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**OFFICE OF THE STATE AUDITOR'S
REPORT ON THE EXAMINATION OF
INFORMATION TECHNOLOGY CONTROLS
PERTAINING TO
BUSINESS CONTINUITY PLANNING FOR
THE MASSACHUSETTS COMMISSION
FOR THE DEAF AND HARD OF HEARING**

April 2, 2008 through November 18, 2008

**OFFICIAL AUDIT
REPORT
FEBRUARY 27, 2009**

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INTRODUCTION

The Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH) was established within the Executive Office of Health and Human Services in July of 1986 under Chapter 176, Acts of 1985 of the Massachusetts General Laws.

The Massachusetts Commission for the Deaf and Hard of Hearing is the principal agency in the Commonwealth on behalf of people of all ages who are deaf and hard of hearing, established by Massachusetts General Laws, Chapter 6 §191-197. All functions and services are carried out in order to enable deaf and hard of hearing individuals to have access to information, services, education, and opportunities which will be equal to those of able-bodied people who hear and which will enable each deaf and hard of hearing individual to live productively and independently while assuming fullest responsibilities as a citizen.

According to MCDHH's web site "To date, there are no definite statistics available on the exact number of deaf or hard of hearing individuals in the state. The information given by the Commission is an estimate, and should be used as such. In general the U.S. Department of Health and Human Services estimates that 8.6 percent of United States population 3 years and older (which varies widely by age) were reported to have hearing problems. This is a national average, but the figure can be applied, with reservation, to the Massachusetts population:"

Massachusetts Population 2000 3 years and older	Estimated # of deaf/ hard of hearing people	Percent of Population
6,349,097	546,022	8.6%

This Massachusetts Commission for the Deaf and Hard of Hearing (DHH) processes 25 to 30 thousand requests per year for sign language interpreter services, provided by 250 vendors, requiring 260 interpreters. The Commission also provides a 24 x 7 x 365 hotline service, including vendor-operated functions during off-hours, weekends and emergencies.

AUDIT SCOPE, OBJECTIVES, AND METHODOLOGY

Audit Scope

In accordance with Chapter 11, Section 12, of the Massachusetts General Laws, from April 2, 2008 through November 18, 2008, we performed an audit of selected information technology (IT) related controls regarding disaster recovery and business continuity planning at the Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH) for the audit period of April 2, 2008 through November 18, 2008. The scope of our audit was to assess the extent to which MCDHH had addressed business continuity planning for business operations supported by technology and had in place adequate on-site and off-site storage of backup copies of magnetic media. Our audit included an assessment of the agency's capabilities to restore critical applications and related business processes and efforts to partner with the Information Technology Division's (ITD) for business continuity support.

Audit Objectives

We sought to evaluate whether an effective business continuity plan had been developed and that adequate resources would be available to provide reasonable assurance that mission-critical and essential business operations would be efficiently recovered should IT operations be rendered inoperable or inaccessible for an extended period of time. We determined whether the business continuity plan had been tested and reviewed and approved to provide reasonable assurance of the plan's viability. In this regard, our objective was to also assess whether backup copies of electronic application systems and data files were being generated and stored at secure on-site and off-site locations.

Because MCDHH is dependent upon ITD's Massachusetts Information Technology Center (MITC) for application systems that support budgetary and human resources functions, we sought to determine whether MCDHH and ITD had collaborated on identifying IT recovery requirements and had developed appropriate business continuity plans. We sought to identify the degree of assistance provided by ITD to help MCDHH develop viable business continuity plans and to provide alternate processing and backup storage facilities and recovery plans to ensure timely restoration of MCDHH's data files and systems supported by MITC.

Audit Methodology

To determine the audit scope and objective, we conducted pre-audit work that included obtaining and recording an understanding of relevant operations, performing a preliminary review and documentation concerning business contingency and disaster recovery planning at MCDHH. Upon completion of our pre-audit work, we determined the scope and objectives of the audit.

