

# Major City Police Chiefs Association

## 911 Committee

### Report of Findings

April, 2005

#### Committee Members

| Police Agency | Department Head      | Committee Designee                     |
|---------------|----------------------|--|
| Woburn        | Chief Mahoney        | CHAIR: Chief Phil Mahoney              |
| Newton        | Chief O'Brien        | Captain Paul Anastasia                 |
| Fall River    | Chief Souza          | Deputy Chief Cathe Moniz               |
| New Bedford   | Chief Moniz          | DC Dave Provencher/Capt. Ron. Teachman |
| Lowell        | Superintendent Davis | Admin Director Chuck Ouellette         |
| Springfield   | Chief Meara          | Administrator William Mullen           |
| Boston        | Commissioner O'Toole | Deputy Superintendent Kenneth Fong     |
| Cambridge     | Commissioner Watson  | 911 Director George Fosque             |
| Brookline     | Chief O'Leary        | Chief Dan O'Leary                      |
| Peabody       | Chief Champagne      | Chief Robert Champagne                 |

## Introduction

Huge changes have occurred in the last 15 years in the operation of 911 centers across the nation and in Massachusetts.

From this:



To this:



**Technological Changes:** First, for various reasons, technology has revolutionized 911 Centers such that many dispatchers now sit in front of 4 or more computer displays with more to come.



Enhanced 911 “ALI” screens, CJIS terminals, CAD stack and status screens, radio console screens, TTD keyboards, Mobile data screens, and alarm monitoring panels are just some of the technology in routine use by dispatchers. This complex technology has made it very difficult for sworn officers who do not work regular shifts in the 911 center to staff a console position. The need to master this technology has largely contributed to the development of the specialty of the civilian dispatcher (with titles like Police Dispatcher or Emergency Telecommunications Dispatcher) such that most 911 centers now have non-sworn dispatchers forming all or part of their 911 dispatch workforce.

**Personnel Changes:** Second, continuing pressure on municipal budgets – especially in the larger cities - has caused police departments and city officials to seek less costly ways of doing business. In many cities, it was found to be substantially cheaper to staff a 911/dispatch center with a civilian dispatcher than a police officer assigned to dispatch duties. In particular, when the total costs of sworn employment including benefits and – especially - retirement were considered, non-sworn dispatchers were deemed “quite cheap” by comparison. Thus, for economic and other reasons civilianization of dispatching developed quickly and spread across the state during the last 15 years, such that in 2004 over 1500 non-sworn dispatchers and dispatch supervisors are employed full time in local, county and state police dispatch centers statewide.

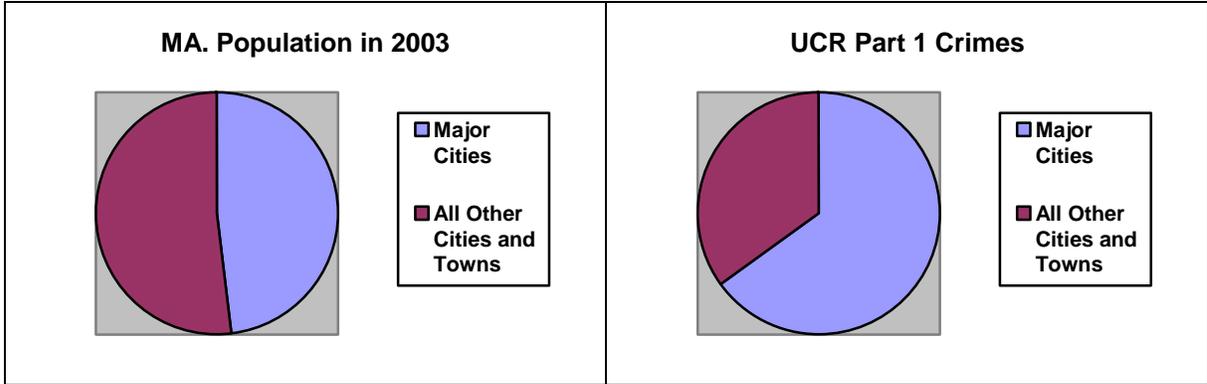
**Public Expectations:** Third, the expectations of the public and the basic “standard of care” expected of 911 centers have rapidly evolved. Many citizens expect, for example, that 911 call takers can give life-saving medical instructions over the phone, that they can quickly access databases with all manner of information, that they can speak various languages, and that they can converse with deaf 911 callers by using a TTD.

Police officers, firefighters, and command staffs likewise expect and demand a lot of their dispatchers. They must excel at multi-tasking, be able to skillfully handle nearly any type of question from callers, gather and succinctly relay all any and all needed information about many dozens of call types, be intimately aware of city geography (even though they work inside), and carefully protect the safety of field personnel.

Because of the many changes in dispatch centers and in dispatchers, the Major City Police Chiefs Association created a **911 Committee** to look at the state of 911 and dispatch operations and make recommendations for improvements.

