

# Performance Audit Report

## Continuity of Operations Planning at University of North Dakota

Report No. NP-005-17

September 11, 2017

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## *Transmittal Letter*

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October 25, 2017

State Board of Higher Education  
Members of the North Dakota Legislative Assembly

We are pleased to submit this performance audit. The subject matter of this audit included certain aspects of the continuity of operations plan at the University of North Dakota.

We conducted this audit under the authority granted within North Dakota Century Code Section 54-10-30. Included in the report are the audit scope and objectives, findings and recommendations, and management responses.

The in-charge auditor for this audit was Beverly Hirn. Craig Hashbarger, CPA, CIA, CFE was the audit manager. Inquiries or comments relating to this audit may be directed to the audit manager by calling (701) 239-7274. We wish to express our appreciation to the staff and management of the University of North Dakota for the courtesy, cooperation, and assistance they provided to us during this audit.

Respectfully submitted,

/S/

Joshua C. Gallion  
State Auditor

# *Executive Summary*

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## ***Introduction***

The purpose of our audit was to determine whether the University of North Dakota (UND)'s continuity of operations plan (COOP) included all the necessary elements and assured the capability to continue the essential functions of the university.

Guidance issued by the Federal Emergency Management Agency (FEMA), states in part that "...the objective for organizations is to identify their essential functions and ensure that those functions can be continued throughout, or resumed rapidly after, a disruption of normal activities." COOPs provide the capability to perform these essential functions for up to 30 days following a disruption in natural operations. Following is a description of the objectives and an overview of the findings.

## ***Objective 1***

Does UND's continuity of operations plan include all necessary elements? If not, why not?

We determined the COOP does not fully address some necessary elements. We identified the level of involvement by senior management, as well as the design of the departmental template, to be significant causes.

- UND's COOP lacks one of the essential elements of a viable continuity of operations plan. (page 7-8)
- UND's essential functions are not readily accessible to those with responsibility for completing department/unit-level COOPs. (pages 8-9)
- Department/unit-level COOPs lack a formal review process and documentation. (page 9-10)

## ***Objective 2***

Have UND's various departments/units submitted completed continuity of operations plans as required by UND's continuity of operations plan? If not, why not?

We determined approximately 10% of UND's various departments/units had submitted continuity of operations plans as required by UND's institution-level COOP.

- UND's COOP lacks some department/unit-level COOPs necessary to fulfill UND's essential functions. (page 11-12)

## ***Background Information***

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The following events were detailed in FEMA's guide, *Building a Disaster-Resistant University*:

In July 1999, a heat wave resulted in a sustained power outage in New York City. The electricity went out at Columbia University and was not completely restored for 2-3 days. In the intervening time, researchers at Columbia's College of Physicians and Surgeons lost irreplaceable research materials – human tissue, enzymes and cells – because there were not sufficient back-up generators to keep freezers or incubators running.

On Labor Day 1998, a severe windstorm in central New York State damaged many buildings, trees, and utilities on the Syracuse University campus, forcing the closure of some residence halls and relocation of 600 students.

In April 1997, the Red River inundated the University of North Dakota. The university was forced to relocate critical functions such as the computer center and had to suspend many of its operations. [Classes were canceled for the remainder of the Spring semester.] After a month of inspection, clean-up, and repairs, the university reopened.

These are actual examples of events which impacted institutions of higher learning and which resulted in significant disruptions in those institutions' operations.

Institutions of higher learning are at risk of being impacted by a variety of emergencies, ranging from natural disasters such as floods, blizzards and tornadoes, to fires, active shooter incidents, cyber-attacks, and pandemics ("continuity events"). In addition to risking lives, injury and/or property damage, these disasters can, and do, result in disruptions in teaching, research, public service and other business operations. According to *Building a Disaster-Resistant University*, continuity events can harm institutions of higher learning by resulting in "faculty and student departures, decreases in research funding, and increases in insurance premiums."

