



The Commonwealth of Massachusetts

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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 DIVISION OF HEALTH CARE FINANCE AND POLICY**

June 13, 2008 through February 20, 2009

**OFFICIAL AUDIT
REPORT
MAY 27, 2009**

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INTRODUCTION

The Division of Health Care Finance and Policy (DHCFP), under Chapter 118G, Section 18 of the Massachusetts General Laws, administers the Uncompensated Care Pool (UCP) within the Uncompensated Care Trust Fund. DHCFP works to improve the delivery and financing of health care by collecting, analyzing, and disseminating information about the health care delivery system, setting rates of payment for long-term care facilities, health centers and clinics, home health agencies, independent practitioners, and other health care providers, administering the Health Safety Net application, and overseeing the Qualifying Student Health Insurance Program. The Division's mission statement states:

“The mission of the Division is to improve the delivery and financing of health care by providing information, developing policies, and promoting efficiencies that benefit the people of Massachusetts. The goals of the division are to assure the availability of relevant health care delivery system data to meet the needs of health care purchasers, providers, consumers, and policy-makers, advise and inform decision-makers in the development of health care policies, develop health care pricing policies that support the cost-effective procurement of high-quality services for public beneficiaries, and improve access to health care for low-income uninsured and underinsured residents.”

DHCFP's server room is located at 2 Boylston Street in Boston. The server room is approximately 600 square feet and has one file and print server that contains 30 virtualized servers. Located on the 30 virtualized servers, DHCFP collects, stores, and analyzes health care data (including Health Safety Net claims) using over 25 SQL database applications, the analytical application SAS, the Access application, as well as the Cognos application. In addition, DHCFP's Adabase mainframe application and the MA-21 application are located at the Massachusetts Information Technology Center (MITC) in Chelsea. DHCFP also relies on MITC for access to the Massachusetts Management Accounting and Reporting System (MMARS), MassMail, and the state's wide area network MAGNet.

AUDIT SCOPE, OBJECTIVES, AND METHODOLOGY

Audit Scope

In accordance with Chapter 11, Section 12, of the Massachusetts General Laws, from June 2, 2008 through February 20, 2009 we performed an audit of selected information technology (IT) related controls regarding disaster recovery and business continuity planning at the Division of Health Care Finance and Policy (DHCFP) for the audit period of June 13, 2008 through February 20, 2009. The scope of our audit was to assess the extent to which DHCFP 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 DHCFP 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 DHCFP 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 DHCFP develop viable business continuity plans and to provide alternate processing and backup storage facilities and recovery plans to ensure timely restoration of DHCFP'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 DHCFP. 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 Division'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 that was assigned business continuity planning responsibilities to determine the extent of DRP/BCP services provided to the DHCFP. In addition, we determined whether DHCFP 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 Division of Health Care Finance and Policy (DHC FP), we determined that although documentation of the strategies for recovering information technology (IT) capabilities under DHC FP's charge needed to be strengthened, there is a reasonable likelihood that DHC FP would be able to resume mission-critical business operations, but possibly not within an acceptable time period. We determined that although DHC FP had established a disaster recovery and business continuity framework with documented roles and responsibilities, the Division could experience delays given that disaster recovery and business continuity plans for IT resources need to be more detailed.

We believe that DHC FP could reduce the risk of failing to resume business functions supported by technology within an acceptable time period by developing and approving more comprehensive recovery plans and ensuring that all staff members having recovery responsibilities are adequately trained. We found that DHC FP's continuity of operations and government plans contained multiple characteristics of disaster recovery and business continuity planning, however DHC FP does not presently have an approved or tested formal disaster recovery or business continuity plan. Because of this, DHC FP is not in compliance with Executive Order No. 490, which requires annual documented training and test exercises of all approved recovery plans.

Regarding backup processing, DHC FP keeps backup copies of applications and data files on 12 media tapes at the vendor facility, Iron Mountain, in Burlington. The tapes are sent weekly to Iron Mountain and retained for three years. DHC FP has successfully restored processing capabilities using the backup tapes.

DHC FP's Adabase mainframe application and MA-21 application are located at the Massachusetts Information Technology Center (MITC) in Chelsea. DHC FP also relies on MITC for access to the Massachusetts Management Accounting and Reporting System (MMARS), MassMail, and the state's wide area network MAGNet. Adabase is the only application to have undergone a successful backup and recovery test at the out-of-state vendor facility, Sungard.

In regards to MITC, ITD performs an annual disaster recovery test at the out-of-state vendor-supported SunGard facility in New Jersey, however the recovery testing is limited to only a portion of the application systems supported at the center. In addition, the state does not have an alternate state-owned processing and backup facility for the systems operated at MITC. At the time of our audit, ITD was in the process of attempting to establish a second data center as an alternate site in western Massachusetts, which would greatly benefit the agencies under the Executive Office of Health and Human Services, including DHC FP.

