjustment of an established rate or rate structure already in place
- Define the mechanism for cost recovery, if necessary and appropriate

#### **4.5.5 Stakeholder Engagement and Communications**

PSAP Administrators must be prepared to handle contingency planning devoid of geographical constraints. PSAPs must develop up front agreements with, at a minimum, neighboring and regional PSAPs, regarding cooperation and protocols.

PSAP and provider network administrators must discuss and codify in written agreements responsibility for design, development, deployment, security, monitoring, and reactive and preventative maintenance.

Database Administrators must develop widely diverse databases inherent in NG 9-1-1 and collaboratively develop service issues resolution and escalation, data quality assurance measures, and security and data rights management.

Public information and education will be critical to the success of the implementation. The expectations of the public must be specifically established and communicated, especially during transitional phases during which 9-1-1 and PSAP capabilities may be “different” in various areas of the state.

#### ***4.5.6 Federal Government and Other National Factors***

The Michigan 9-1-1 system will remain compliant with all Federal laws pertaining to 9-1-1 service.

#### ***4.5.7 Service and Application Providers***

NG 9-1-1 will introduce new service and application providers as needs for IP connectivity, monitoring, and maintenance evolve.

#### ***4.5.8 Infrastructure and Equipment Providers***

NG 9-1-1 will introduce new infrastructure and equipment providers to 9-1-1. The existing legal and regulatory environment will have to be reviewed and revised to allow: 1) architecture and technology neutrality, 2) the potential delivery of new services by non-Local Exchange Carrier service providers, 3) the extension of liability protection to current and future network service providers, and 4) the alignment of new service arrangements, costs, and funding mechanisms to support infrastructure.

#### ***4.5.9 Other Emergency Service Providers***

Michigan would have working relationships with (and the ability to seamlessly share data with) other state and federal agencies that provide or support emergency services.

#### ***4.5.10 Other related state services***

The Michigan NG 9-1-1 system will be interactive and capable of two way communication, integrating a number of non-public safety private and governmental services, such as suicide hot lines, trauma centers, poison control, road, public works, weather services, and Emergency Management. The ESInet will enable both the PSAPs and the general public to receive real time information, alerts, and warnings.

## 5. GOALS, OBJECTIVES, AND MEASURES

The goals of the initial State of Michigan 9-1-1 Plan for the State 9-1-1 Committee are fourfold:

- Efficiently and properly implement the funding systems established in Public Act 32 of 1986, as amended.
- Effectively carry out the development of best practices and model policies for PSAPs, local 9-1-1 governing units, and service providers as set out in Public Act 32 of 1986, as amended.
- Develop a strategy for moving Michigan's 9-1-1 system to a Next Generation 9-1-1 platform that is IP-based and capable of processing 9-1-1 calls on a technology-neutral basis.
- Establish a statewide minimum training standard for 9-1-1 operators and a mechanism to oversee the program.

### 5.1 State of Michigan 9-1-1 Plan Goals and Objectives:

**Objective 1:** Create a system for notice, data collection, reporting, and review of the funding systems established in Secs. 401 and 408 of P.A. 32 of 1986, as amended.

**Completion Date:** August 1, 2010

**Measurement(s):** Revised format for the Annual 9-1-1 Report to the Legislature complete with data in regard to state and local funding revenues for 9-1-1 as well as reporting for the technical aspects of 9-1-1.

**Objective 2:** Recommend, in consultation with PSAPs, the implementation of set operational standards and model policies for PSAP operations, 9-1-1 fund use, service provider 9-1-1 delivery functions, and best practices for 9-1-1 governing authorities.

**Completion Date:** June 30, 2010

**Measurement(s):** Issuance of administrative rules by the MPSC as recommended by the Committee.

**Objective 3:** Establish a written plan for migration from the current 9-1-1 legacy system to a Next Generation IP-based 9-1-1 system that identifies a timeline for implementation, system benefits, potential areas of challenge, and potential funding methods.

**Completion Date:** July 31, 2010

**Measurement(s):** Issuance of a network migration plan and recommendation in the State 9-1-1 Committee's Annual 9-1-1 Report to the Legislature.

**Objective 4:** Develop a program for the implementation of the Committee's Recommended Minimum Standards for Dispatcher Training as adopted by the Committee on December 14, 2007.

**Completion Date:** December 31, 2009

**Measurement(s):** Issuance of administrative rules for dispatcher training by the MPSC as recommended by the Committee.

