Continuity of Operations Planning Preparedness of NCAA Division I Athletic Departments

Brandon Lane Allen
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The University of Southern Mississippi

CONTINUITY OF OPERATIONS PLANNING PREPAREDNESS
OF NCAA DIVISION I ATHLETIC DEPARTMENTS

by

Brandon Lane Allen

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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Dean of the Graduate School

December 2011
ABSTRACT

CONTINUITY OF OPERATIONS PLANNING PREPAREDNESS
OF NCAA DIVISION 1 ATHLETIC DEPARTMENTS

by Brandon Lane Allen

December 2011

Collegiate athletic departments face the same threats of private and public businesses. Multiple disruptive events have caused havoc at various athletic events causing change of venues, loss of revenue, injuries, and deaths. Natural disasters and terrorism continue to pose serious threats on all types of organizations; therefore, athletic departments must become proactive in preparing for the unexpected (Wheatman, 2001).

The purpose of this study was to assess NCAA division 1 athletic departments’ continuity of operations planning preparedness. The population for this study was limited to athletic directors or facility directors responsible for continuity of operations planning (N=344). A total of 91 completed surveys were returned for a 26% response rate. The total score from the 26-item questionnaire (derived from FEMA’s guidelines for continuity of operation planning) was used to measure the institution’s level of preparedness.

Demographic variables consisting of number of students, budget of athletic department, type of institution (public or private), location of institution (FEMA’s 10 regions) and experience of a presidential disaster (received federal funding for recovery), were used for hypothetical testing with the alpha level set at 0.05.
Descriptive statistics (frequencies, means, and standard deviations) and an analysis of variance were used to conduct the analysis. Tukey’s HSD post hoc test was used as a follow up on the statistical significant difference in athletic budget to determine the location of the difference. The average mean of 3.44 on a 5-point Likert scale (1=no progress; 5=Objective achieved) revealed areas of concern for NCAA division 1 athletic departments continuity of operations planning preparedness. Athletic departments should be proactive in developing and implementing COOP measures in order to resume normal operations in the event of an accident.
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CHAPTER I

INTRODUCTION

Within the last 10 years, over 560 presidential disaster declarations were issued throughout the United States (FEMA, 2010f). Even though the majority of these events fell into the severe storm category, other major disasters, such as hurricanes, earthquakes, typhoons, fires, floods, and terrorist attacks, totaled 109. At least two of these major disasters could be found in each of the 10 regions designated by the Federal Emergency Management Agency (FEMA). In 2010, there were 81 major federal disaster declarations across the United States (FEMA, 2010e). Since all cities are susceptible to a major disaster, organizations and institutions should have a continuity plan in place to continue operations of essential functions and minimize or eliminate the amount of time an institution is shut down from normal operations.

The Federal Emergency Management Agency (FEMA) supports the idea that public and private organizations should provide continuity plans. It views these plans as a basic entitlement to the nation’s citizens (2009a). Colleges and universities are no exception to the rule. After Hurricane Katrina in 2005, students from at least 12 colleges and universities were displaced and relocated to other areas in the country waiting for direction from their institution on what to do next (Wolverton, 2005). Tulane University seemed to be a leader in disseminating information to its students. The university’s president, Scott S. Cowen, posted a blog on Tulane’s website informing faculty, staff, and students of the progress on behalf of those involved. After it was apparent that the
university would remain closed through the 2005 fall semester, he turned his attention to providing opportunities for the students. On September 1, 2005, Cowen contacted the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the American Association of State Colleges and Universities. Subsequently, representatives of the respective organizations discussed how other universities around the country could provide assistance to the students at Tulane (Cowen, 2005). These accrediting bodies of Higher Education along with the American Association of Community Colleges, the Council of Independent Colleges, and the Association of Jesuit Colleges and Universities made a decision to allow paid students of the affected institutions to attend their institutions without tuition charge. Included in the plans were provisions for student athletes (Boggs et al., 2005). Cowen made it clear that the athletic program was an integral part of reestablishing its program. He stated that, “we want our athletes to carry the torch, face, and name of Tulane University during this difficult time” (Cowen, 2005, p. 1).

As exemplified by Tulane, continuity planning is a necessity for colleges and universities, and special considerations should be made regarding athletic programs. Wolverton (2005) acknowledged the fact that many institutions have crisis-management plans. However, most of these institutions do not include procedures that provide for displaced athletes and damaged facilities in order to continue their athletic programs. To support this claim, Wolverton quoted the Commissioner of the Sunbelt Conference, Wright Waters, as saying that “[c]onferences and teams make plans for if it rains, but we don’t plan much
beyond that” (p. 37). Hurricanes Katrina and Rita impacted at least 12 collegiate teams in multiple athletic conferences (Wolverton, 2005).

Continuity planning is necessary to combat all threats including weather, crowd management, and terrorism. Hall, Marciani, and Cooper (2007) shed light on the potential of sport venues as terrorist targets. For example, the Federal Bureau of Investigation (FBI) posted warnings that reported some terrorist groups were downloading stadium images. The downloading of this information supports the tactics of these terrorist groups by targeting large groups of people in one place. There are multiple examples of unexpected events that have closed down normal operations in athletic organizations from little league to professional teams. Therefore, continuity planning is critical in order to assure that all institutions maintain normal operations if or when an unexpected event occurs (e.g. weather, crowd control, or terrorism).