In recognition of the risk posed by disruptions in organizations' essential functions, FEMA provides guidance for development and implementation of continuity of operations plans. A COOP provides a framework to enable an organization to continue essential functions if an event at the organization or in the region threatens operations, or requires the relocation of select personnel and functions. In 2009, FEMA, to provide guidance to non-federal entities in developing COOPs, issued Continuity Guidance Circular 1, *Continuity Guidance for Non-Federal Entities* (CGC 1). CGC 1 outlines ten elements deemed necessary for an "effective continuity capability." CGC 1's overarching continuity requirements are summarized as follows:

- Essential Functions – The critical activities performed by organizations, especially after a disruption of normal activities.
- Orders of Succession – Provisions for the assumption of senior offices during an emergency if any of those officials are unavailable to execute their legal duties.
- Delegations of Authority – Identification, by position, of the authorities for making policy determinations and decisions.
- Continuity Facilities – Locations, other than the primary facility, used to carry out essential functions, particularly in a continuity event.

- Continuity Communications – Communications that provide the capability to perform essential functions under all conditions.
- Vital Records Management – the identification, protection and ready availability of electronic and hard copy documents, references, records, information systems, data management software and equipment.
- Human Capital – emergency employees and other special categories of employees who are activated to perform assigned response duties.
- Tests, Training, and Exercises (TT&E) – Measures to ensure that the continuity plan can support the continued execution of the essential functions throughout the duration of a continuity event.
- Devolution of Control and Direction – capability to transfer statutory authority and responsibility for essential functions from primary operating staff and facilities to other employees and facilities.
- Reconstitution of Operations – The process by which surviving and/or replacement personnel resume normal agency operations from the original or replacement primary operating facility.

UND's institution-wide COOP was developed in July 2011, and most recently updated August 18, 2015. UND's COOP's stated purpose is to provide a "framework to continue [UND's] essential functions in the event that an emergency at the University or in the region threatens operations or requires the relocation of select personnel and functions."

UND's COOP has identified UND's essential functions as follows:

- Sustain the safety and welfare of University employees, students, and visitors
- Deliver academic programs to students
- Preserve critical research
- Maintain critical business, finance, and infrastructure operations

UND's COOP states that its purpose is to provide an "approach to begin continuity operations within 12 hours of activation," continue essential functions and maintain them "for up to 30 days."

UND's institution-wide COOP recognizes that some of the essential elements of its COOP should be addressed at the institution-wide level, while others must also be addressed at the department/ unit level. UND's COOP specifically states that "each college, school, department or component must evaluate its own unique circumstances and environment to develop a comprehensive COOP."

UND's institution-wide COOP defines UND's essential functions and orders of succession, but also states that the "supporting departmental COOP captures unit-specific actions that will allow continuing functions," and departmental COOPs will "outline unit-specific orders of succession." UND's institution-wide COOP also states the elements of continuity facilities and vital records will be addressed in the departmental COOPs.

To facilitate department/units' completion of individual COOPs, UND's Emergency Management office provides a COOP template, instructions, and a sample COOP that can be used by management of each department/unit to complete their COOPs. The Emergency Management office requests each department submit a current copy of its COOP to the Emergency Management office.



# ***Objectives, Scope and Methodology***

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## ***Purpose and Authority***

This performance audit of the University of North Dakota's (UND) COOP has been conducted by the Office of the State Auditor pursuant to authority within North Dakota Century Code (NDCC) Chapter 54-10.

Performance audits are defined as engagements that provide assurance or conclusions based on an evaluation of sufficient, appropriate evidence against stated criteria, such as specific requirements, measures, or defined business practices. Performance audits provide objective analysis so management and those charged with governance and oversight can use the information to improve performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability. The purpose of this report is to provide analysis, findings and recommendations with respect to the audit objectives.

## ***Objectives of the Audit***

The objectives of our audit were to answer the following questions:

- Does UND's continuity of operations plan include all necessary elements? If not, why not?
- Have UND's various departments/units submitted completed continuity of operations plans as required by UND's continuity of operations plan? If not, why not?

## ***Audit Scope and Methodology - General***

We conducted this performance audit 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 audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We primarily used two sources of criteria for developing our findings and conclusions.

CGC 1 provides the overarching guidance for use in continuity planning. It provides this guidance, in part, by identifying the critical elements it deems necessary to maintain a comprehensive and effective continuity capability.

UND's institution-wide COOP includes several statements of UND's intent and purpose with respect to its development of institution-wide and department/unit-level COOPs.

