The Commonwealth of Massachusetts
EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY
STATE 911 DEPARTMENT
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Executive Director

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December 15, 2016

To the Great and General Court of the Commonwealth of Massachusetts:

On behalf of the State 911 Department (Department), I am pleased to issue our Annual Report for Calendar Year 2015. This Report contains an overview of the enhanced 911 program and specific information about agency activities during that year.

On July 31, 2008, the Legislature passed and the Governor signed into law Chapter 223 of the Acts of 2008 (Chapter 223) that, amongst other things, changed the name and organizational structure of the agency, which from 1991 up to that date had been known as the Statewide Emergency Telecommunications Board (SETB). The SETB had consisted of a 21-member board and staff, was charged with coordinating and effecting the implementation of enhanced 911 service, and administering such service in the Commonwealth of Massachusetts (Commonwealth). In its place, Chapter 223 created the Department and the State 911 Commission.

The Department is within the Executive Office of Public Safety and Security (EOPSS) and has the authority and responsibility to direct the day-to-day administration of the statewide enhanced 911 system. It has its own budgetary authority. The Massachusetts statewide enhanced 911 system is one of the largest systems per capita in the United States. A person dialing 911 from anywhere in the Commonwealth is automatically connected to the Public Safety Answering Point (PSAP) handling emergencies in that area. The system provides the phone number and address of the telephone used to make the emergency call (for wire-line calls) or the phone number and approximate location of the caller (for wireless calls), along with dispatching data for local police, fire and ambulance services. PSAP personnel either dispatch emergency services directly or relay the calls to secondary PSAPs, limited secondary PSAPs, or private or public safety departments.

The State 911 Commission, also within EOPSS, consists of 19 members and is charged with providing strategic oversight and guidance to the Department, while also advising the Department relative to its annual budget and all material changes thereto, and in all matters regarding enhanced 911 service. The State 911 Commission is also charged with approving all formulas, percentages, guidelines, or other mechanisms used to distribute grants, all major contracts that the Department proposes to enter into for enhanced 911 services, and all regulations and standards proposed by the Department.

Chapter 223 directed the Department to review and assess new communications technologies that may include, but are not limited to, wireless, video, broadband, and Internet Protocol (IP)-enabled applications that may serve as the Next Generation 911 technology platforms, consistent with Federal Communications Commission decisions and federal law. In August 2014, the Department entered into a contract with General Dynamics Information Technology, Inc. (GDIT) to provide a comprehensive, end-to-end, fully featured, standards-based Next Generation 911 system to replace the current enhanced 911 system. Today, the Commonwealth is limited as to what data can be sent with a 911 call and what communication devices can directly contact 911. Next Generation 911 will ultimately allow for additional data to be sent with the voice 911 call, including telematics crash data, text to 911 with images, video, and medical records of the caller. In phase one of the Next Generation 911 rollout, the system will allow for texting to 911 without image and video.

In 2015, the Department made progress in bringing this new 911 system to the Commonwealth. We expect this new system to be fully implemented in Massachusetts by the end of 2017. We are excited about its introduction in Massachusetts, and expect a major benefit to our citizens along with our first responder community.

Sincerely,

FRANK POZNIAK
Executive Director

The 2015 State 911 Commission members were:

Daniel Bennett – Chairman
Secretary of the Executive Office of Public Safety and Security
Designee: Curtis M. Wood
Undersecretary for Forensic Sciences and Technology, Executive Office of Public Safety and Security

Charles Desourdy, Chief Information Officer
Information Technology Division

Richard McKeon, Colonel
Department of State Police
Designee: Blair Sutherland, Superintendent

Stephen Coan, State Fire Marshal
Department of Fire Services
Designee: Peter Ostroskey, Deputy State Fire Marshal

William Evans, Police Commissioner
Boston Police Department
Designees: Michael Cox, Deputy Superintendent
Shawn Romanoski, Director of Communications

