

INTERNAL AUDIT OF THE
INFORMATION SYSTEMS: BUSINESS CONTINUITY
AS OF AUGUST 26, 2015

AT THE
TEXAS ANIMAL HEALTH COMMISSION

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Audit Committee
and Commissioners
Texas Animal Health Commission
Austin, Texas

We have conducted the internal audit (audit) of the Information Systems: Business Continuity at the Texas Animal Health Commission as of August 26, 2015. The results of our evaluation disclosed that the Commission has implemented good controls over Business Continuity. However, we noted an opportunity for strengthening the controls in place. The report that accompanies this letter summarizes our comments and recommendations.

We appreciate the courtesy and cooperation the management of the Commission showed during the course of the engagement.

Monday N. Rufus, P.C.

August 26, 2015
Austin, Texas

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Executive Summary

The 80th Texas State Legislature, Senate Bill 908 Committee report, requires all state agencies and universities to have a business continuity plan (or continuity of operations plan).¹ Since the mandate, Texas Animal Health Commission (TAHC) has documented their continuity of operations and the IT continuity of operations plans, which as a whole are considered the business continuity plan for the TAHC.

As documented in the TAHC continuity of operation plan, the mission of the agency are:

1. Protect the animal industry from and/or mitigate the effects of domestic, foreign and emerging diseases.
2. Increase the marketability of Texas livestock commodities at the state, national and international levels
3. Protect human health from animal diseases and conditions that are transmissible to people and,
4. Prepare for and respond to emergency situations involving animals²

Continuity of Operation Plan (COOP) is an overall approach to providing alternative paths in support of critical business processes in the event of an emergency, disaster, or other disruption. This is an enterprise-wide view of what needs to be done to continue in business despite a risk coming to fruition. In essence, the job of the COOP is to ensure business functions can operate during and after a disaster or other contingency, and then to minimize recovery time to reach normal operations. The focus is on total business survival, not just Information Technology. However, the overall plan must include consideration of information systems and telecommunications network requirements. This aspect of COOP is usually handled separately and referred to as Information Technology Continuity of Operations plan (IT COOP). As a result, our internal audit covers the COOP and IT COOP.

A good Information Technology Continuity of Operations plan must take into account all types of events impacting both critical information systems processing facilities and end user normal business operation functions. Examples of disasters are: External (such as terrorism and sabotage); Internal (such as employee misdeed, fraud, and accident); Inherent (fire, flood, tornado); and Environmental (power outage or no telephone service).

Not all critical disruptions in service are classified as a disaster but still are of a high-risk nature. For example, disruption in service is sometimes caused by systems malfunctions, accidental file deletions, network denial of service instructions and viruses. These events may require action to be taken in order to recover operational status. Such actions may necessitate restoration of hardware, software, or data files. Therefore, a well-defined risk-based classification system needs to be in effect to make a determination to initiate business continuity planning efforts.

A designated person should have the responsibility and authority to direct the development, coordination, maintenance, testing, training, and exercises relating to the COOP. The Information Resource Department should play a significant role in the development, implementation, and maintenance of the Commission's COOP.

According to the Texas State Agency Continuity Planning Policy Guidance Letter dated October 24, 2013, signed by the Executive Directors of the Texas Department of Public Safety, Texas Department of

¹ Senate Committee Report,

<http://www.capitol.state.tx.us/billlookup/Text.aspx?LegSess=80R&Bill=SB908>

² Texas Animal Health Commission, Continuity of Operations Plan Promulgation Statement p.6

Information Resources, and State Office of Risk Management; and sent by the Texas Department of Public Safety to all the agency heads.

By November 30, 2013, designate a Continuity Coordinator for the agency and provide contact information to SORM. A qualified Continuity Coordinator should be trained in continuity planning and certified by a recognized organization such as FEMA's Emergency Management Institute (Continuity Practitioner Level I or Level II), or Disaster Recovery Institute International (Certified Professional, such as ABCP, CFCP, CBCP or MBCP). In some cases, smaller agencies may wish to share a continuity coordinator and develop continuity plans jointly.³

At a minimum, the following situations will require the activation of the COOP when:

- The resumption of mission critical automation activities is the primary issue.
- Any event prevents access to the building and where personal safety is the primary issue and mission critical automation activities is the secondary issue.