The subject matter for this objective consisted primarily of the University of North Dakota's department/unit-level COOPs in place as of May 19, 2017.

# ***Audit Results – Objective 1: Necessary Elements of Continuity of Operations Plans***

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## ***Statement of Objective and Conclusions***

The first objective of our audit was to answer the following question:

- Does UND's continuity of operations plan include all necessary elements? If not, why not?

We determined the COOP does not fully address some necessary elements. We identified the level of involvement by senior management, as well as the design of the departmental template, to be significant causes.

We also communicated certain matters of lesser significance in a separate letter to management.

## ***Audit Methodologies***

To accomplish our objective, we reviewed CGC 1. We reviewed UND's institution-wide COOP, the departmental COOP template and related documents. We also reviewed a sample of completed departmental COOPs. We conducted interviews of senior management and a sample of managers at the department/unit level.

## ***Findings, Recommendations, and Responses***

### **Elements of an Effective COOP**

As described in the Background Information section of this report, CGC 1 defines ten elements deemed necessary for an effective continuity capability. In our review of UND's institution-wide COOP, as well as the departmental COOP template, we noted that two of these elements were not fully addressed. The element of Testing, Training & Exercises (TT&E) was not addressed in the institution-wide COOP or in the COOP template. The element of Reconstitution of Operations was addressed at the institution-wide COOP level, but it was not addressed in the COOP template.

Tests, Training, and Exercises (TT&E) refers to formal and informal training programs, tests of critical equipment and systems, as well as drills and exercises to ensure that the continuity plan will enable the institution to sustain the institution's essential functions as intended. According to CGC 1, "an effective TT&E program is necessary to assist organizations to prepare and validate their organization's continuity capabilities." Without appropriate TT&E, there is an increased risk that the institution's COOP may not function as intended in an actual continuity event.

Reconstitution of Operations refers to the institution's plan for resuming normal business operations after the emergency/event has sufficiently passed. While UND's institution-wide COOP does include an outline for a reconstitution plan at the institution level, the departmental COOP template does not provide for or refer to a reconstitution plan. This may result in additional time, expense, and/or delays in resumption of regular business.

## Recommendation 1-1

We recommend management develop and incorporate the element of Tests, Training and Exercises in both the institution-wide COOP as well as the departmental COOP template. We further recommend management add provisions for Reconstitution of Operations to the departmental COOP template.

### UND Response:

Agree.

- “Tests, Training and Exercises” components have been added to the online department, and institution-wide COOP templates. **Completed as of 10/20/2017**
- A “Reconstitution of Operations” component has been added to the department COOP online template. **Completed as of 10/20/2017**

## Communication of University-wide Essential Functions

As previously described, UND’s institution-wide COOP identifies the following as UND’s institution-wide essential functions:

- Sustain the safety and welfare of University employees, students, and visitors
- Deliver academic programs to students
- Preserve critical research
- Maintain critical business, finance, and infrastructure operations

Currently, these institution-wide essential functions are not included in the department/unit COOP template or instructions, and a description of the essential functions is not readily accessible (such as on the UND COOP web page). Furthermore, based on our interviews with management, we noted an underlying theme that members of department/unit level management were not fully aware how their departments or units would interact with each other in a continuity event and in relation to the institution’s essential functions.

CGC 1 states that “organizations should identify internal and external interdependencies that are part of and/or influence each essential function business process.” In other words, the institution should clearly understand the roles each department/unit plays in carrying out the institution’s essential functions, and the institution should understand how these units interact with each other during various continuity events.

If management does not have a sufficient awareness of the institution’s essential functions and the ways in which departments and units are dependent upon each other, there is an increased risk the departmental COOPs will not be adequately designed to carry out UND’s essential functions during a disaster or other event.

## Recommendation 1-2

We recommend management clearly communicate UND’s essential functions, as well as department/unit level roles, to those responsible for developing and implementing elements of UND’s COOP.

To accomplish this, management should consider conducting a formal “business process analysis,” which CGC 1 defines as a process to “identify and map the functional processes, workflows, activities, resources...and facilities inherent to the execution of each identified essential function.” This analysis, if properly conducted as part of UND’s continuity planning, could enable management at all levels to better understand UND’s essential functions, as well as the roles UND’s various departments and units play in carrying out those functions.