AUDIT RESULTS

Business Continuity Planning

We determined that the Division of Health Care Finance and Policy (DHCFP) had a high-level continuity of operations plan (COOP) and a continuity of government plan (COG) containing multiple elements of business continuity and disaster recovery planning. However, DHCFP did not have a formal documented business continuity plan (BCP) or disaster recovery plan (DRP). Planning for a disaster can have many steps or phases in order to minimize the impact on clients. A COOP is a high level documented strategy for executives planning agency continuation of operations. A BCP is more detailed and should encompass a disaster recovery plan and user area plans. DHCFP should work with the Information Technology Division (ITD) to develop a formal approved documented Business Continuity Plan and Disaster Recovery Plan that is tested at least annually.

DHCFP's server room is located at 2 Boylston Street in Boston. The server room is approximately 600 square feet and has one file and print server that contains 30 virtualized servers. We found that the server room had appropriate environmental protection controls in place, such as fire detection and suppression equipment, backup air conditioning for temperature control, and a backup generator and uninterruptible power supply (UPS). We also found physical security controls to be generally adequate.

DHCFP's Adabase mainframe application and MA-21 application are located at the Massachusetts Information Technology Center (MITC) in Chelsea while the Safety Net application resides at 2 Boylston Street, Boston. If a disaster were to occur, the Division would be impacted after a 24-hour period. The MA-21 application could impact approximately 400,000 patients while Safety Net could impact approximately 200,000 users. In addition, hospital payments could be affected if the disaster were to occur in the first half of the month. Adabase is the only application to have undergone a successful backup and recovery test at the out-of-state vendor facility, Sungard.

In regards to backup processing, DHCFP keeps backup copies of applications and data files on 12 media tapes at the vendor facility, Iron Mountain, in Burlington. The tapes are sent weekly to Iron Mountain and retained for three years. DHCFP has successfully restored processing capabilities using the backup tapes.

At the time of our audit, DHCFP was in the process of working with ITD to develop a disaster recovery and business continuity plan. There was a backup plan in place to have employees work from home via VPN access should a disaster occur, however the plan is not a formal certified document. In addition to the recovery plans, DHCFP and ITD were working to develop a backup and alternate processing site.

As of February 20, 2009 an arrangement had been made with MITC to hotel certain servers for the purpose of backup of DHCFP's server to better process failover remediation of applications in the event of a loss of IT resources at the central office location. Currently, if a disaster were to render the 2 Boylston Street office inoperable, the Division would first make an attempt to relocate to the 600 Washington Street building, however if unable to do so, DHCFP would work with an in-state private vendor to establish a building for relocation.

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 "...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 Division of Health Care Finance and Policy (DHCFP) strengthen its business continuity process by developing and maintaining appropriate recovery strategies to regain mission-critical and essential processing within acceptable time periods. We also recommend that DHCFP further develop and test in conjunction with ITD a more comprehensive and formal business continuity plan that incorporates a disaster recovery plan. DHCFP 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, DHCFP should develop detailed 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, DHCFP should test the viability of their alternate processing site. After the plan has been tested, DHCFP should document the results of the test and evaluate the scope and results of the tests performed.

DHCFP should specify the assigned responsibilities for maintaining the plans and supervising the implementation of the tasks documented in the plans. DHCFP 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 DHCFP'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 IT processing is delayed for an extended period of time.

In conjunction with ITD, DHCFP 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 DHCFP's regional servers, and the servers at MITC. As part of business continuity planning, DHCFP should incorporate a strategy in which the Commission collaborates with the Division of Capital Asset Management (DCAM) in the event an additional alternate processing site is needed to ensure the continuity of operations. The finalized version of DHCFP's business continuity plan should also incorporate their vendor CBE Technologies DRP.

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 its 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 DHCFP continue working with ITD on business continuity and disaster recovery planning.

Auditee Response

Since there are now plans to consolidate IT services, DHCFP's implementation of the mirror imaged disaster recovery system (that would be located at ITD in Chelsea) has been placed on hold. DHCFP continues to work with ITD to develop the agency's business continuity plan. The agency has completed its business impact analyses (BIAs). DHCFP has started drafting its recovery roles assignment and the draft emergency response plan. DHCFP still needs to complete the gap and strategy program in order to finish and test the remaining components of the business continuity plan. The Division will also implement the other recommendations noted in the State Auditor's report on the Examination of the Information Technology Controls Pertaining to Business Continuity Planning for the Division of Health Care Finance and Policy.

Auditor's Reply

We acknowledge the receipt of the hotel analysis from October 2008 and a Division of Healthcare Finance and Policy's Disaster Recovery Project document. Although these documents support your planning process for business continuity, we note that business continuity and disaster recovery plans will need to be specifically developed, tested, and reviewed and approved to be viable. We would advise that the Safety Net application system and other non-critical data applications should become a part of your business continuity and disaster recovery planning process.

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
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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



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

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DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

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. 1, 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 Order 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.

DEVAL L. PATRICK
GOVERNOR
Commonwealth of Massachusetts

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 **O**bjectives for Information [related] **T**echnology (**COBiT**); Control Objectives Document, Delivery & Support Section (DS4).
- Department of Homeland Security - **C**ontinuity **O**f **O**perations **P**roject 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. Offsite 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).