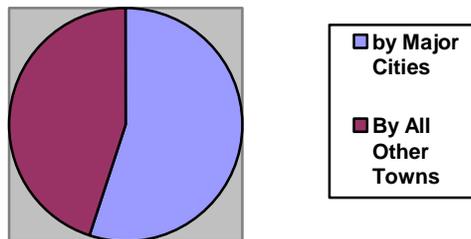
## Overview of 911/Dispatch Operations in the 40 Major Cities of Massachusetts

The 40 most-populous municipalities (out of 351 total municipalities) account for about 48% of the state’s residents; an even higher percentage of the state’s weekday population; and over 65% of the Part 1 UCR index crimes.



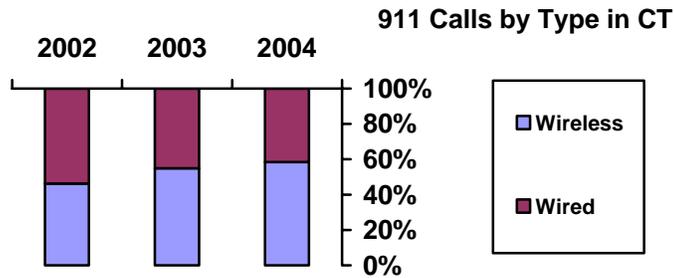
Although numbers are not yet available (the state 911 agency has not publicly released 911 call volume information by PSAP or city); we project that the 911 Centers (known as “PSAP”s or Public Safety Answering Positions) in the 40 major cities handle 50% or more of the volume of all 911 calls in the state from wired phones. In addition, the major cities also are thought to handle a large proportion of 911 cell calls that are transferred to city dispatchers after initial answering in one of three state-police-operated wireless PSAPs. Finally, many major city PSAPs also handle a large volume of alarms from either fire or security alarm system, whether public or privately owed and operated.

### Emergency Calls and Alarms - Estimated % Handled



There has been a shift in calling 911 from traditional wired phones to an increased reliance on cell phones. This transition to a “cell phone carrying populace” is well

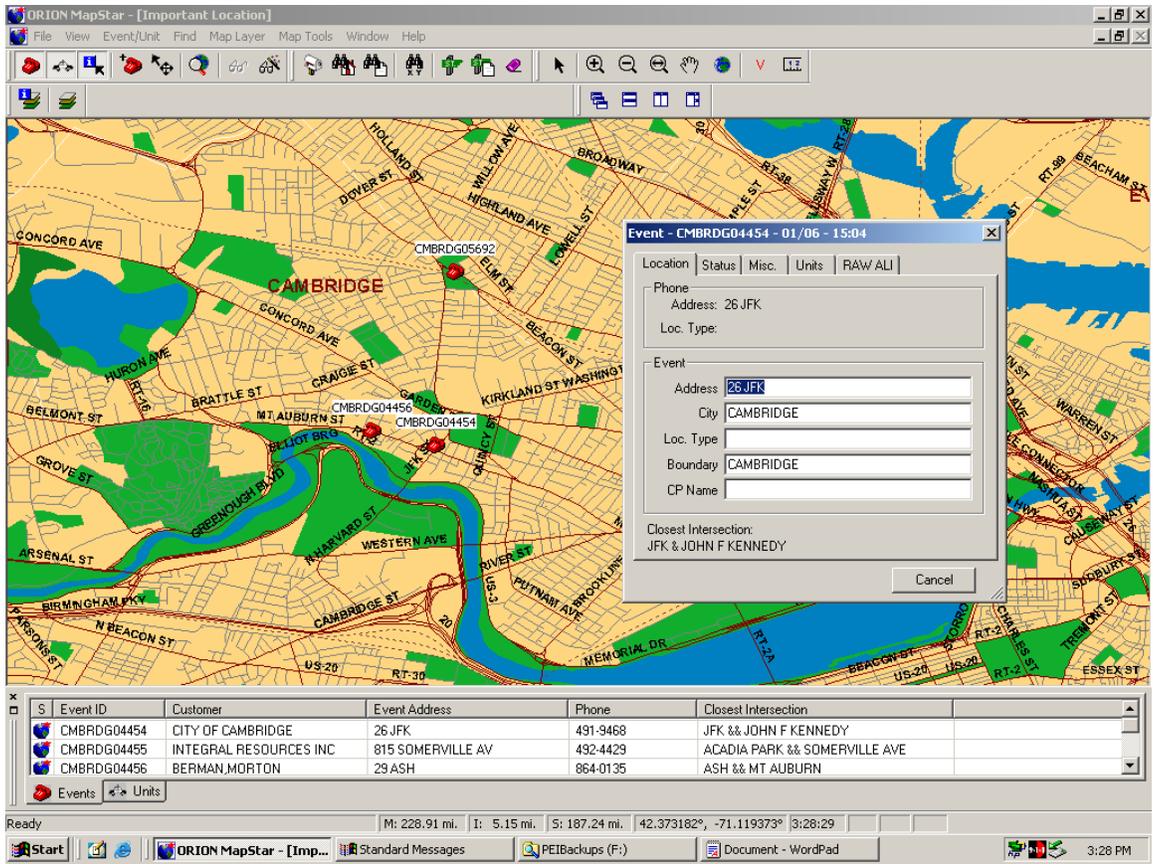
underway in our state, especially among the younger generation – many of whom would not even have a wired phone in their residence if cell service improved somewhat. Although exact figures are not available in Massachusetts there is no reason to believe that the proportion is not unlike our neighboring state of Connecticut. They report the following trend from 2002 through 2004 with wireless 911 calls now making up 58% of the total calls to 911 in their state.