We interviewed senior management to obtain an understanding of their internal control environment, primary business functions, and stated controls. We obtained an understanding of the Department's mission-critical functions and application systems by requesting, obtaining and reviewing agency documentation as well as interviewing business process owners for Contingency Planning and IT staff, which support IT functions for the agency. Documentation was requested but not limited to the agency's plans for the continuation of agency operations, such as Continuity of Operations Plans (COOPs), Continuation of Government (COG), Business Continuity Plans (BCP), and Disaster Recovery Plans (DRP). We also interviewed ITD staff who were assigned business continuity planning responsibilities to determine the extent of DRP/BCP services provided to the MCDHH. In addition, we determined whether MCDHH was in compliance with Governor Patrick's Executive Order No. 490 issued September 26, 2007.

Our audit was conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS) issued by the Comptroller General of the United States and generally accepted industry practices. Audit criteria used in the audit included Executive Orders 144, 475, and 490; management policies and procedures, and control guidelines outlined in Control Objectives for Information and Related Technology (CobiT version 4.1), as issued by the Information Systems Audit and Control Association, July 2007.

AUDIT CONCLUSION

Regarding disaster recovery and business continuity planning at the Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH), we determined that although documentation of the strategies for recovering information technology (IT) capabilities under MCDHH's charge needed to be strengthened, there is a reasonable likelihood that MCDHH would be able to resume mission-critical business operations, but possibly not within an acceptable time period. We determined that although MCDHH had established a disaster recovery and business continuity framework with documented roles and responsibilities, the Department could experience delays given that disaster recovery plans (DRP) for IT resources needed to be more detailed.

We found that MCDHH has a continuity of operations and government plan containing multiple characteristics of disaster recovery and business continuity planning. However, the Commission does not presently have an updated approved or tested formal DRP or a current BCP. Because of this, MCDHH is not in compliance with Executive Order No. 490, which requires annual documented training and testing exercises of all approved recovery plans.

MCDHH could reduce the risk of failing to resume business functions supported by technology under their charge by developing more comprehensive recovery plans, ensuring that all staff having recovery responsibilities are adequately trained, designating an alternative processing site for central office operations, and approving disaster recovery and business continuity plans. After reviewing the Commission's BCP, we found it to be very high level, lacking detailed procedures for carrying on its mission in the event IT resources were rendered inoperable or unavailable. As part of business continuity planning, a DRP should be developed detailing procedures for the restoration of IT resources in a timely manner should a disaster occur. In addition, disaster recovery and business continuity plans need to be effectively tested annually to insure continued viability. The test exercises and results should also be documented to help strengthen future plans.

Regarding on-site and off-site backup procedures, MCDHH performs weekly and daily backups. Weekly backups are stored at the Commission's regional office in Springfield and are rotated every three weeks. MCDHH has successfully restored processing capabilities using the backup tapes during disaster recovery testing. At the time of our audit, MCDHH's BCP was undergoing an update to reflect changes stemming from new backup processes and a new off-site storage facility at the Department of Mental Retardation's backup processing site located in Wrentham.

AUDIT RESULTS

Business Continuity Planning

Our audit revealed that although the Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH) has a high level Continuity of Operations Plan (COOP), a Continuity of Government (COG) and a Disaster Recovery Plan in place, MCDHH does not presently have an updated approved and implemented Business Continuity Plan (BCP). A comprehensive strategic BCP needs to be developed and documented and should include detailed user area plans for the continuation of mission critical applications in the event a major disaster rendered IT resources inaccessible or unavailable. In addition, MCDHH's disaster recovery plan needs to be strengthened with more detailed recovery processes to ensure timely restoration of MCDHH's systems, and other applications residing at the Massachusetts Information Technology Center (MITC).

MCDHH is totally reliant on ITD's Massachusetts Information Technology Center for standard service via MAGNet including the Human Resources Compensation Management Systems (HRCMS), the Massachusetts Management Accounting and Reporting System (MMARS), virtual gateway, and MassMail. There are three critical/essential functions at MCDHH: emergency interpreter (CART) referral service; first responder communication access training and technology services (CATTs); technical assistance to provide vital information to providers, independent living services, information services, and protective locations during emergencies.

The server room at MCDHH is 120 square feet in size, houses four servers which includes an IRIS database application; case management database; file/print and net storage, for disc-to-disc and disc-to-tapes backups using EMC's Retrospect application. The server room has a dedicated air conditioner and an UPS system but does not have a backup generator.