To ensure that the COOP is complete and workable, agency personnel must be trained, and the plan must be tested. Staff assigned to business continuity teams need training which focuses on their particular roles. The plan needs to be tested to ensure successful recovery in the event of a disaster.

Internal Audit Results

The Commission has partially implemented a Continuity of Operations Plan (COOP). Its COOP contains an updated Information Technology Continuity of Operations Plan (IT COOP) and back-up and storage procedures for critical data, a training program has been established and an annual testing has been performed. To fully comply with the requirements, the Commission should ensure that the Memorandum of Understanding for the alternate site is updated.

Summary of Management's Response

The TAHC had a Memorandum of Understanding with the Texas Racing Commission for the purpose of being an alternate site location should one of the agencies be hit by a disaster affecting the computer infra-structure. The TAHC is developing a new MOU with another agency and will update it annually.

³ [https://www.sorm.state.tx.us/sorm-cms/uploads/2013/11/Texas%20State%20Agency%20Continuity%20Planning%20Policy%20Guidance%20Letter%20\(10-24-2013\).pdf](https://www.sorm.state.tx.us/sorm-cms/uploads/2013/11/Texas%20State%20Agency%20Continuity%20Planning%20Policy%20Guidance%20Letter%20(10-24-2013).pdf)

Observations, Findings, Recommendations, and Management's Response

During our review, we noted the following strengths:

- The Commission has developed COOP and IT COOP plans.
- Copies of the plans are kept offsite.
- The Continuity Coordinator is certified by FEMA Emergency Institute
- The IT COOP contains a list of applications profile with descriptions of business processes and criticality levels.
- The responsibility for maintaining the IT COOP has been assigned to someone in the agency.
- The IT COOP has a list of servers, server types, locations and operating systems
- There is a list of information resources (including current phone numbers of vendors' contact persons) needed to recover the critical business processes.
- The IT COOP damage assessment and salvage log to be used in the event of a disaster
- The plan includes a listing of emergency phone numbers – City of Austin police department, Fire Department, Red Cross, Public Safety etc.
- An agency-level continuity training program has been developed to ensure mission critical personnel are prepared to perform required continuity functions during an emergency.
- An annual exercise of the COOP and results have been documented.

- **Business Impact Analysis** to systematically assess the potential impacts of a loss of business functionality due to an interruption of computing and/or infrastructure support services resulting from various elements or incidents. The TAHC conducted and documented an agency-wide Risk Assessment, which included an Impact Analysis and Risk Mitigation plan. No exceptions were noted in this area.

- **A Security Risk Assessment** to weigh the cost of implementing preventive measures against the risk of loss from not taking action. The TAHC conducted a risk assessment to assure protection against most threats. The TAHC is the process of identifying probable consequences or risks associated with vulnerabilities and provide the basis for establishing a cost effective security program that eliminates or minimizes the effects of risks. No exceptions were noted in this area.

- **Recovery Strategy** to appraise recovery alternatives and alternative cost-estimates, which shall be presented to management. The TAHC has identified an alternate site for restoring data processing operations if a disaster occurs but the Memorandum of Understanding needs to be updated.

- **Disaster Recovery Plan** which should contain measures that address the impact and magnitude of loss or harm that will result from an interruption; identify recovery resources and a source of each; be maintained to ensure accuracy; and be tested annually. The implementing, testing, and maintenance management program addresses the initial and ongoing testing and maintenance activities of the Business Continuity Plan. The TAHC has developed an IT Continuity of Operations plan, which addresses significant activities of the agency such as telecommunications services, and data services. Copies of the plan are kept in relevant off-site locations. We noted an evidence of testing and maintenance of the plan. No exceptions were noted in this area.

- **Mission critical data shall be backed up** on a scheduled basis and stored off site in a secure, environmentally safe, locked facility accessible only to authorized agency representatives. Critical information resources are backed up on a scheduled basis and stored off site in a secure, environmentally safe, and locked facility. No exceptions were noted in this area.