Note that in the same three-year period the total number of 911 calls (both wired and wireless/cell) in Connecticut stayed relatively flat:

| Year                      | 2002      | 2003      | 2004      |
|---------------------------|-----------|-----------|-----------|
| Number of 911 Calls in CT | 2,574,745 | 2,611,110 | 2,545,599 |

Major city police agencies (and all Mass. police departments that run PSAPs) are facing the issue of how best to deal with 911 cell calls transferred from the State Police. Since the 1990's, all 911 cell calls made in Massachusetts have been answered by the State Police at several "Wireless PSAPs" (originally Framingham for eastern and central Mass. and Northampton for western Mass.). Dispatchers in these centers asked the caller's location and, for the most part, transferred the call to the local PSAP where the local dispatcher talked with the caller and handled the call. Recently, funds have been generated through a surcharge on cell phone bills (see the 911 Funding section below) to provide mapping PC's in local PSAPs such that when the 911 cell call is transferred to the local PSAP from the State Police, the caller's location will be plotted on the map:



Some Major City PSAPs (e.g., Fall River, Waltham, Cambridge, and New Bedford) are going through this map installation process now in a “first wave” of map system installs managed by the SETB and their vendor, Verizon. Early experience shows promising results from callers using newer “Phase 2” capable phones with in-built GPS chips; the “lat-long” of the phone provided by the 6 carriers (Verizon Wireless, Sprint, Cingular, AT&T Wireless, Nextel and T-Mobile) can often be plotted on the mapping PC within 5 - 50 meters of the actual caller’s location.

But key issues remain:

- How to handle 911 Hangups on cell calls, especially when a call-back is made with no answer, and the caller’s Phase 2 location is shown on a map. It is strongly recommended that each jurisdiction have a written policy on handling hangups which reflects the realities and needs of the local jurisdiction. NENA’s Operational Information Document 56-501 provides guidance on hangup policies; it is at <http://www.nena.org/9-1-1OperPractices/OpsInfoDocs/NENASOPhangupOID56001final102003.pdf>.

- Currently, when most all 911 cell calls are made, the address of the cell tower handling that call is known. Cell calls could be routed directly to the PSAP – skipping the State Police - whose jurisdiction covers the “footprint” of that cell tower. This use of this “Phase 1” wireless 911 tower location to directly route 911 calls is used in many states and counties. However, in areas where many towns are clustered closely together (such as in Metro Boston or in many other urban areas of Massachusetts), it can easily be that a person is located in one town but is talking on their cell phone through a tower located several blocks inside a neighboring town. For this and other reasons, Massachusetts has preferred to wait until the location of the caller’s phone is quickly available before allowing local PSAPs to directly receive their own 911 cell calls, without initial State Police handling.

What will be the impact of Major City PSAPs taking 911 cell calls directly, without initial State Police answering? When the location of the caller’s phone is more fully known (by Dec 2005 the FCC has required all cell carriers to provide Phase 2 information to PSAPs on all calls), and the wireless location-finding technology gets sufficiently fast to allow initial routing (e.g., under 5-10 seconds), Major City PSAPs need to understand the impact of receiving “their own” 911 cell calls directly, without need for State Police initial answering.

In general it is believed that most major city PSAPs currently are already handling the overwhelming bulk of their 911 cell calls; since most calls are already being transferred from the State Police. Thus, handling them directly would result in some very important outcomes:

1. The time delay in receiving the call would be reduced since the State Police would not have to answer and query the caller first. This is particularly important in the case of crimes in progress, fires, and certain medical emergencies where minimizing dispatch delay is crucial.
2. Much more importantly, handling calls directly at local PSAPs would greatly reduce congestion at the State Police wireless PSAPs and thus help prevent “call blockage”. Most Major City PSAPs in eastern Mass. are familiar with the difficulties in local callers reaching 911 on their cell phones while the Framingham State Police Wireless PSAP – staffed with 6-8 dispatchers for an area covering hundreds of towns and cities - is experiencing “drive time” and also handling several major state highway accidents.

However, there are issues to be addressed as Major City PSAPs plan to take their own wireless 911 calls directly:

1. Some events, a major motor vehicle accident being the prime example, may generate a peak cluster of cell 911 calls that may strain the call-taking

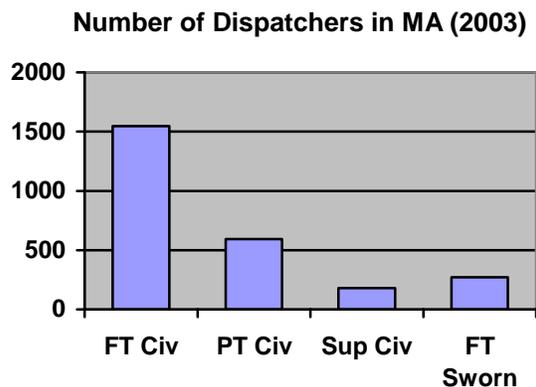
ability of a local PSAP. Research is needed to determine the likely number and peak call volume generated by such incidents to determine the impact on local PSAPs. Do they need additional staff to manage these peaks?