MCDHH has manual procedures to be implemented in the event of an emergency, or disruption, to normal production services. Their current Business Continuity Plan (BCP) is undergoing a review and rewrite to reflect changes, stemming from new EMC Corporation backup processes and a new off-site storage facility at DMR's Wrentham, Mass. site. The new BCP is expected to be completed by the end of April 2009.

Backups including electronic verification are performed daily and weekly. The backup process includes RAID storage technology of 1.4 terabytes, and an NAS device of 1.8 terabytes to provide sufficient storage capacity. Weekly backups are currently stored at the Commission's Springfield area office. These backups are tri-cycled. In the near future, MCDHH will have the capability to store off-site backups at DMR's backup facility in Wrentham with a DMR courier providing delivery and pickup services. Backup tapes have successfully been used during testing of BCP exercises.

MCDHH's alternative processing site is the Commission's Springfield area office. The objective of MCDHH is to provide recovery to a loss of systems of less than 48 hours. Manual processes are implemented and continue as a work-around in the event of a MITC emergency and a severe crisis level will result should MCDHH access be unavailable to MITC for 5-7 days.

The Springfield site has sufficient space to house designated recovery personnel to procure, establish and recover computer systems, workstations, etc. Critical MCDHH personnel have remote access to this alternate processing site (VPN). This site is tested annually.

State agencies have been required to perform and document their planning efforts for the continuity of operations and government per executive orders of the governor. Between 1978 and 2007, Governors Dukakis, Romney, and Patrick issued three separate executive orders (see Appendices I, II, and III) requiring agencies of the Commonwealth to develop plans for the continuation of government services. In 1978, Executive Order No. 144 mandated that the head of each agency within the Commonwealth to "make appropriate plans for the protection of its personnel, equipment and supplies (including records and documents) against the effects of enemy attack or natural disaster, and for maintaining or providing services appropriate to the agency which maybe required on an emergency basis." In 2007 Executive Order No. 475 mandated that "Each secretariat and agency shall conduct activities on a quarterly basis that support the implementation of its Continuity of Government and Continuity of Operations plans and shall submit a quarterly report..." and "...Each secretariat and agency shall regularly, and in no event less than once per calendar year, conduct trainings and exercises to put into practice... Continuity of Operations plan" In September 2007 Executive Order No. 490 mandated "Whereas, to achieve a maximum state of readiness, these plans should be incorporated into the daily operations of every secretariat and agency in the executive department, and should be reviewed on a regular basis and, with respect to agencies supplying services critical in times of emergency, exercised regularly; In addition, each critical secretariat and agency shall submit an annual report to the Executive Office of Public Safety and Security."

Business continuity plans should be tested to validate their viability and to reduce both the risk of errors and omissions as well as the time needed to restore computer operations. In addition, an effective recovery plan should provide specific instructions for various courses of action to address different types of disaster scenarios that would render IT systems inoperable. Specifically, the plan should identify how essential services would be provided for each scenario without the full use of the data processing facility, and the manner and order in which processing resources would be restored or replaced. Furthermore, the plan should identify the policies and procedures to be followed, including details of the logical order for restoring critical data processing functions, either at the original site or at an alternate site. The plan would also identify and explain the tasks and responsibilities necessary to transfer and safeguard backup

magnetic copies of data files, program software, and system documentation from off-site storage to the site being used for restoration efforts.

Sound management practices, as well as industry and government standards, support the need for comprehensive and effective backup procedures and business continuity plans for organizations that depend on technology for information processing. Contingency planning should be viewed as a process to be incorporated within an organization, rather than as a project completed upon the drafting of a formal documented plan. Since the criticality of systems may change, a process should be in place that will identify a change in criticality and amend the contingency plans accordingly. System modifications, to IT equipment configurations, and user requirements should be assessed in terms of their impact to existing business continuity plans. (See Appendix IV for other criteria.)

Recommendation

We recommend that the Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH) strengthen its business continuity process by developing and maintaining appropriate updated recovery strategies to regain mission-critical and essential processing within acceptable time periods. We also recommend that MCDHH also develop and test in conjunction with ITD a more comprehensive and formal business continuity plan that incorporates a disaster recovery plan. MCDHH needs to ensure that the business continuity plan documents recovery strategies with respect to various disaster scenarios, and contains all pertinent information needed to effectively and efficiently recover critical operations within the needed time frames. In addition, MCDHH should develop user area plans to document contingencies and the steps to be followed to continue business operations to the extent possible should IT resources be unavailable. We recommend that all recovery and continuity planning documents should be available in hardcopy and electronic media and should be stored off-site in secure and accessible locations. As part of disaster recovery planning, MCDHH should test the viability of their alternate processing site. After the plan has been tested, MCDHH should document the results of the test and evaluate the scope and results of the tests performed.