David D'Arcangelo, Director
Massachusetts Office on Disability
Designee: Jeffrey Dougan, Supervisor

Monica Bharel, Commissioner
Department of Public Health

Heidi Reed, Commissioner
Massachusetts Commission for Deaf/Hard of Hearing
Designee: Jonathon O'Dell, Assistive Technology Manager

Christopher Delmonte, Bridgewater Police Chief
Massachusetts Chiefs of Police Association

Douglas Mellis, East Longmeadow Police Chief
Massachusetts Police Association

Kevin Coppinger, Lynn Police Chief (Vice Chair)
Major City Police Chiefs Association

Gerard Dio, Worcester Fire Chief
Massachusetts Fire Chiefs Association

Robert Silvia, Cohasset Fire Chief
Massachusetts Fire Chiefs Association

Ralph Dowling, Captain, Boston Fire Department
Professional Fire Fighters of Massachusetts

James Cummings, Barnstable County Sheriff
Massachusetts Sheriffs Association

James Boudreau, Lynnfield Town Manager
Massachusetts Municipal Association

VACANT
Massachusetts Emergency Medical Care Advisory Board

Patrick Tyler
Massachusetts Ambulance Association

Steven Hooke, Holbrook Emergency Management Director
Massachusetts Communications Supervisors Association

Employees – 2015:
Frank Pozniak (Executive Director)
Thomas Ashe (Deputy Executive Director)
Louise McCarthy (General Counsel)
Elaine Ginn (Executive Assistant)
Karen Robitaille (Fiscal Director)
Vicky Goetz (Fiscal Specialist)
Michelle Hallahan (Fiscal Specialist)
Karen Mullin (Fiscal Coordinator)
Angela Pilling (Fiscal Specialist)
Cindy Reynolds (Grant Specialist)
Normand Fournier II (9-1-1 Systems Director)
Charles Ashworth (Systems Analyst)
Jack DiPesa (Systems Analyst)
Joe Hickey (Systems Analyst)
Jeff Jeffers (Project Coordinator)
Shahriar Moin (Systems Analyst)
Christine Wingfield (Regional PSAP Coordinator)
Monna Wallace (Programs Director)
Cathy Rodriguez (Program Assistant)
Venus Wheeler (Program Assistant)
Ronnie Zuniga (Public Education Coordinator)
Juanita Bracero (Enhanced 911 Trainer)
John Brunelli (Enhanced 911 Trainer)
Sheila Foley and Christine Molloy (Part-Time Enhanced 911 Trainers)
Ashley Landis, Linda Mazzolla, and Christine O'Reilly (Part-Time TTY Quality Assurance Team)
Kevin Lewis (Enhanced 911 Trainer)

Kristen Vaidya(Enhanced 911 Trainer)
Grant Harrison (Equipment Distribution Program (EDP) Manager)
Melanie DaRosa, Christopher Hartling, Christopher Murphy, Christopher Plant, Glen Schultz, and Marguerite Szczawinski (EDP Field Advisors)
Janice Barrette, Paul Gambina, Brian Hall, Anne Ouellette, Al Gomes, and Al Terminiello (EDP Customer Representatives)

OVERVIEW

Since 1991, the SETB, and now the Department, has implemented and managed wire-line and wireless enhanced 911 services for all 351 municipalities in the Commonwealth. These services are provided through PSAPs, which by the end of 2015 totaled 247 in the Commonwealth. In 2015, the Department directly provided network, database, customer premises equipment (CPE), maintenance and monitoring services to the PSAPs through a service provider contract with Verizon. In addition, in 2015 the Department provided training services and grant funding to the PSAPs. Pursuant to the contract it entered into with General Dynamics Information Technology, Inc. in August 2014, the Department began the project to transition the 911 system in the Commonwealth to a new Next Generation 911 system. The transition continued throughout 2015.