One way to address this is to identify a set of major highway accidents that have occurred and then research the number of calls received by the State Police, the number transferred to the local PSAP, and the number not transferred (i.e., “We already know about that accident sir”).

Another approach involves researching the experience of major cities in other states who handle their own 911 cell calls already.

2. In those Major Cities with interstate highways, can the location-finding technology be sufficiently accurate to generally route calls from inside state/interstate roadway “corridors” to the state police wireless PSAPs while calls outside the roadways are routed to the local PSAPs? Should this happen?

Full or partial civilianization of 911 and dispatch functions has occurred in about 35 of the 40 major city PSAPs. This is a major change since the 1980s when dispatching was a mostly sworn assignment. Approximately 500 full-time non-sworn dispatchers and dispatch supervisors staff the 40 major city PSAPs. (This does not include 100+ additional dispatchers working in separate fire alarm offices still operated by some cities). This is approximately 25% of the 2,000 civilian dispatchers working in the state’s 275 PSAPs (most operated by and within police departments).



Consolidation of police, fire and EMS dispatching has occurred in about 12 of the 40 large city PSAPs. Worcester, Lowell, Cambridge, Fall River and Newton, for example, operate combined police/fire/EMS dispatch and 911 centers either as a unit within the police department or as a separate emergency communications department. However, the larger proportion of major cities operate a 911 call answering and police dispatch unit in the Police headquarters building but have a separate Fire Alarm office

either in the Fire Department or a Wires/Electrical department. 911 calls for fire or EMS are often transferred to this fire alarm office for separate or additional handling.

The trend is still toward consolidation in the major cities although “consolidation” may occur in different ways:

- a. Police and fire dispatch can be co-located in one PSAP, but kept physically separate at different console positions and staffed by dispatchers with special skills either in the police or fire service.
- b. “Virtual consolidation” can be effected by the use of shared technology even through police and fire dispatching occurs in separate facilities. This can occur through use of shared CAD, radio and E911 phone systems, thoughtfully designed to interoperate. Thus a call taking dispatcher in a police-station-located PSAP can simply press a button on their CAD to request fire apparatus be sent to a call. Likewise, a fire alarm operator can quickly summon police assistance and work cooperatively with remote police dispatchers.

## Funding for 911 and Dispatch Operations in Massachusetts

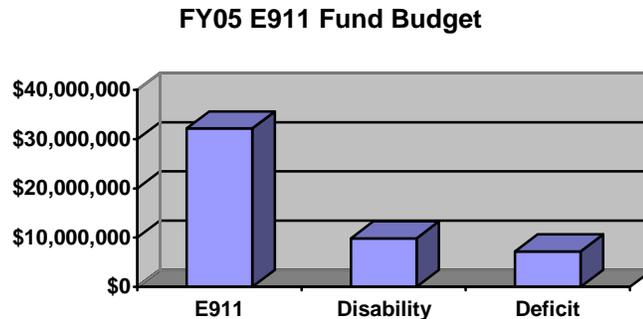
Two sources of funds now support 911 and Dispatch operations in the state:

Local municipal budgets support all of the operational, personnel, equipment, capital, and training costs of 911 and dispatch operations except certain costs associated with 911 telephone equipment. Although exact figures are not available, it is estimated that the 40 major cities spend well over \$100 million dollars yearly on 911 and dispatch operations.

Cities and towns are also asked to provide, from local tax-supported funds, all items of equipment, furniture, and physical facility modifications required to house and support 911 phone equipment. These costs can be quite large: currently several city dispatch centers are needing to replace their entire dispatch consoles to accommodate the addition of new PC-based 911 phone answering equipment that will be forthcoming during 2005/2006. These console costs alone can exceed \$75,000 in a medium-sized city.

Two state-managed 911 Funds support PSAP 911 telephone equipment, 911 databases, network services and other expenses related to 911. These funds derive from separate monthly surcharges assessed on “landline” (\$0.85) and cell phone (\$0.30) bills. These funds are estimated to raise a total of over \$50 million for 911 and Disability programs serving the entire state. The funds are currently budgeted and used as described in detail in Appendix A.

Here is a summary of the uses to which the revenues derived from the \$0.85/mo “E911” surcharge on wireline phones are budgeted in the current year:



The proportion of state 911 Funds “received” by the 40 major cities is difficult to calculate. In all cities and towns, both funds will insure that any 911 call is processed by a special, highly reliable telephone network and quickly routed to a PSAP with information about the location of the calling phone. These network, circuit, database, maintenance, and related costs are high in a state with 275+ PSAPs; they are all contracted to Verizon.

In addition, the 911 Funds provide 911 telephone answering equipment to each PSAP, regardless of size. All PSAPs receive the same basic backroom equipment and servers, a digital logger, instant call checks, and 2 sets of telephone answering equipment (APU's).