MCDHH should specify the assigned responsibilities for maintaining the plans and supervising the implementation of the tasks documented in the plans. MCDHH should specify who should be trained in the implementation and execution of the plans under all emergency conditions and who will perform each required task to fully implement the plans. Furthermore, the completed business continuity and user area plans should be distributed to all appropriate staff members. We recommend that MCDHH's IT personnel be trained in their responsibilities for recovering business operations in the event of an emergency or disaster, including training on manual procedures to be used when processing is delayed for an extended period of time.

In conjunction with ITD, MCDHH should establish procedures to ensure that the criticality of systems is evaluated, business continuity requirements are assessed on an annual basis, or upon major changes to user requirements or the automated systems, and appropriate business continuity plans are developed for the applications residing on MCDHH's regional servers, and the servers at MITC. As part of business continuity planning, MCDHH should incorporate a strategy in which the Commission collaborates with the Division of Capital Asset Management in the event that an additional alternate processing site is needed to ensure the continuity of operations.

We recommend that the Commission follow Executive Order No. 490 for continuity of operations and business continuity planning. Included in this executive order are requirements for each secretariat and agency to conduct activities to support their continuity of government and continuity of operations plans. The executive order also requires agencies to conduct training and submit an annual report on the detailed plans to the Executive Office of Public Safety and Security. We also recommend that MCDHH coordinate with ITD on disaster recovery and business continuity planning.

Auditee Response:

MCDHH agrees with the auditor's conclusions and recommendations in regards to its Business continuity processes and Disaster recovery procedures. MCDHH will be taking the following actions to insure compliance with those recommendations and those stated in Executive Order 490:

Utilizing the resources available to us through the Executive Office of Health and Human Services Information Technology Department we will work with area offices to develop and test alternative operational facilities.

Establish more detailed BCP and Disaster recovery plans and verify those plans by testing.

Educate staff in the proper procedures and execution of BCP and Disaster Recovery Plans and their various situational instances.

Work closely with ITD to insure that these procedures are in accordance with Commonwealth standards.

MCDHH will develop plans and procedures to comply with these recommendations no later than March 31, 2009.

Auditor's Reply

We acknowledge that Massachusetts Commission for the Deaf and Hard of Hearing is taking steps to strengthen disaster recovery procedures and address business continuity requirements. In that regard, it is important that the Commission conduct an adequate business impact analysis for its IT-enabled business processes. Business continuity planning and disaster recovery efforts on the part of the Commission in coordination with the Information Technology Division will strengthen the planning process and avoid duplicate efforts.

COMMONWEALTH OF MASSACHUSETTS

By His Excellency

MICHAEL S. DUKAKIS

Governor

EXECUTIVE ORDER NO. 144

(Revoking and superseding Executive Order No. 25)

WHEREAS, it is the responsibility of the Commonwealth of Massachusetts to preserve the health and welfare of its citizens in the event of emergencies or disasters by insuring the effective deployment of services and resources; and

WHEREAS, such emergencies or disasters may result from enemy attack or by riot or other civil disturbances, or from earthquakes, hurricanes, tornados, floods, fires, and other natural causes; and

WHEREAS, the experience of recent years suggests the inevitability of natural disasters and the increasing capability of potential enemies of the United States to attack this Commonwealth and the United States in greater and ever-growing force; and

WHEREAS, the effects of such emergencies or disasters may be mitigated by effective planning and operations:

NOW, THEREFORE, I, Michael S. Dukakis, Governor of the Commonwealth, acting under the provisions of the Acts of 1950, Chapter 639, and in particular, Sections 4, 8, 16 and 20 thereof, as amended, and all other authority conferred upon me by law, do hereby issue this Order as a necessary preparatory step in advance of actual disaster or catastrophe and as part of the comprehensive plan and program for the Civil Defense of the Commonwealth.