The Department has established technical and operational standards to ensure accurate and timely responses to enhanced 911 calls, and trained over 5,000 dispatchers and call-takers in the proper procedure for answering enhanced 911 calls in 2015. In late 2006, the PSAP training fund grant was established to reimburse PSAPs for a portion of their training costs. In 2008, pursuant to Chapter 223 of the Acts of that year, the Department expanded its grant programs to provide personnel and equipment support to PSAPs, including a wireless Massachusetts State Police (MSP) grant for such support to the MSP's Framingham, Middleboro and Northampton wireless PSAPs, and to encourage regionalization of the PSAPs. An additional wireless center was established at the Essex County Sheriff's Department in Middleton in 2013 to handle the increased volume in wireless 911 calls in the Commonwealth and to lessen the burden on the MSP wireless PSAPs.

Finally, the Department continued with the administration of the Disability Access Program that provides telecommunication relay service, captioned telephone relay service, and specialized customer premises phone equipment distribution service to the Commonwealth's disabled community. In 2015, the Department distributed 3,072 specialized phones to this community.

FUNDING

The Department's budget in Fiscal Year (FY) 2015 (July 1, 2014 – June 30, 2015) was funded solely from the Enhanced 911 Fund, which was established by Chapter 223 of the Acts of 2008. This Fund was supported by the surcharge assessed on subscribers of wire-line, wireless service, including pre-paid wireless, and VoIP. In FY2015, the monthly surcharge was 75 cents, which produced $105,178,432 in revenue.

The Department's budget for FY 2015 ($88,786,640) funded the administrative costs of the agency ($5,097,503); programs, including the grant program ($41,066,690); enhanced 911 services ($40,294,076); and disability access programs ($2,328,370). A description of the grant program is contained in the accomplishment section below.

ACCOMPLISHMENTS

The following outlines the major accomplishments in Calendar Year 2015.

Next Generation 911

On August 4, 2014, the Department entered into a contract with General Dynamics Information Technology, Inc. to provide a comprehensive, end-to-end, fully featured, standards-based Next Generation 911 system to replace the current enhanced 911 system. The current enhanced 911 system is an analog-based system that was designed in the 1960s. The system has been successful in delivering 911 services for many years. However, the types of analog services that are embedded in the existing system are becoming obsolete and are being discontinued throughout the country. Technological advancements have created the necessity for a more advanced system that will offer capabilities (e.g., text and video messaging) that simply do not exist using today's system. Throughout the nation, enhanced 911 systems are being overhauled and replaced with new and emerging technologies. This need was recognized by the Legislature with the passage of Chapter 223 of the Acts of 2008, and, therefore, in accordance with this law, it was necessary to replace the existing system with one that uses advanced communications technologies in the infrastructure itself.

The benefits of a Next Generation 911 system are significant. By using an IP-based system, 911 system capabilities are greatly enhanced not only from the call-taker's perspective, but also from a reliability standpoint. Over the years, wireline carriers have been investing mostly in their IP infrastructure and barely maintaining their legacy systems, ultimately leading to reduced reliability in the analog components. Due to the nature of IP, call setup times over the Next Generation 911 system will be much improved over the current enhanced 911system, saving potentially critical seconds between the time someone dials 911 and when a call taker hears ringing.

Additional information capabilities are inherent to Next Generation 911. Today, we are limited as to what data can be sent with a 911 call. Using Next Generation 911 will ultimately allow for additional data to be sent with the voice call, including telematics crash data, text to 911 with picture and video, medical records of the caller, etc. In the short term, Next Generation 911 will allow for texting to 911 without image and video. Text to 911 is a critical need for the deaf, hard of hearing and speech impaired. Currently, the only way for those constituents to contact 911 directly is by using a text telephone (TTY) device. TTY is an archaic means of communication and has mostly been abandoned in exchange for using text to communicate. Texting will also allow for communication with a PSAP in a situation where the person is fearful for his or her life but is unable to convey that information verbally (e.g., active shooter, domestic violence, home invasion, etc.).