Larger PSAPs receive extra sets of telephone answering equipment if their size and call volume necessitates more answering positions. The three largest cities (Boston, Worcester and Springfield) receive some special equipment. Here is a list of how many PSAPs have 2, 3, and more 911 phone answering equipment positions.

| # APU's | # PSAPs Having | % of PSAPs | Cities   |
|---------|----------------|------------|--|
| 2       | 184            | 67.2%      |  |
| 3       | 49             | 17.9%      |  |
| 4       | 18             | 6.6%       |  |
| 5       | 5              | 1.8%       | Lawr, Brock, Quincy, Plym, Andov                                     |
| 6       | 12             | 4.4%       | NB, FR, SF SP, Barn S, Low, Newt, Midd<br>SP, N SP, Pitts, Walt etc. |
| 7       | 2              | 0.7%       | Camb., Lynn  |
| 8       | 1              | 0.4%       | Springfield  |
| 9       | 1              | 0.4%       | Fram SP  |
| 14      | 1              | 0.4%       | Worcester  |
| 34      | 1              | 0.4%       | Boston   |

The latter two funds, the E911 Fund and the Wireless 911 Fund are new – both having been established by state laws passed in 2002. They represent a very important possible source of funding to assist major city 911 operations.

## Key Findings

There appears to be great variety in the confidence that Police Chiefs and their command staffs have in the skills, knowledge and abilities of their dispatch personnel. In some cases, confidence is high; in other cases it is not. But in all cases there is a recognition of the vital role that 911 dispatch operations play in both daily police operations and major or critical incidents.

These basic findings have emerged:

1. **911 Dispatchers and dispatch supervisors need to receive wages and benefits commensurate to the many critical functions that they are required to perform to protect citizens and police officers.** In some cities, 911 dispatchers are expected to perform as professionals but receive the compensation of paraprofessionals. Compensation is an entirely local matter effected by many considerations, but many cities have found that investing a bit more in their 911 dispatch staff pays back many times over in reduced training costs, reduced errors, reduced overtime, improved performance, and better citizen and officer satisfaction with dispatchers.

In particular, some cities have found a “win-win” for both management and dispatch employees when increased compensation can be tied to skill building and maintenance in the form of incentive pay for EMD, dispatch trainer, typing, and various other skills that are required in dispatch operations.

2. **911 Dispatchers need vastly increased training and professional development** so that their skills are commensurate with the more highly trained police, fire, and EMS personnel that they support.

Unlike police officers, firefighters, and EMTs (the other first responders), dispatchers receive very little pre-service training and almost no in-service training.

Why is this the case?

- a. There is no legislation requiring dispatcher training and there are almost no training standards for dispatchers. Only 16 hours of training (largely in the operation of the 911 phone and its related TTD device) are required by rule of the SETB.
- b. Dispatchers cannot easily be spared for training because to send a dispatcher to training requires that a relief dispatcher be hired on overtime to fill-behind the dispatcher-at-training. Back-fill costs

are critical to be able to conduct dispatcher training, especially in-service training.

- c. In some PSAPs, turnover is so high that it is often thought to be not cost-effective to invest in the training of someone who may soon be an ex-employee.
- d. There are relatively few opportunities for dispatcher training, especially quality ones. The state intends to re-start the Dispatch Academy, but is delayed in so doing.

3. **The 911 Dispatch function needs even more attentive and knowledgeable supervision and leadership within the major city police agencies** and local government.

911 Dispatch has become a highly specialized profession unto itself requiring special training, technical knowledge, and highly developed procedures and protocols. In many states, the dispatch profession has a highly developed career ladder starting with dispatch trainee, through dispatcher, senior dispatcher and chief dispatcher, all the way up to deputy 911 center director and director.

Some cities have found that dedicating a committed Superior officer or civilian supervisor over a long period of time to dispatch supervision can result in much-improved dispatch center operations and improved morale among dispatch staff.

4. **The major city 911 dispatch centers need additional funding** to be able to train their dispatch personnel, replace antiquated equipment, process calls correctly, and carry out their many functions. Local major city budgets are being cut or level-funded and thus cannot support the development of dispatchers and dispatch centers.

5. **The technology of the 911 system computers and components as installed in major city PSAPs has an impact on police IT staff and functions.** Police IT staff are not knowledgeable about this technology and do not know how best to do their share in locating, supporting, and – where possible – interfacing it to local CAD and other police computer systems.

## Key Recommendations

### A. Training

1. Provide training to each newly hired dispatcher sufficient to perform their job at a high level of competence. In particular, it is recommended that dispatchers, within the first year of employ, receive training equivalent to the following:
  - a. Pre-Service Training at or equal to the training offered at the 5 week Dispatch Academy (coordinated by the SETB).



Right: Dispatchers from 8 cities at a recent graduation from the 5-week Dispatch Academy  
Left: A recent Dispatch Academy grad displays his Academy shirt

- b. State and national certification in – or equal to - most or all of the following, depending on specific job duties: APCO Basic Telecommunications, Mass. 911 Call Taking, TTY, Basic Police Dispatch, Basic Fire Dispatch, EMD, CJIS and CPR.
    - c. Structured OJT following Pre-Service or initial training as described above in department policies, CAD system operations, and other topics required to achieve proficiency as a Dispatcher or Telecommunicator.
  2. Yearly In-Service base-line training equal to or exceeding 16 hours each year in topics designed to develop skills needed for career development and meeting the needs of host departments. For comparison, the Municipal Police Training Committee is said to have a yearly in-service standard of 32 hours of classroom training for police officers and 8 hours of firearms training.