### 5.2 Tracking Progress

The activity towards the accomplishment of meeting each of the goals and objectives will be included in the State 9-1-1 Administrator's quarterly report to the Committee. This will include an evaluation as to the "on target" status of each goal and objective, and any corrective measures/action plans that may be necessary for any goals or objectives that are not being met. The goals, objectives, and status of each will be included in the Committee's Annual 9-1-1 Report to the Legislature.

## 6. RESOURCE ALLOCATION

The State 9-1-1 Office is under the management of the Michigan State Police, in accordance with PA 244<sup>13</sup> of 2003. The office provides staff necessary to carry out the duties of the State 9-1-1 Committee. The staff includes an administrator, assistant to the administrator, two analysts, and a student assistant.

Currently there are eighty-seven (87) 9-1-1 plans in the state of Michigan (Wayne County has multiple emergency service districts). Each county or emergency service district oversees their 9-1-1 system as written in their plan. The State 9-1-1 Office provides guidance and oversight to the counties and districts. Staff from the office is assigned to assist specific subcommittee and workgroups of the State 9-1-1 Committee.

Much of the work done by the Committee is done via various subcommittees. These subcommittees are composed of subject matter experts from both the public (state and county/PSAP level) and private sector who volunteer their time and expertise, and provide resources to the state at no charge. Existing subcommittees can establish the plan's operational standards, model policies, 9-1-1 fund use, service provider 9-1-1 delivery functions, and best practices for 9-1-1 governing authorities. Since this work is voluntary, no costs can be assessed. The knowledge and background of the subcommittee members are beneficial, and play an important role in the implementation of the plan.

Resource allocation to meet the goals and objectives of the Plan are challenging. Comprehensive planning is needed to identify the additional workload created to fulfill the objectives to develop a system for notification, data collection, reporting, and review of the funding systems. The planning stage of the project must assess needs, rank priorities, identify the number of staff required, costs, and establish a time line for various phases of the project. Until this is completed, it is difficult to determine if the current staff of the State 9-1-1 Office can handle the additional work and if the appropriate expertise are available. The State 9-1-1 Office has access to other state agencies (ie: Management and Budget, Information Technology) that may be able to assist in the implementation of this project.

New Michigan legislation recently enacted attempts to provide stable 9-1-1 funding. The legislation is too new to determine if the projected revenue streams are correct to support the existing 9-1-1 system. As the new plan is implemented, funding and funding allocation may not be adequate. When preparing the operational budget to implement the plan the needs at the state level, as well as the needs of the counties and local PSAP's, must be included. Providing 9-1-1 service to Michigan residents is a county responsibility. The counties and PSAP's may need additional support staff, technical experts, and equipment to meet the plan's goals.

Funding must also be considered for the long-term support of the plan. While funding and funding allocations may be in place at the beginning of the project, it is possible this will change over the course of time. Procedures need to be identified to address these possible changes.

It is important to remember the Plan will be constantly evolving and changing as technology advances and funding mechanisms alter. The State 9-1-1 Committee continues to be proactive in its efforts to ensure 9-1-1 services for the state's residents and visitors, regardless of the format in which the 9-1-1 call is placed.

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<sup>13</sup>Under PA 244 of 2003, MCL484.1408(4) allowed \$0.005 (½ cent) of the CMRS \$0.29 surcharge to be used by the Michigan State Police to establish the state E9-1-1 coordinator position. Under PA 165 of 2007, MCL484.1408(4)(d) that provision was changed to 1.87% of the state 9-1-1 surcharge to maintain the office of the state 9-1-1 coordinator.

## 7. UPDATING THE PLAN

Prior to 2009, there was no single 9-1-1 plan for the State of Michigan. Each of the state's 83 counties prepared and maintained individual county-level (or in the case of Wayne County, four separate "Emergency Service District") plans.

The State of Michigan 9-1-1 Plan for 2009 was developed by, and will be updated by, the State of Michigan 9-1-1 Committee with assistance from the Committee's Emerging Technology Subcommittee and the State 9-1-1 Administrator. Beginning in 2009, the Plan will be included in the State 9-1-1 Committee's Annual 9-1-1 Report to the Legislature. The Plan will be updated at least every two years following the initial distribution date.