Improved PSAP capabilities allow for more efficient PSAP management. For instance, with Next Generation 911, a PSAP may send telecommunicators to neighboring PSAPs during a major event for call overflow management. Simply by logging into a position at a different PSAP, that call taker can receive calls destined for his or her home PSAP without any intervention by the 911 service provider or the State 911 Department. By logging in remotely, the PSAP is creating a larger virtual PSAP during a crisis. In addition, because the Next Generation 911 system is IP-based, it allows for faster call setup time, reducing the time it takes for a 911 call to start ringing at the PSAP, and its remote monitoring capabilities give the Department greater system management capabilities.

The telecommunicators at the PSAPs will benefit from a greatly enhanced mapping system that will not only provide property parcel data information to pinpoint the location of a caller, but will also show roof outlines of structures on the property. A secondary tab on the mapping system will provide the telecommunicators with an aerial view providing information regarding obstacles or hazards in the area.

The PSAPs will have more flexibility in how they manage their speed dials. Today, PSAPs must route all changes through the Department and then wait for the 911 service provider to implement them. The new system will allow for PSAPs to manage their own speed dials instantly. Part of the reason it can take up to two days to get a speed dial changed today is due to the fact the 911 service provider uses dial-up connections to make the configuration changes remotely. The Next Generation 911 system will be connected via high speed links for monitoring and maintenance.

While the physical footprint of the backroom equipment is similar to what the legacy system employs, there are far fewer servers in the equipment cabinet, resulting in fewer HVAC requirements, less power consumption, and less noise. In addition, the computer at each call-taking position in a PSAP is smaller than the current computer taking up less space in the console furniture. However, the larger liquid crystal display screens make it easier to see the data on the displays.

Finally, in the Next Generation 911 environment, reporting data, such as call volume, call answer time, and average busy hour, will be made available remotely and more timely than today in the legacy 911 environment. Currently, the Department must physically visit every one of the PSAPs to collect the reporting data. This process is time intensive, and sometimes involves multiple visits if subsequent information is needed.

There were several major Next Generation 911 accomplishments in calendar year 2015. The Next Generation 911 system designed by GDIT went through a "proof of concept" testing in the vendor's laboratory. After successful concept testing, the Next Generation 911 equipment was installed into two secure and high-availability data centers within Massachusetts, one in Andover and the other in Northborough. A Network Operations Center and Security Operation Centers have been "stood up", with backup centers in place in case of a catastrophic failure. GDIT hired employees to staff the Network and Security Operation Centers and field personnel to support the PSAPs.

In 2015, GDIT's subcontractor, Windstream, installed a high-availability network exclusively for the Commonwealth for the data centers, and installed this robust network for the PSAPs. Initial testing for routing 911 calls over satellite was completed, which is expected to provide another layer of redundancy for the larger PSAPs.

Reviewing and matching the legacy 911 database with a modern GIS database required substantial effort. The GIS data for all municipalities for road centerline matching was completed in 2015. In addition, the process for the carriers to update their records was implemented in 2015 and they have been trained on the new process.

Many technical and procedural documents have been developed by GDIT and the Department. Training materials for the PSAPs were substantially completed in 2015. Training on the Next Generation 911 system commenced for Department staff. A contract was signed for an external security firm to audit the Next Generation 911 system. This security firm scanned the system for vulnerabilities and attack vectors, which provided additional hardening of the Next Generation 911 system to strengthen the overall security posture of the new system. In 2015, PSAP site visits began for deployment of the Next Generation 911 system. These visits are designed to minimize cutover issues and to identify potential problems before deployment.