Yearly in-service training can be accomplished by attending state or vendor sponsored training courses taught regionally; by attending in-house training conducted by local police agencies; or by attending shared training given by one police agency for other agencies in the local area.

Some cities have had success with scheduling in-service dispatcher training in 4-hour blocks, opening it up to surrounding cities and towns, and scheduling it to repeat over several different night and day periods so that it is made convenient to the round-the-clock schedules of dispatchers.

3. The vast majority of 911 Dispatchers are employees of cities and towns. Police Chiefs and town leaders are thus legally responsible to insure that their own employees have the tools required to perform their jobs. Thus, it is important that Police Chiefs and others who are the employers of 911 Dispatchers actively guide and control the statewide training curriculum for 911 Dispatchers through whatever mechanisms are available. This includes the setting of standards and the development of continuing education programs.

## **B. 911 Program Funding Changes**

The current use of 911 surcharge revenues is focused on providing, maintaining and upgrading telephone equipment, network services, 911 databases, and other telephone-oriented services sufficient for a robust and reliable 911 telephone system in Massachusetts. This effort is important, but 911 is more than a telephone system that delivers the location of 911 callers; it includes the people and systems that speak with 911 callers, understand their emergencies, process their calls, and insure that the proper help arrives promptly and with the correct information.

Thus, 911 surcharge revenues need to assist major city police agency PSAPs in developing the call processing capabilities of dispatchers and dispatch centers. Because revenues are limited, the following short-term use of funds are recommended:

1. Develop a long term strategy, such as that used in Connecticut, to specially direct a portion of 911 Funds to support PSAP call processing operations in cities that are most in need of assistance in properly operate these functions. 911 is a central service of local government and its baseline quality of service should not have to depend on whether a caller lives in a poor or more advantaged city.
2. Establish a PSAP Training Fund at the SETB to insure that dispatchers in all PSAPs receive the pre-service and in-service training that they need to perform their duties.

The Fund would make yearly grants to PSAPs to enable them to develop and deliver the training required according to certification standards developed statewide by PSAP managers working with SETN Training staff. Rules would be established for the appropriate use of funds.

It is recommended that the PSAP Training Fund have two fund allocation mechanisms: a Continuing Grant Program in which funds would be allocated based on a formula and a Special Grant Program in which funds would be awarded based on a competitive process.

The formula that would be used for determining Continuing Grants to each PSAP should weight crime, fire incident occurrence, and other factors such that the proportion of funds received by major cities reflects the proportion of their statewide effort in handling 911 calls that are emergencies.

3. Fund real-time language translation services for all PSAPs (such as the “Language Line”) as a regular part of the 911 Program.

Many 911 programs in other states include language translation services in their offerings. The Mass. 911 Program invests heavily in meeting the special needs of the deaf and hard-of-hearing community (TTDs, special training, etc.); why should persons who do not speak English (disproportionately concentrated in the major cities) not have instant access to translation services when they call 911?

It is estimated that a statewide contract signed between the 911 Program and a leading language translation provider would cost less than \$100,000 each year for all 274 PSAPs.

4. Assist major city and other PSAPs to process 911 calls. This requires funding for many things such as:

- a. Fund headsets for all dispatchers who request them, if the requesting department has a headset usage policy.

Headsets allow call-taking dispatchers to clearly hear callers while having their hands free to type important information into local Computer Aided Dispatch systems. It is hard to quickly process 911 calls without the availability of headsets; headsets are part of the standard-issue job equipment of the modern dispatcher just as handcuffs or a radio are part of the standard equipment issued to police officers.

It is estimated that the costs of such a program could be less than \$100,000 in an initial year with replacement costs at \$25,000 in following years

- b. Fund EMD card sets and related training materials, for those departments that have adopted a formal Emergency Medical Dispatch (EMD) program.

For those PSAPs that choose to answer and process emergency medical calls, EMD can be a true lifesaver for citizens. Dispatchers are trained in nationally-certified EMD protocols to ask a few key, quick questions about different medical conditions; provide pre-arrival instructions to callers while they anxiously await responders; and even give life-saving CPR, Heimlich and

other instructions over-the-phone to help callers save the life of their relatives or friends.

The 911 Fund should provide appropriate funds to support any PSAP that has the ability and chooses to initiate an EMD program. The SETB should establish a program to develop and support EMD adoption in more PSAPs.

A yearly amount of \$125,000 should be designated to support this effort; PSAPs would apply and be granted funds based on a competitive process that factors in need and other parameters.

- c. Provide funds to local departments to assist in the mounting and use of 911 program-provided displays in or on local dispatch consoles.

The 911 Program is providing two 17” computer displays to departments at each 911 call answering position (a map display to locate both wireline and cell 911 callers and a 911 call processing display to replace the current “APUs”). In some cases, current consoles – which were not designed for this new equipment - will need to be replaced, at great cost to local police departments.