Changes to the plan will be documented in the following manner:

- The Plan is given a new version number following the annual review and update cycle, or following any interim update that was necessary. The number given at that time is a full number, that is; 1.0, 2.0, etc.
- Any changes made to the Plan on an interim cycle are given a fractional number, that is 1.1, 1.2, etc.
- The date field documents the date that the State of Michigan 9-1-1 Committee approved the change, or in the case of an interim administrative change, the date of that change.
- The "description of change" field documents the nature of the change and the page and/or section affected.
- The footers of all revised pages are edited to indicate that the page has been revised and the date of the revision.

## **8. MECHANISM(S) FOR OVERSEEING AND MANAGING THE STATE'S 9-1-1 SYSTEM**

In Michigan the 9-1-1 statute, Public Act 32 (PA 32) of 1986 (as amended), serves as the central oversight mechanism for 9-1-1 in the state. PA 32 sets out the authority for which a 9-1-1 system is enacted, as well minimum requirements of a 9-1-1 system. Under MCL 484.1303 (2)(a)(d) these requirements include: Managerial, Technical, Operational, and Fiscal considerations.

The State 9-1-1 Committee serves as a central coordinating body for 9-1-1 policy and planning. The Committee regularly issues best practices, model policies, and evaluates operational and funding compliance by PSAPs and counties through its compliance review system. By using compliance review, the Certification Subcommittee conducts comprehensive evaluations of local 9-1-1 operations, administration, and funding use. Further information is available at: [www.michigan.gov/etsc](http://www.michigan.gov/etsc).

While the Committee has limited oversight powers, PA 32 currently permits direct oversight for funding use of 9-1-1 surcharges under MCL 484.1408(4)(a). Using this authority, the Committee has established a list of Allowable and Disallowable Wireless and Wireline 9-1-1 Surcharge Expenditures. (In accordance with MCL 484.1401(b)(14), any changes made to the lists' language must be transmitted to the Michigan Legislature 90 days prior to becoming effective.)

Under previous statute, the Committee was required to certify that the counties were in compliance with requirements of Phase I and Phase II wireless deployment. However, upon completion of statewide Phase II deployment at the end of 2005, that requirement has since been migrated to rule making under the Michigan Public Service Commission (MPSC). The MPSC, in consultation with the State 9-1-1 Committee, may promulgate rules for uniform procedures, policies, and standards for the receipt and expenditure of 9-1-1 funds. [Sec. 413(1)(c)]

The State 9-1-1 Committee is also required to issue an annual report to the Michigan Legislature and Governor as to the status of 9-1-1 in Michigan. The report is a comprehensive accounting of the status of 9-1-1 in the state. All reports issued since 2000 are available through the Committee's web site at: [www.michigan.gov/etsc](http://www.michigan.gov/etsc).

Any further oversight mechanisms for the forward movement into NG 9-1-1 are pending the Michigan NG 9-1-1 study and the adoption of selected recommendations by the Committee and the Legislature.

As described throughout this plan, the State 9-1-1 Committee and the processes it uses to guide the Michigan 9-1-1 system is inclusive at all levels, and encourages the participation of all stakeholders in Michigan's 9-1-1 community.

## 9. MECHANISM FOR INITIATING AND MONITORING AN IMPLEMENTATION PROJECT

Michigan's Landline E9-1-1 and Wireless E9-1-1(Phases I and II) implementation projects have been completed. These projects were conducted on a countywide or Emergency Service District level (i.e., Wayne County has four such districts).

The focus of the 2009 Plan will be the implementation of a Next Generation 9-1-1 E9-1-1 system (frequently referred to as an internet protocol [IP] based 9-1-1 system).

The projects will be initiated and monitored by the respective County/District 9-1-1 Coordinators, State 9-1-1 Committee, and the State 9-1-1 Administrator. Based on the solution selected, the future progress of the system's components will be tracked by the State 9-1-1 Committee, the State 9-1-1 Subcommittee, and included in the State 9-1-1 Committee's Annual 9-1-1 Report to the Legislature.

Roles of the State 9-1-1 Committee and State 9-1-1 Administrator are outlined in Michigan's 9-1-1 statute (PA 32 of 1986 [as amended]):

Excerpts from Michigan's **EMERGENCY 9-1-1 SERVICE ENABLING ACT:**

### **484.1712 Emergency 9-1-1 service committee; creation; purpose; authority and duties.**

Sec. 712. An emergency 9-1-1 service committee is created within the department of state police to develop statewide standards and model system considerations and make other recommendations for emergency telephone services. The committee shall only have the authority and duties granted to the committee under this act.