Service Provider Contract

In 2013, the Department successfully negotiated and procured a multiyear contract with Verizon to equip, install, monitor, maintain, and support the current enhanced 911 system throughout the Commonwealth. This contract was in place in 2015 and will remain in place for the current enhanced 911 system as the Department transitions the Commonwealth to the new Next Generation 911 system. The service provider for the new Next Generation 911 system is GDIT. Therefore, in 2015 and for a time period thereafter until the new Next Generation 911 system is fully deployed across the Commonwealth, there will be two contracts in place to ensure that the 911 system in the Commonwealth is fully supported during the transition.

Grant Program

Pursuant to Chapter 223 of the Acts of 2008, the Department expanded its grant program to support the PSAPs in the Commonwealth and to develop and encourage the creation of regional PSAPs and Regional Emergency Communication Centers (RECCs) throughout the Commonwealth. A description of each of these grant programs is contained below.

- PSAP and Regional Emergency Communication Center Training Grant: Reimburses primary, regional, and regional secondary PSAPs and RECCs for allowable expenses related to the training and certification of enhanced 911 telecommunicators. The amount of funds allocated to this grant is set by a percentage of the previous Fiscal Year revenues specified in Chapter 223, but such percentage may be adjusted with the approval of the State 911 Commission. Funds are then allocated to each PSAP based on 911 call volume and population, with a floor of $10,000 for this grant.

- Public Safety Answering Point and Regional Emergency Communication Center Support and Incentive Grant: Provides funding to primary, regional and regional secondary PSAPs and RECCs for allowable expenses related to enhanced 911 personnel and equipment costs. Incentive funds are awarded in addition to amounts allocated as part of the Support Grant using a formula that applies a specified percent of total surcharge revenues based on number of municipalities to be served by regional PSAPs or RECCs. The amount of funds allocated to this grant is set by a percentage of the previous Fiscal Year revenues specified in Chapter 223, but such percentage may be adjusted with the approval of the State 911 Commission. Funds are then allocated to each PSAP based on 911 call volume and population.

- Wireless State Police Public Safety Answering Point Grant: Reimburses wireless MSP PSAPs for allowable expenses related to enhanced 911 personnel and equipment costs. The amount of funds allocated to this grant is set by a percentage of the previous Fiscal Year revenues specified in Chapter 223, but such percentage may be adjusted with the approval of the State 911 Commission.

- Regional and Regional Secondary Public Safety Answering Point, and Regional Emergency Communication Center Development Grant: Supports the development and startup of regional PSAPs, regional secondary PSAPs and RECCs, including the expansion or upgrade of existing regional and regional secondary PSAPs, and RECCs, to maximize effective emergency 911 and dispatch services as well as regional interoperability. This is a competitive grant with the amount of funds allocated to the grant determined by the Department with State 911 Commission approval.

Chapter 223 permits the Department to introduce new grants associated with providing enhanced 911 services in the Commonwealth. In order to support the PSAPs in meeting new training requirements described below, the Department introduced a new grant in 2011, the Emergency Medical Dispatch (EMD) Grant. The EMD Grant was approved by the State 911 Commission, and then by the Department of Telecommunications and Cable by Order dated May 27, 2011, and was renamed the EMD/Regulatory Compliance Grant in 2013. The amount of funds allocated to this grant is determined by the Department with State 911 Commission approval.

The amount awarded to each grant in Fiscal Year 2015 is contained below.

	FY15
Training Grant	$4,778,783
EMD Grant	$2,070,000
Support & Incentive	$24,177,748
Wireless MSP	$3,933,000
Development	$8,000,000
Total	$42,959,531

Regionalization

Since the passage of Chapter 223 of the Acts of 2008 that established a grant program to encourage and incent regionalization of the PSAPs in the Commonwealth, 13 regional 911 centers have been added to the mix of PSAPs providing 911 services to the Commonwealth's municipalities. In total, there are a total of 24 regional 911 centers answering 911 calls for 136 municipalities across the Commonwealth. The Department continues with its efforts to provide more and better incentives to achieve further regionalization of the many PSAPs in Massachusetts to enhance public safety and maximize interoperability while at the same time achieving costs savings where possible.