However, we identified a condition that could affect the overall effectiveness of the Continuity of Operation Plan.

Finding: Ensure That TAHC update the alternate site memorandum of understanding for currency

Criteria

By August 31 of each year thereafter, review and update plans to ensure contact lists, responsibilities, Memorandums of Agreement/Memorandums of Understanding (MOU), and procedures remain current and valid, in accordance with the Texas State Agency Continuity Planning Policy Guidance Letter dated October 24, 2013 signed by the Executive Directors of the Texas Department of Public Safety, Texas Department of Information Resources, and State Office of Risk Management; and sent by the Texas Department of Public Safety to all the agency heads.

Condition

The TAHC has not updated their alternate site Memorandum of Agreement/Memorandum of Understanding (MOU) as required by the Continuity Planning Crosswalk, Texas legislative requirements and FEMA guidance. According to the document provided by the commission, the last MOU update was done in 2013.

Cause

There is the lack of control to ensure that the MOU is updated.

Effect

Because the MOU is not updated annually, the alternate site agreement may change without the knowledge of TAHC. This will adversely impact the TAHC should there be a disaster.

Recommendation

We recommend that TAHC update their MOU and their contact list annually to ensure the agreement remains current and valid.

Management Response

The TAHC had a Memorandum of Understanding with the Texas Racing Commission for the purpose of being an alternate site location should one of the agencies be hit by a disaster affecting the computer infra-structure. The TAHC is developing a new MOU with another agency and will update it annually.

Appendix 1

TEXAS DEPARTMENT OF PUBLIC SAFETY

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STEVEN C. McCRAW
DIRECTOR
DAVID G. BAKER
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DEPUTY DIRECTORS



COMMISSION
A. CYNTHIA LEON, CHAIR
CARIN MARCY BARTH
RANDY WATSON

October 24, 2013

Agency Head

Dear Directors:

The State of Texas must be prepared to ensure the continuing performance of critical government functions under all conditions, including emergencies that disrupt normal operations. As cited in the Texas Homeland Security Strategic Plan for 2010-2015, continuity planning is a critical aspect of overall homeland security planning. Elements of a continuity plan include identification of essential functions, delegating of authority, orders of succession, communications, vital records and data, and alternate operating locations; continuity planning ensures those resources will be available when needed through coordination with partners and stakeholders. Requirements for state agency continuity planning are established in the Texas Labor Code (Section 412.054), with additional information on information security rules related to information security standards in Rule §202.24 of the Texas Administrative Code. State agencies are required to maintain continuity plans and ensure that they are regularly updated and validated.

The purpose of this letter is to provide additional guidance on continuity planning to state agencies, consistent with existing legislation and rules. It applies to state agencies that are members of the Governor's Emergency Management Council, members of the State Data Center Program, and/or State Office of Risk Management (SORM) client agencies. The letter recommends minimum standards for state agency continuity planning, but it is not intended to be restrictive; as appropriate, some agencies may find that they need to go well beyond the minimum standard based on their mission and their planning challenges.

To support agency continuity planning, this letter also establishes Texas Essential Functions (Attachment). These functions, modeled on the National Essential Functions established in National Security Presidential Directive 51/Homeland Security Presidential Directive 20, represent the broad responsibilities of state government during an emergency. While priorities will vary based on the specifics of an incident and there are many important agency activities not reflected in the list, maintaining these Texas Essential Functions should be the primary focus of state government during a crisis.

The State Office of Risk Management (SORM), in coordination with the Department of Information Resources (DIR), the Texas Division of Emergency Management (TDEM), and the Texas Office of

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Homeland Security (OHS), will develop, maintain, and disseminate a Continuity Planning Crosswalk that combines Texas legislative requirements, FEMA guidance, best practices, and other applicable standards. This Continuity Planning Crosswalk will serve as the single recommended standard for minimum content in Texas state agency continuity plans. It will incorporate the issue areas described in the Federal Emergency Management Agency's (FEMA's) Continuity Guidance Circular 1 (CGC 1), *Continuity Guidance for Non-Federal Governments* and Continuity Guidance Circular 2, *Continuity Guidance for Non-Federal Entities: Mission Essential Functions Identification Process*. Specifically, it will include the "Continuity Plan Considerations" in Annex A of CGC 1. It will also recommend that Agency continuity plans include an annex covering the continuity response to pandemics and, as necessary, include plans for telecommuting and copies of memorandums of agreement related to security, alternate facilities, and other support needed in a continuity situation.