The fund should set aside at least \$300,000 in each year of this upgrade to assist local PSAPs.

## C. Technology Recommendations

The SETB and its 911 Program contractor Verizon have begun a multi-year project to replace aging, 10-year-old analog 911 phone equipment in all PASAPs with modern, computer-based equipment. The left-hand Plant Vesta Pallas computer (with a 17" flat panel monitor) will replace the 911 Plant MAARS phones ("APUs") currently in PSAPs. The right-hand Plant MapStar computer will give every 911 phone position in the state a map display of the location of all 911 calls including wireless ones.



To insure that the equipment works to its best ability the following is recommended:

1. The technology of the 911 system computers and components as installed in major city PSAPs needs to be carefully coordinated with the technology used by major city police agencies. In particular, access to 911 taped audio, interfacing with CAD, and other types of controlled interconnections need to be jointly developed by major city police IT staffs and SETB technical and vendor staffs, working jointly.
2. Because PSAPs, not the SETB, are the users of PSAP 911 equipment, the SETB should establish a user committee with key PSAP operations and police IT staff to periodically discuss issues about the operation, use, and future evolution of this technology.

## **D. Best Practices Initiative**

It is recommended that Major City and other PSAP Managers collaborate in an initiative to develop and share best practices.

1. Many cities have policy and procedures they can share with others in electronic format.
2. Many cities have personnel that are knowledgeable in various operational or technical

# Appendix A

## Mass. 911 Funding Detail

Currently, approximately 4.5 million wired telephone lines are assessed a \$0.85/month E911 surcharge that goes into an E911 Fund managed by the Statewide Emergency Telecommunications Board (SETB).

Another surcharge, currently \$0.30/month is assessed to cell phone subscribers with the funds going into a Wireless 911 Fund also managed by the SETB.

Together, these funds should generate over \$50 million in revenues each year to support both 911 and Disability Access to telephone services. Prior to 2002 the single former 911 Fund generated about \$7 million yearly.

### How 911 Funds are Budgeted

In FY06 both funds are budgeted by the SETB to improve 911 as follows:

#### From the E911 (Wireline) Fund

| Use of Funds                        | Amount Budgeted     | Comment   |
|-------------------------------------|---------------------|---|
| E911 Data Centers                   | 3,947,980           | Verizon Contract  |
| E911 Network                        | 2,530,307           | Verizon Contract  |
| E911 Network Maint. Costs           | 769,622             | Verizon Contract  |
| E911 Service Response Centers       | 3,644,485           | Verizon Contract  |
| E911 Capital Upgrade Estimate       | 19,410,329          | Includes mapping and new E911 PCs to 275 PSAPs though Contract to Verizon |
| SETB Expenses                       | 1,874,250           | State agency staff, admin, <b>training</b> costs                          |
| 911 Total                           | <b>\$32,176,953</b> |   |
| Total Disability and Relay Services | <b>\$9,840,822</b>  | Funds 711 center, amplified phones, etc.                                  |
| Deficit Recovery                    | <b>\$7,203,714</b>  | Pays back Verizon for expenses incurred in first 10 years of E911 program |
| TOTAL                               | \$50,886,947        | Each of next few years  |

Funds are restricted to expenses incurred by telecommunications carriers in providing 911 services as established by the SETB throughout the state and for other purposes.

#### From the Wireless 911 Fund

| Use of Funds                   | Amount Budgeted | Comment                           |
|--------------------------------|-----------------|-----------------------------------|
| Wireless 911 Equipment         | unknown         | Verizon Contract                  |
| Mapping systems to 275 PSAPs   | unknown         | Verizon Contract                  |
| Salaries of extra State Police | unknown         | Mass State Police – needed to add |

|                               |                     |   |
|-------------------------------|---------------------|---|
| Dispatchers in Wireless PSAPs |                     | dispatchers to handle volume of cell 911 calls  |
| Public Education              | unknown             |   |
| SETB Expenses                 | unknown             | State agency staff, admin costs                 |
| W911 Total                    | Approx \$10,000,000 | Over \$10 in revenue is projected at \$0.30/mo. |

Funds are available for many purposes to support cell 911 call processing. This fund is not as restricted in its usage. Note that needs of PSAPs must be met before wireless carriers can recovery costs of cell 911 services.

### Number of Phones

In Massachusetts, the number of wired telephone lines that are the subject of the current \$0.85/mo. surcharge is declining. The FCC reports the following numbers of phone lines and cell phone users:

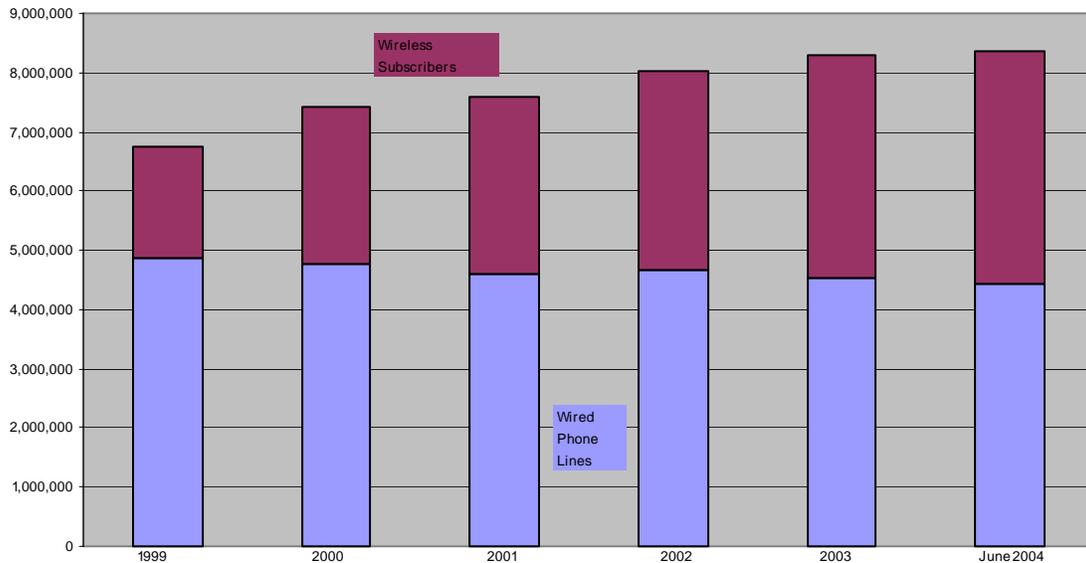
| Date      | ILEC Lines (all Verizon lines) | CLEC Lines (15 other telcos such as RCN) | Total Wired Lines | Total Mobile Subscribers |
|-----------|--------------------------------|--|-------------------|--------------------------|
| June 2004 | 3,432,038                      | 997,760                                  | 4,429,798         | 3,919,139                |
| Dec 2003  | 3,565,171                      | 973,607                                  | 4,538,778         | 3,741,975                |
| Dec 2002  | 3,914,218                      | 750,473                                  | 4,664,691         | 3,375,726                |
| Dec 2001  | 3,931,469                      | 669,209                                  | 4,600,678         | 2,996,816                |
| Dec 2000  | 4,252,502                      | 509,731                                  | 4,762,233         | 2,649,130                |
| Dec 1999  | 4,580,383                      | 277,476                                  | 4,857,859         | 1,892,014                |

The ILEC is the Incumbent Local Exchange Carrier or the telephone company that had the monopoly business prior to degegulation; CLECs or Competitive Local Exchange Carriers are the new telephone companies, many serving business users, that arose after deregulation.

It is unknown how these numbers differ from those in the Mass ALI database.

The following chart shows that the number of total end users of telephone services (wired phone lines plus cell phones) has steadily increased over the last 5 years, but only because increasing cell phone usage has more than replaced a decline in wired phones.

Wireless Subscribers and Wired Phone Lines in Mass: 1999 through June 2004  
 From "FCC Local Telephone Competition Status as of June 30,2004"



The following table, Trends in Relative Revenue from Wired versus Wireline Sources, from shows the maximum revenue that could have been generated from both the current \$0.85/mo. surcharge on wired phone lines as well as the current \$0.30/mo. surcharge on wireless subscribers *had both charges applied from 1999 which they did not*. In reality, wireline surcharges only started being assessed beginning 9/1/03; wireless surcharges began to be assessed sometime earlier in 2003. Thus the numbers in *italics* below are designed to only show trends in the nature of revenue sources had the current surcharges been in effect for some years.

The table is meant to show that, at least in the last 24 months, **overall maximum 911 revenues from both surcharges would have remained relatively flat** due to the steady increase in wireless subscriber contributions making up for the decline in contributions from wireline lines.

**Trends in Relative Revenue from Wired versus Wireline Sources**  
 (only bold numbers are

| Date of Report | Sum of Wired Lines and Wireless Subscribers | Max Yearly Revenue from Wired Lines at \$0.85/mo | Max Yearly Revenue from Wireless Subscribers at \$0.30/mo | Total Max Yearly Revenue |
|----------------|---|--|---|--------------------------|
| June 2004      | <b>8,348,937</b>                            | <b>\$45,183,940</b>                              | <b>\$14,108,900</b>                                       | <b>\$59,292,840</b>      |
| Dec 2003       | 8,280,753                                   | <i>\$46,295,536</i>                              | <i>\$13,471,110</i>                                       | <i>\$59,766,646</i>      |

|          |           |              |              |              |
|----------|-----------|--------------|--------------|--------------|
| Dec 2002 | 8,040,417 | \$47,579,848 | \$12,152,614 | \$59,732,462 |
| Dec 2001 | 7,597,494 | \$46,926,916 | \$10,788,538 | \$57,715,453 |
| Dec 2000 | 7,411,363 | \$48,574,777 | \$9,536,868  | \$58,111,645 |
| Dec 1999 | 6,749,873 | \$49,550,162 | \$6,811,250  | \$56,361,412 |

It is not known how the above numbers, reported every 6 months to the FCC by Verizon, 15 CLECs, and the 6-7 wireless carriers operating in Mass., match the actual experience of the SETB in revenue collections. But the relative trends should be instructive.