1. The Secretary of Public Safety, through the State Civil Defense Director, shall act as State Coordinating Officer in the event of emergencies and natural disasters and shall be responsible for the coordination for all activities undertaken by the Commonwealth and its political subdivisions in response to the threat or occurrence of emergencies or natural disasters.

2. This coordination shall be carried out through and with the assistance of the Massachusetts Civil Defense Agency and Office of Emergency Preparedness, as provided under the Acts of 1950, Chapter 639, as amended.

3. Each secretariat, independent division, board, commission and authority of the Government of the Commonwealth (hereinafter referred to as agencies) shall make appropriate plans for the protection of its personnel, equipment and supplies (including records and documents) against the effects of enemy

attack or natural disaster, and for maintaining or providing services appropriate to the agency which maybe required on an emergency basis.

Each agency shall make appropriate plans for carrying out such emergency responsibilities as may be assigned in this Order or by subsequent Order of the Governor and for rendering such additional emergency assistance as the Secretary of Public Safety and the Civil Defense Agency and Office of Emergency Preparedness may require.

4. The responsibility for such planning shall rest with the head of each agency, provided that such agency head may designate a competent person in the service of the agency to be and act as the Emergency Planning Officer of the Agency. It shall be the function of said Emergency Planning Officer to supervise and coordinate such planning by the agency, subject to the direction and control of the head of the agency, and in cooperation with the Secretary of Public Safety and the State Civil Defense Agency and Office of Emergency Preparedness.

5. Each agency designated as an Emergency Response Agency by the Director of Civil Defense shall assign a minimum of two persons to act as liaison officers between such agency and the Civil Defense Agency and Office of Emergency Preparedness for the purpose of coordinating resources, training, and operations within such agency.

To the extent that training and operational requirements dictate, the liaison officer shall be under the direction and authority of the State Civil Defense Director for such periods as may be required.

6. A Comprehensive Emergency Response Plan for the Commonwealth shall be promulgated and issued and shall constitute official guidance for operations for all agencies and political subdivisions of the Commonwealth in the event of an emergency or natural disaster.

Given at the Executive Chamber in Boston this 27th day of September in the Year of Our Lord, one thousand nine hundred and seventy-eight, and of the independence of the United States, the two hundredth and third.

MICHAEL S. DUKAKIS

Governor

Commonwealth of Massachusetts

PAUL GUZZI

Secretary of the Commonwealth

GOD SAVE THE COMMONWEALTH OF MASSACHUSETTS



MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
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BY HIS EXCELLENCY

MITT ROMNEY
GOVERNOR

EXECUTIVE ORDER NO. 475

**Mandating Continuity of Government and Continuity of Operations Exercises
within the Executive Department**

WHEREAS, the security of the Commonwealth is dependent upon our ability to ensure continuity of government in the event of a terrorist attack, natural disaster, or other emergency;

WHEREAS, effective preparedness planning requires the identification of functions that must be performed during such an emergency, the assignment of responsibility for developing plans for performing those functions, and the assignment of responsibility for developing the capability to implement those plans;

WHEREAS, to accomplish these aims, the Governor directed each secretariat within the executive department to develop a Continuity of Government Plan identifying an official line of succession for vital positions; prioritizing essential functions which should continue under all circumstances; designating an alternate command site; and establishing procedures for safeguarding personnel and resources;

WHEREAS, the Governor also directed each secretariat and agency within the executive department to develop a Continuity of Operations Plan establishing emergency operating procedures; delegating specific emergency authority to key personnel; establishing reliable, interoperable communications; and providing for the safekeeping of critical systems, records, and databases;

WHEREAS, one hundred and two Continuity of Government and Continuity of Operations plans have been developed by the Office of the Governor and every secretariat and agency within the executive department;

WHEREAS, these Continuity of Government and Continuity of Operations plans have been submitted to and remain on file with the Massachusetts Emergency Management Agency and are ready to be put into operation in the event of a terrorist attack, natural disaster, or other emergency;

WHEREAS, to achieve a maximum state of readiness, these plans have been incorporated into the daily operations of every secretariat and agency in the executive department;

WHEREAS, each executive department agency with critical functions has exercised its Continuity of Operations plan and tested its alert and notification procedures, emergency operating procedures, and the interoperability of communications and information systems; and