**UND Response:**

**Agree.**

- Division, College, Auxiliary, and Priority Department COOPs will be developed initially to identify UND’s essential functions for inclusion in the institution-wide COOP. This process shall be managed by the Enterprise Risk Assessment Committee and implemented by the Office of Emergency Management. **Estimated Completion 12/15/2018**
- The Enterprise Risk Assessment Committee also shall conduct a formal “business process analysis” as part of the Division, College, Auxiliary, and Priority Department COOP process. **Estimated Completion 5/1/2018**
- “Function processes, workflows, activities, resources and facilities” components have been added to the department COOP online template. **Completed as of 10/20/2017**

**Documentation of Review of Continuity of Operations Plan**

The departmental COOP template currently does not include a space to indicate the date(s) the COOP was completed, or the name(s) and date(s) the report was reviewed and approved.

CGC 1 states "organizations should annually review their essential functions ...**and document the date of the review and names of personnel conducting the review**" (emphasis added). In the absence of a means for documenting the date of review and name of the reviewer, there is an increased risk that outdated departmental COOPs could be used and/or departmental COOPs may not be timely updated and/or reviewed.

**Recommendation 1-3**

**We recommend Emergency Management add fields to the template for completion date, reviewer name, and revision and approval dates.**

**UND Response:**

**Agree.**

- “Completion and revision dates, reviewer name, and approval date” components have been added to the online department COOP template. **Completed as of 10/20/2018**

# ***Audit Results – Objective 2: Departmental/Unit Continuity of Operations Plans***

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## ***Statement of Objective and Conclusions***

The second objective of our audit was to answer the following question:

- Have UND's various departments/units submitted completed continuity of operations plans as required by UND's continuity of operations plan? If not, why not?

We determined 31 out of 320 (approximately 10%) of UND's various departments/units have submitted continuity of operations plans as required by UND's institution-wide COOP. Our procedures indicated additional support and direction from upper management would be a significant necessary factor to increase compliance.

We communicated certain matters of lesser significance in a separate letter to management.

## ***Audit Methodologies***

To accomplish our objective, we reviewed UND's institution-wide COOP, the departmental COOP template, and related documents. We reviewed a client listing of completed COOPs. We obtained and reviewed a department listing from Peoplesoft and eliminated obvious duplicates. We conducted interviews of senior management and a sample of managers at the department/unit level.

## ***Findings, Recommendations, and Responses***

### **Completion of Department/Unit-level COOPs**

UND's institution-wide COOP states that "each college, school, department and component of the University is required to participate in the development of a business continuity plan to address disruptions." It further states that "each college, school, department, or component must evaluate its own unique circumstances and environment to develop a comprehensive COOP" and "the supporting departmental COOP captures unit-specific actions that will allow continuing functions."

As of May 19, 2017, of approximately 320 departments/units at UND, only 31 of them (10%) had submitted a COOP to the emergency management office.

Based on the results of our interviews, members of management felt they had received frequent communication from the Emergency Management office regarding completion of departmental COOPs. However, some members of management did not view completion of a departmental COOP as a high priority, since such request was not made or reinforced by that person's supervisor (i.e. upper management, in most cases). Our interviews identified direction and leadership from upper management was or would be instrumental in completing the department/unit level COOP.

Because so many of the departmental COOPs are not complete, UND may not be able to effectively fulfill all its essential functions in a continuity event.

## Recommendation 2-1

We recommend upper management communicate UND's need for appropriate department/unit level COOPs to those responsible for completing the COOPs.

To facilitate this process, management may consider conducting a formal "business process analysis," as defined by CGC 1. This analysis, if properly conducted as part of UND's continuity planning, could identify high-risk or high-priority departments/units which truly must have a COOP. It may also result in efficiencies as management identifies areas for which a higher-level COOP may suffice.

### UND Response:

Agree.

- The Enterprise Risk Assessment Committee shall conduct a "business process analysis" to determine priority, high-risk, and critical departments for COOP development. The intent of the "business process analysis" also is to identify areas where higher-level, interdependent, or collective COOPs may suffice. **Estimated Completion 5/1/2018**
- The Office of Emergency Management will assist in the facilitation of department COOP development and revisions. **Ongoing**