Continuity plans should be based on a comprehensive process for identifying Mission Essential Functions at the agency level, conducting a Business Process Analysis to explore the processes required to perform these functions, and conducting a Business Impact Analysis to evaluate the effect threats and hazards may have on the ability to perform these functions. Note that an agency's Mission Essential Functions may or may not directly support performance of Texas Essential Functions. CGC 1 and CGC 2 provide several tools and formats for capturing the results of these analyses and developing a continuity plan, but these formats should not be seen as restrictive and should be adjusted to fit the needs of the agency. Other plan formats may be more useful in some cases, as long as they address the minimum content requirements in the Continuity Planning Crosswalk.

Executive management of Texas state agencies should:

- By November 30, 2013, designate a Continuity Coordinator for the agency and provide contact information to SORM. A qualified Continuity Coordinator should be trained in continuity planning and certified by a recognized organization such as FEMA's Emergency Management Institute (Continuity Practitioner Level I or Level II), or Disaster Recovery Institute International (Certified Professional, such as ABCP, CFCP, CBCP or MBCP). In some cases, smaller agencies may wish to share a continuity coordinator and develop continuity plans jointly
- By October 31, 2014, review current continuity plans and develop or revise them as needed to achieve the minimum standards described above
- By October 31, 2014, provide electronic copies of continuity plans, along with a completed Continuity Planning Crosswalk, to SORM. In addition, provide an electronic copy of any Memorandum of Agreement relating to the planned use of state facilities as alternate sites to the Texas Facilities Commission (TFC)
- By August 31 of each year thereafter, review and update plans to ensure contact lists, responsibilities, Memorandums of Agreement/Memorandums of Understanding, and procedures remain current and valid
- Beginning as soon as practicable, but no later than Fiscal Year 2015, conduct an annual exercise of agency continuity plans and report completion to SORM. Schedule and post exercise information on preparingtexas.org. Exercises should be compliant with the Homeland Security Exercise and Evaluation Program (HSEEP) and should be sequential and progressive in terms of participants and objectives
- By October 31, 2014, develop an agency-level continuity training program to ensure mission-critical personnel are prepared to perform required continuity functions during an emergency.

As directed in Section 412 of the Texas Labor Code, SORM will review continuity plans and provide guidelines and models (which will include the Continuity Planning Crosswalk described above) to state agencies. SORM will use the Continuity Planning Crosswalk as its evaluation tool for state agency continuity plans. Written feedback should normally be provided by SORM to state agencies within 90 days of plan submission. As necessary, SORM may request subject matter expert assistance in reviews. SORM will publish additional rules in the Texas Administrative Code as required to implement its continuity responsibilities. Where possible, SORM will also develop incentives for agencies to meet and exceed the minimum continuity planning standards described in this letter.

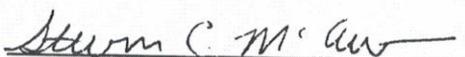
Delivery of some critical functions and services during an emergency will rely on coordination of continuity plans and operations among multiple agencies. As a group, we must identify interdependencies, cross-functional issues, and coordination requirements among agency continuity plans and develop recommendations to address any challenges. The Texas Homeland Security Council and the informal Continuity Roundtable will be the primary forums for interagency discussion of continuity planning issues.

Due to their sensitive nature, state agency continuity plans and supporting documents should be labeled "For Official Use Only." Section 552.101 of the Texas Government Code exempts information from public disclosure if considered to be confidential by law, either constitutional, statutory, or by judicial decision. Chapter 418 of the Texas Government Code provides that certain information, including information relating to risk or vulnerability assessments, critical infrastructure, and security systems, is confidential in specific circumstances.