WHEREAS, each secretariat has exercised its Continuity of Government plan, and tested its ability to prioritize and deliver essential functions, operate at an alternate facility, and implement succession plans and delegations of authority in an emergency; and

WHEREAS, these regular exercises will continue to ensure that vulnerabilities in the Continuity of Government and Continuity of Operations plans are identified, reviewed, and corrected, and will help to secure an effective response by each secretariat and agency in the event of a terrorist attack, natural disaster, or other emergency;

NOW, THEREFORE, I, Mitt Romney, Governor of the Commonwealth of Massachusetts, by virtue of the authority vested in me as Supreme Executive Magistrate, do hereby order as follows:

Section 1: Each secretariat and agency within the executive department shall continue to consider emergency preparedness functions in the conduct of its regular operations, particularly those functions which would be essential in a time of emergency.

Section 2: Each secretariat within the executive department shall conduct activities on a quarterly basis that support the implementation of its Continuity of Government and Continuity of Operations plans and shall submit a quarterly report to the Executive Office of Public Safety detailing the actions taken to implement these plans.

Section 3: Each agency within the executive department shall conduct activities on a quarterly basis that support the implementation of its Continuity of Operations plan and shall submit a quarterly report to the Executive Office of Public Safety detailing the actions taken to implement such plan.

Section 4: Each secretariat within the executive department shall regularly, and in no event less than once per calendar year, conduct trainings and exercises to put into practice its submitted Continuity of Government and Continuity of Operations plans.

Section 5: Each agency within the executive department shall regularly, and in no event less than once per calendar year, conduct trainings and exercises to put into practice its submitted Continuity of Operations plan.

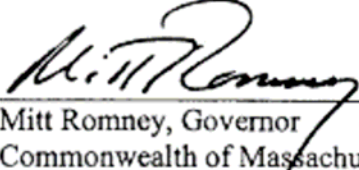
Section 6: These trainings and exercises shall be designed to simulate emergency situations which may arise, and shall be designed to test the effectiveness of the various components of the Continuity of Government and Continuity of Operations plans. These exercises must, at a minimum, include transfer of command functions to an emergency relocation site and the use of emergency communication systems.

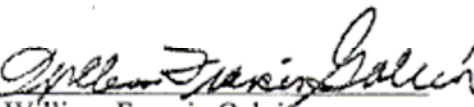
Section 7: Each secretariat within the executive department shall incorporate findings from these trainings and exercises into its Continuity of Government and Continuity of Operations plans, and based on these findings, shall regularly, and in no event less than once per calendar year, update these plans. Likewise, each agency within the executive department shall incorporate findings from these trainings and exercises into its Continuity of Operations plan, and based on these findings, shall regularly, and in no event less than once per calendar year, update its Continuity of Operations plan. These plans shall be submitted to and remain on file with the Massachusetts Emergency Management Agency. In addition, the Executive Office for Administration and Finance shall submit a quarterly report to the Executive Office of Public Safety on the status of its review of executive department communication and information systems.

Section 8: The Executive Office of Public Safety shall submit an annual report to the Office of the Governor regarding the status of the Continuity of Government plan of each secretariat within the executive department, and the status of the Continuity of Operations plan of each secretariat and agency within the executive department.



Given at the Executive Chamber in Boston this 3rd day of January in the year of our Lord two thousand and seven and of the Independence of the United States, two hundred and thirty.


Mitt Romney, Governor
Commonwealth of Massachusetts


William Francis Galvin
Secretary of the Commonwealth

GOD SAVE THE COMMONWEALTH OF MASSACHUSETTS



DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

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By His Excellency

DEVAL L. PATRICK
GOVERNOR

EXECUTIVE ORDER NO. 490

**Mandating Preparation, Review, Updating, and
Electronic Management of Continuity of Government and
Continuity of Operations Plans**

Revoking and Superseding Executive Order No. 475

WHEREAS, the security and well-being of the people of the Commonwealth depend on our ability to ensure continuity of government;

WHEREAS, effective preparedness planning requires the identification of functions that must be performed during an emergency and the assignment of responsibility for developing and implementing plans for performing those functions;