### **484.1714 Duties of committee; staff assistance.**

Sec. 714. (1) The committee shall do all of the following:

- (a) Organize and adopt standards governing the committee's formal and informal procedures.
- (b) Meet not less than 4 times per year at a place and time specified by the chairperson.
- (c) Keep a record of the proceedings and activities of the committee.
- (d) Provide recommendations to public safety answering points and secondary public safety answering points on statewide technical and operational standards for PSAPs and secondary PSAPs.
- (e) Provide recommendations to public agencies concerning model systems to be considered in preparing a 9-1-1 service plan.
- (f) Perform all duties as required under this act relating to the development, implementation, operation, and funding of 9-1-1 systems in this state.

### **484.1601 Technical assistance and assistance in resolving dispute.**

Sec. 601. The emergency 9-1-1 service committee created in section 712, upon request by a service supplier, county, public agency, or public service agency, shall provide, to the extent possible, technical assistance regarding the formulation or implementation, or both, of a 9-1-1 service plan and assistance in resolving a dispute between or among a service supplier, county, public agency, or public safety agency regarding their respective rights and duties under this act.

The State 9-1-1 Office has contracted with the Kimball Corp. to perform a feasibility study for the IP system, including PSAP surveys and current equipment inventories, with PSAPs in the state. Kimball will also present a recommendation to the State 9-1-1 Committee in December of 2009 for the type of IP system(s) to be implemented. Once the State 9-1-1 Committee has accepted a solution, the Plan will be modified to reflect further mechanisms for implementation and monitoring, if necessary.

## 10. CONCLUSION

This 9-1-1 Plan provides a road map for the future direction of Michigan 9-1-1. As each section has outlined, the process is accountable, proactive, and designed to move the 9-1-1 system forward.

The State 9-1-1 Committee recognizes that NG 9-1-1 architecture supports an interconnected system of local, regional, and state emergency services networks, and will ultimately expand to cover the entire nation. Effective interconnection requires effective statewide planning and coordination, *as well as* effective interstate planning and coordination.

The State 9-1-1 Committee, through this plan - and the Committee's inclusive process - will move forward in its work to develop recommendations to drive NG 9-1-1 forward. The Committee recognizes that changes in the state's 9-1-1 statutory and network environment may need to be changed. To that end, this plan will be a dynamic document that is capable of reflecting those changes.

As reflected in the section on Goals and Objectives, the Committee also recognizes that, in addition to NG 9-1-1, other goals such as minimum standards for dispatcher training, standard PSAP operational policies, and reporting requirements are also elements in making progress in 9-1-1. The Committee has created and adopted this plan, not to simply outline the need and plan for technical progress, but operational progress as well.

In conclusion, the purpose of this plan is to outline the process toward a NG 9-1-1 and to address operational issues that the State 9-1-1 Committee recognizes as key to successful overall delivery of 9-1-1 in the state. As it has done in the past, the Committee will continue to facilitate Michigan's 9-1-1 legacy of progress and adaptability as we move into the new challenges facing 9-1-1 in the future.

## APPENDIX A - ACRONYMS

- ALI – automatic location identification
- APCO – Association of Public Safety Communications Officials
- CAD – computer-aided dispatch
- CLEC – Competitive Local Exchange Carrier
- CPA – Certified Public Accounting/Accountant
- CPE – customer premises equipment
- EAP –Employee Assistance Program
- EMS – Emergency Medical Services
- ESInet – Emergency Services Internet Protocol enabled network
- GIS – geographic information system
- ILEC – Incumbent Local Exchange Carrier
- IP – Internet Protocol
- LEC – Local Exchange Carrier
- LEIN – Law Enforcement Information Network
- MLTS – multiple line telephone system
- MPSC – Michigan Public Service Commission
- MSAG – master street address guide
- MSP – Michigan State Police
- NENA – National Emergency Number Association
- NG – Next Generation
- PSAP – public safety answering point
- SIP – Session Initiation Protocol
- VoIP – Voice over Internet Protocol

**APPENDIX B - ALLOWABLE AND DISALLOWABLE USAGE OF 9-1-1 SURCHARGE FUNDS**  
(available at [http://www.michigan.gov/documents/ListingofAllowable\\_14259\\_7.pdf](http://www.michigan.gov/documents/ListingofAllowable_14259_7.pdf))

**BY WAY OF EXAMPLE, BUT NOT LIMITATION, THE FOLLOWING COSTS ARE ALLOWABLE OR DISALLOWABLE (as approved by the State 9-1-1 Committee on June 23, 2009):**

**ALLOWABLE USAGE OF 9-1-1 SURCHARGE EXPENDITURES**

**Personnel Costs** directly attributable to the delivery of 9-1-1 service (i.e.; directors, supervisors, dispatchers, call-takers, technical staff, support staff): salaries, MSAG coordination, uniforms, fringe benefits, addressing/database, EAP

**Note:** If 9-1-1 staff serves dual functions (i.e.; a director who is also in charge of Emergency Management, a dispatcher who is also a police officer) then only those portions of personnel costs attributable to their 9-1-1 functions should be allowable.