For the state as a whole, effective continuity planning must consider the delivery of services by local government agencies as well as state agencies. County and municipal agencies throughout Texas are encouraged to adopt standards and processes for continuity planning similar to those described in this letter and to coordinate their efforts regionally. As with state agencies, effective planning and risk reduction will depend on a careful analysis of critical functions, business processes, and business impacts.

Ensuring that the most critical government services continue to be available to the people of Texas under any conditions is a challenging task demanding a concerted planning effort. Thank you for your support of this important initiative.

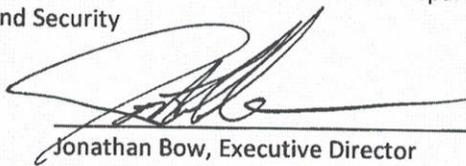
Respectfully,



Steven C. McCraw, Director
Texas Department of Public Safety
Texas Office of Homeland Security



Karen Robinson, Executive Director
Texas Department of Information Resources



Jonathan Bow, Executive Director
State Office of Risk Management

Attachment: Texas Essential Functions

TEXAS ESSENTIAL FUNCTIONS

TEF 1: *Maintain Continuity of Government.* Focus: Ensure the continued functioning of state government and critical government leadership elements, including: succession to key offices; organizational communications (with a priority on emergency communications); leadership and management operations; situational awareness; personnel accountability; and functional and judicial organizations (as necessary).

TEF 2: *Provide Visible Leadership.* Focus: Provide leadership visible to the State of Texas and the Nation and maintain the trust and confidence of our State's citizens and partners.

TEF 3: *Defend the Constitution of Texas.* Focus: Defend the Constitution of the State of Texas and prevent or interdict attacks against the State or its people, property, or interests.

TEF 4: *Maintain Effective Relationships with Neighbors and Partners.* Focus: Maintain relationships and cooperative agreements with federal, state, local, and tribal governments, and private sector and non-profit partners.

TEF 5: *Maintain Law and Order.* Focus: Maintain civil order and public safety (protect people and property and the rule of law), by ensuring basic civil rights, preventing crime, and protecting critical infrastructure.

TEF 6: *Ensure Availability of Emergency Services.* Focus: Provide and/or assist local and tribal governments in providing critical emergency services, including emergency management, police, fire, ambulance, medical, search and rescue, hazmat, shelters, emergency food services, recovery operations, etc.

TEF 7: *Maintain Economic Stability.* Focus: Manage the overall economy of the State of Texas by managing the State's finances and ensuring solvency.

TEF 8: *Ensure the Availability of Basic Essential Services.* Focus: Provide and/or assist in the provision of basic services, including water, power, health care, communications, transportation services, sanitation services, environmental protection, commerce, etc. These are services that must continue or be restored quickly to provide for basic needs.

Appendix 2

Objective and Scope

Objective

The primary objectives of the internal audit were to determine the following:

- *Reliability and Integrity of Information*
- *Compliance with Policies, Procedures, Laws, and Regulations*
- *Safeguarding of Assets*
- *Efficiency and Effectiveness of Operating Procedures*

Scope

Our scope included reviewing The 80th Texas Legislature, Senate Bill 908 Committee report, which requires all state agencies and universities to have a business continuity plan or continuity of operations plan. We interviewed the appropriate staff of the TAHC, reviewed the TAHC's policies and procedures, tested for compliance with these operating policies and procedures, and reviewed other pertinent reports and documentation.

Methodology

Our procedures included collecting information and documentation; reviewing operating procedures, laws, and regulations, conducting interviews with the appropriate staff of the Commission, testing for compliance with policies, procedures and laws, and review of other pertinent reports and documentation.

Information collected and reviewed included the following:

- Interviewed staff to obtain an understanding of the activities, processes, and controls in place related to information technology/project development.
- Obtained a copy of IT Continuity of Operations Plan.
- Obtained and reviewed the TAHC Continuity of Operations Plan
- Obtained and reviewed State Office of Risk Management Continuity Plan Crosswalk for Texas State Agencies
- Guidance letter dated October 24, 2013 signed by the Executive Directors of the Texas Department of Public Safety, State Office Risk Management, and Texas Department of Information Resources and sent by the Texas Department of Public Safety to all Agency Heads
- Section 412 of the Texas Labor Code
- Chapter 418 of the Texas Government Code
- Section 552.101 of the Texas Government Code
- Obtained a copy of alternate site Memorandum of Understanding between TAHC and Texas Racing Commission.