WHEREAS, to accomplish these aims each secretariat within the executive department was directed to develop a Continuity of Government plan identifying an official line of succession for vital positions, prioritizing essential functions, designating alternate command sites, and establishing procedures for safeguarding personnel and resources; and each secretariat and agency within the executive department was directed to develop a Continuity of Operations Plan establishing emergency operating procedures, delegating specific emergency authority to key personnel, establishing reliable, interoperable communications, and providing for the safekeeping of critical systems, records, and databases;

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WHEREAS, Continuity of Government and Continuity of Operations plans have been developed by the Office of the Governor and every secretariat and agency within the executive department and all one hundred and two of these plans are currently stored in paper form at the Massachusetts Emergency Management Agency;

WHEREAS, to achieve a maximum state of readiness, these plans should be incorporated into the daily operations of every secretariat and agency in the executive department, and should be reviewed on a regular basis and, with respect to agencies supplying services critical in times of emergency, exercised regularly;

WHEREAS, to allow greater access to these plans, ensure their security and sustainability, and encourage more active participation and review by the secretariats and agencies, they should be maintained on a secure online database; and

WHEREAS, the Executive Office of Public Safety and Security and Massachusetts Emergency Management Agency are collaborating with the Information Technology Department to develop an online tool and database to maintain these Continuity of Government and Continuity of Operations plans;

NOW, THEREFORE, I, Deval L. Patrick, Governor of the Commonwealth of Massachusetts, by virtue of the authority vested in me by the Constitution, Part 2, c. 2, § 1, Art. I, do hereby revoke Executive Order 475 and order as follows:

Section 1. Each secretariat and agency within the executive department shall continue to consider emergency preparedness functions in the conduct of its regular operations, particularly those functions which would be critical in a time of emergency.

Section 2. The Secretary of Public Safety and Security (hereinafter, "the Secretary"), in his discretion, shall designate secretariats and agencies as either critical or non-critical for the purpose of determining the detail, frequency of submission, and testing of Continuity of Government and Continuity of Operations plans.

Section 3. The Secretary shall notify all secretariats and agencies of the completion of the online Continuity of Operation / Continuity of Government tool and database (hereinafter, "the online tool"). Within 120 days of notification of completion of the online tool, each secretariat and agency shall submit, via the online tool, the appropriate Continuity of Government plan and/or Continuity of Operations plan based upon its critical or non-critical designation.

Section 4. If the Secretary designates a secretariat or agency as critical, then that secretariat or agency shall regularly, and in no event less than once per calendar year, conduct trainings and exercises to put into practice its submitted Continuity of Government and Continuity of Operations plans.

Section 5. These trainings and exercises shall be designed to simulate emergency situations which may arise, and shall be designed to test the effectiveness of the various components of the Continuity of Government and Continuity of Operations plans. These exercises must, at a minimum, include transfer of command functions to an emergency relocation site and the use of emergency communication systems.

Section 6. Each designated critical secretariat within the executive department shall incorporate findings from these trainings and exercises into its Continuity of Government and Continuity of Operations plans, and based on these findings, shall regularly, and in no event less than once per calendar year, update these plans using the online tool. Likewise, each designated critical agency within the executive department shall incorporate findings from these trainings and exercises into its Continuity of Operations plan, and based on these findings, shall regularly, and in no event less than once per calendar year, update its Continuity of Operations plan using the online tool. In addition, each critical secretariat and agency shall submit an annual report to the Executive Office of Public Safety and Security detailing the trainings and exercises conducted and the actions taken to incorporate the findings of such trainings and exercises into updated Continuity of Government and Continuity of Operations plans.

Section 7. Each non-critical agency within the executive department shall conduct activities on an annual basis that support the implementation of its Continuity of Operations plan, including but not limited to ensuring that the plan is current and viable, and shall regularly, and in no event less than once per calendar year, update these plans using the online tool. In addition, each non-critical agency shall submit an annual report to the Executive Office of Public Safety and Security detailing the actions taken to implement such plan.

Section 8. The Executive Office of Public Safety and Security shall submit an annual report to the Office of the Governor regarding the status of the Continuity of Government plan of each secretariat within the executive department, and the status of the Continuity of Operations plan of each secretariat and agency within the executive department.

Section 9. This Executive Office shall continue in effect until amended, superseded, or revoked by subsequent Executive Order.