**Facility Costs** of the dispatch center directly attributable to the delivery of 9-1-1 service: capital improvements for construction, remodeling, or expansion of dispatch center, electrical/heat/AC/water, fire suppression system, cleaning, maintenance, trash removal, telephone, generator/UPS and grounding insurance, office supplies, printing and copying, furniture

**Note:** If a shared facility, only those portions of facility costs attributable to the 9-1-1 functions should be allowable.

**Training and Memberships** directly related to 9-1-1 service:

On the job training, vendor provided training, conferences, travel and lodging as necessary, membership in associations (APCO, NENA, etc.)

**Hardware, software, connectivity and peripherals** directly attributable to the delivery of 9-1-1 service:

Customer Premise Equipment, Remote CPE Hardware/Modems, Computer-Aided Dispatch, Radio system (consoles, infrastructure, field equipment), LEIN costs for dispatch purposes, Paging System, pagers and related costs, Voice logging equipment, Mobile Data Systems, GIS/Mapping Systems/AVL Systems, Alarms/Security Systems, Connectivity for any of the above, Maintenance and service agreements of above

Software licensing of the above, Associated database costs

**Vehicle costs (staff vehicle, pool car, mileage reimbursement, fuel, etc.)** directly attributable to the delivery of 9-1-1 service:

Travel for meetings, training, conferences, travel for MSAG verification and testing, travel for 9-1-1 Public Education purposes

**Professional Services**

Attorneys, Consultants, Insurance, Architects, Auditor

**Public Information/Education Expenses** directly attributable to the delivery of 9-1-1 service.

**Miscellaneous**

**THE BELOW DISALLOWABLE EXPENSES ARE MEANT TO SERVE AS EXAMPLES ONLY - PLEASE REFER TO THE STATE 9-1-1 COMMITTEE APPEALS PROCESS FOR QUESTIONS.**

**Personnel Costs** of law enforcement, fire, and EMS responders, emergency management staff, shared support or technical staff, except for portions of time directly functioning as 9-1-1 allowable staff.

**Facility Costs** of law enforcement, fire, EMS, emergency management, or other municipal facilities, except for that portion housing the 9-1-1 center or back-up center, or leased to the 9-1-1 center for allowable training or meeting facilities.

Capital costs and furnishing for facilities for which the primary purpose is other than 9-1-1 (i.e.; a conference room used primarily for the City Council but occasionally leased/loaned to the 9-1-1 center for meetings).

**Training** for staff not involved directly in the delivery of 9-1-1 service, or for any staff for courses not directly attributable to 9-1-1 or dispatching services. **Memberships** for staff not involved directly in the delivery of 9-1-1 service, or for associations with a primary purpose other than public safety communications (i.e., sheriff's associations, police or fire chief associations, etc.)

**Hardware, software, connectivity and peripherals** not attributable to the delivery of 9-1-1 service: Law Enforcement Record Management Systems, Fire Records Management Systems, EMS Records Management Systems, Jail Records Management Systems, LEIN costs for non-9-1-1 functions (e.g., Records Unit), word processing, databases, etc. not directly, attributable to 9-1-1 service, GIS not directly related to the delivery of 9-1-1 service, court information systems, connectivity for any of the above, maintenance and service agreements for any of the above, software licensing for any of the above, Non-Emergency N-1-1 Systems.

**Vehicle costs (fleet vehicle, pool car, mileage reimbursement, etc.)** for law enforcement, fire, or EMS responders, such as patrol cars, fire apparatus, ambulances, etc.

**Professional Services** not directly attributable to the delivery of 9-1-1 service.

**Public Information** not directly attributable to the delivery of 9-1-1 service.

**Miscellaneous:** road signs/addressing implements.

**Emergency Telephone Service Committee**

6/21/2005

**State 9-1-1 Committee revised**

6/23/2009