- Tested for compliance with laws and regulations
- Reviewed other pertinent reports and documents

Criteria Used included the following:

- 80th Texas Legislature, Senate Bill 908
- Guidance letter dated October 24, 2013 signed by the Executive Directors of the Texas Department of Public Safety, State Office Risk Management, and Texas Department of Information Resources and sent by the Texas Department of Public Safety to all Agency Heads
- Continuity Plan Crosswalk for Texas State Agencies
- Review of other pertinent reports and documents
- Review of other pertinent reports and documents

Other Information

Our internal audit was conducted in accordance with *generally accepted government auditing standards*. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our internal audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our internal audit objectives. Our internal audit also conforms with the Institute of Internal Auditor's (IIA) *International Standards for the Professional Practice of Internal Auditing*.

Appendix 3

Background Information

In 1893, the agency was initiated to fight the Texas Cattle Fever epidemic, which had created a nationwide problem. Since then, the Texas Animal Health Commission (Commission) and the United States Department of Agriculture (USDA) have worked cooperatively with livestock producers on animal health issues. In recent years, the agency's primary objectives have been to control and eradicate livestock diseases, such as: Brucellosis in cattle and swine; tuberculosis in cattle; goats and cervidae; hog cholera in swine; pseudorabies in swine; scabies in cattle and sheep; Venezuelan equine encephalomyelitis (VEE); and equine infectious anemia (EIA) in horses.

The Commission's enabling statutes are in Chapters 161 through 168 of the Texas Agriculture Code, Vernon's Annotated Texas Statutes. The Commission is vested with the responsibility of protecting all livestock, domestic animals, and domestic fowl from diseases stated in the statute, or recognized as maladies by the veterinary profession. The Commission is authorized to act to eradicate or control any disease or agency of transmission for any disease that affects livestock, exotic livestock, domestic animals, domestic fowl, exotic fowl, or canines, regardless of whether or not the disease is communicable. In order to carry out these duties and responsibilities, the Commission is authorized to control the sale and distribution of all veterinary biologics, except rabies vaccine; regulate the entry of livestock, domestic animals, and domestic fowl into the state; and control the movement of livestock.

To carry out its mission, the Commission is supported by the veterinary community, competent laboratory system and epidemiology activities which oversee the diagnosis of diseases, and assures appropriate tracing of the movement of exposed and infected animals to determine the origin of infection and minimize the transmission of disease.

The Commission is composed of thirteen members who are appointed by the Governor with the advice and consent of the Senate. The Governor designates the Chair.

The Commissioners appoint an Executive Director who supervises the Commission's activities. The Commission's operating budget is prepared and approved by the Commissioners on an annual basis, whereas the State legislative appropriation request is determined every two years. Both the budget and appropriations are reviewed and approved by the State Legislature.

The Commission is funded by a combination of state general revenue funds, federal funds from the U.S. Department of Agriculture (USDA), and fee-based revenue. For fiscal year 2014 the Commission has an authorized workforce of 161.0 full-time equivalent employees (FTEs). The Commission's staff is comprised of field inspectors, veterinarians, veterinary epidemiologists, laboratory personnel, emergency management planners, field investigators, and administrative staff.

Appendix 4

Report Distribution

As required by Gov't Code 2102.0091 copies of this report should be filed with the following:

Governor's Office of Budget and Planning

Attn: Kathy McGrath
internalaudits@governor.state.tx.us

Legislative Budget Board

Attn: Ed Osner
Ed.Osner@lbb.state.tx.us

State Auditor's Office

Attn: Internal Audit Coordinator
iacoordinator@sao.state.tx.us

Sunset Advisory Commission

Attn: Ken Levine
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Texas Animal Health Commission Management

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