Given at the Executive Chamber in Boston this 26th day of September in the year of our Lord two thousand and seven, and of the Independence of the United States of America two hundred and thirty-one.

A handwritten signature in black ink, appearing to read "Deval Patrick", written over a horizontal line.

DEVAL L. PATRICK
GOVERNOR
Commonwealth of Massachusetts

A handwritten signature in black ink, appearing to read "William Francis Galvin", written over a horizontal line.

WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

GOD SAVE THE COMMONWEALTH OF MASSACHUSETTS

Continuity Planning Criteria

The goal of this document is to provide a guideline for planning and establishing a business continuity process to ensure necessary steps are taken to identify the impact of potential losses, maintain viable recovery strategies and plans, and ensure continuity of products/services through exercises, rehearsals, tests, training, and maintenance.

Continuity planning efforts will determine an organization's business readiness to recover from an emergency or interruption to normal business processing. These efforts require the creation and maintenance of a documented Business Continuity Plan (BCP) to ensure effective and efficient recovery and restoration of business functions or services – including paper documents, electronic data, technology components, and telecommunications recovery. The BCP must detail all processes, procedures, activities and responsibilities executed during a disaster, or emergency, or an interruption to the organization's products or services.

Our evaluation criteria is a compilation of the above Standards, Guidelines and Objectives developed by the following recognized organizations:

- Contingency Planning & Management (CP&M - National Organization)
<http://www.contingencyplanning.com/>
- DRII Disaster Recovery Institute International (DRII - International Organization)
<http://www.drii.org/DRII>
- IT Governance Institutes' Control Objectives for Information [related] Technology (COBIT); Control Objectives Document, Delivery & Support Section (DS4).
- Department of Homeland Security - Continuity Of Operations Project Guidance documents (COOP).
- [Presidential Decision Directive-67](#) (requires all Federal agencies to have viable COOP capabilities) and Comm. Of Mass. Executive Order No. [144](#) from Governor Michael S. Dukakis in 1978 (requires all state agencies to prepare for emergencies/disasters, and to provide liaisons to Massachusetts Emergency Management Agency for coordinating resources, training, testing and operations), and
- Comm. Of Mass. Executive Order No [475](#) from Governor Mitt Romney in 2007, and
- Comm. Of Mass. Executive Order No [490](#) from Governor Deval L. Patrick in 2007.

Our criteria is summarized in the following items:

1. Creation of a Business Continuity Plan and Business Continuity Team, comprised of a Business Continuity Manager (BCM), and alternate, for managing the Continuity Program (creation, modifications, updates, test exercises, etc.); Team Leaders, and alternates (from each business unit) to coordinate all continuity aspects for their particular areas of business.
2. Awareness Continuity Training should be given to all employees (minimum of twice annually).
3. Identification and prioritization of all critical/essential business functions (called Risk Analysis, and Business Impact Analysis). A Risk Analysis assigns a criticality level. A Business Impact Analysis identifies the Recovery Time Objective (RTO) - when the applications/systems restoration is needed - most important for critical/essential functions. Analyses should be documented within the BCP. Executive Management must review and sign-off on: analyses, BCP, and test exercise results.

4. Off-site Storage Program - protection of critical data, materials, or media. Document location address and contact name (during business and off hours). Identify authorized individual(s) to retrieve offsite data. Offsite access procedures.
5. Identify all resources to support critical business functions, alternate site, technology, software, applications, data, personnel, access, transportation, and vendors needed. Workload swaps, split operations, work at home, employee family (need) services.
6. Name(s) authorize to declare a disaster and execution of BCP, and establish. Command Center, Assembly/Holding Areas, Fire/Police/Rescue notification, Site Emergency Personnel (Fire Marshals, security, building evacuations, EMT).
7. Notification Lists and Procedures (employees, legal, Pub. Relations, support groups, vendors, clients).
8. Establish a strategy for communicating with all affected parties (release of approved and timely information, Senior manager, Officer-in-charge, Media, and company representative).
9. Document a plan for coordinating with interdependent departments (SLA).
10. Implement a plan to recover and restore agency's functions (for RTO, RPO) – at least, yearly test exercises.
11. Document a plan for reestablishing normal business operations (back to original site).