Purpose of the Study

The Federal Emergency Management Agency (2009b) is clear about its position on continuity planning stating that “[c]ontinuity planning is a fundamental responsibility of public institutions and private entities to our nation’s citizens” (p. 2). FEMA continues to stress the importance of these plans by stating that, Today’s changing threat environment and the potential for no-notice emergencies, including localized acts of nature, accidents, technological system failures, and military or terrorist attack-related incidents, have increased the need for continuity capabilities and planning across all levels of government and the private sector. (p. 2)
Unfortunately, research is limited regarding COOP in athletic departments. Since continuity planning is a fundamental responsibility for public and private institutions, athletic departments of higher education should have some type of planning in place. With the prevalent and inerrant risks of terrorism and natural disasters, these departments need to be prepared (Hall, Marciani, & Cooper, 2007). Guidelines should be available to offset any delays in functionality. The purpose of this study is to determine the level of preparedness of the National College Athletic Association (NCAA) Division 1 athletic departments in regard to continuity planning. This study will identify the current status and needs of athletic departments and the gaps and discrepancies in continuity planning. This study will provide recommendations and resources to strengthen current procedures. Recommendations for athletic departments may include identifying the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j) reconstitution operations; (k) program plans and procedures; (l) risk management; (m) budgeting and acquisition of resources; and (n) continuity plan operational phases and implementation. Since continuity planning is a fundamental responsibility of public and private entities, it is highly recommended that athletic departments reinforce compliance with federal government guidelines and recommendations (FEMA, 2009c).
Hypotheses

The following hypotheses will guide this study:

$H_1$: There will be no significant difference in the level of preparedness among athletic programs based on geographical locations of the 10 regions declared by FEMA.

$H_2$: There will be no significant difference in the level of preparedness among athletic programs based on membership in a conference.

$H_3$: There will be no significant difference in the level of preparedness among athletic programs based on the number of students enrolled at the institution.

$H_4$: There will be no significant difference in the level of preparedness among athletic programs based on a presidential declared disaster occurring within the last 10 years.

$H_5$: There will be no significant difference in the level of preparedness among athletic programs based on athletic budget.

$H_6$: There will be no significant difference in the level of preparedness among athletic programs based on type of institution (public or private).

Definitions of Terms

For the purpose of this research study, the following terms are defined:

*All-hazards*: “An approach for prevention, mitigation, preparedness, response, continuity, and recovery that addresses a full range of threats and hazards, including natural, human-caused, and technology-caused” (National Fire Protection Association [NFPA], 2010, p. 5).
Business continuity management: “The act of anticipating incidents which will affect mission-critical functions and processes for the organization and ensuring that it responds in a planned rehearsed manner” (Gallagher, 2003, p. 3).

Business Impact Analysis (BIA): A categorical process of ranking essential functions based on level of impact that contributes to organizational survival (Cornish, 1999).

Continuity of Operations Plan (COOP)/Business Continuity Plan (BCP): An “ongoing process supported by senior management and funded to ensure that the necessary steps are taken to identify the impact of potential losses, maintain viable recovery strategies, recovery plans, and continuity of services” (NFPA, 2010, p. 5).

Continuity communications: “Communications that provide the capability to perform essential functions, in conjunction with other organizations until normal operations can be resumed” (FEMA, 2009c, p. 4).

Continuity facilities: “Locations where an organization’s leadership and staff operate. Facilities should be able to provide staff with survivable protection and should enable continued and endurable operations” (FEMA, 2009c, p. 3).

Delegation of authority: “Identification, by position, of the authorities for making policy determinations and decisions at HQ, field levels, and all other organizational locations” (FEMA, 2009c, p. 2).

Devolution of control and direction: “The capability to transfer statutory authority and responsibility for essential functions from an organization’s primary operating
staff and facilities to other organization employees and facilities, and to sustain that operational capability for an extended period” (FEMA, 2009c, p. 2).

Disaster recovery (DR): The reaction to a disruption of normal operations with the purpose of restoring operations in a timely and orderly fashion (Ketterer, Price, & McFadden, 2007).

Essential functions: Those functions which are critical to the ongoing survival of organizations, especially after a disruption of normal activities (Cornish, 1999).

Human capital: “An organization’s ability to respond and adapt rapidly to threats posed to its workforce” (Ketterer et al., 2007, p. 8).

Mitigation: “Activities taken to reduce the impacts from hazards” (NFPA, 2010, p. 6).

Orders of succession: “Provisions for the assumption of senior agency offices during an emergency in the event that any of those officials are unavailable to execute their legal duties” (NFPA, 2010, p. 5).

Preparedness: “Ongoing activities, tasks, and systems to develop, implement, and maintain program capabilities” (NFPA, 2010, p. 6).

Presidential disaster declaration: Any disaster that is beyond the capability of the state and local governments to respond. Once a request from a governor is received by a FEMA regional office, the President may then declare a major disaster, thereby allowing access to federal funding for response and recovery (FEMA, 2010g).

Prevention: “Activities to avoid an incident or to stop an incident from occurring” (NFPA, 2010, p. 6).
*Recovery:* “Activities and programs designed to return conditions to a level that is acceptable to the entity” (NFPA, 2010, p. 6). “Recovery is the perceived time to return to a pre-crisis profit level or production level” (Lasecki, 2009, p. 9).

**Region 1:** The states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont (FEMA, 2010d).

**Region 2:** The states of New Jersey, New York, Puerto Rico, and the Virgin Islands (FEMA, 2010d).

**Region 3:** The states of Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia (FEMA, 2010d).

**Region 4:** The states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee (FEMA, 2010d).

**Region 5:** The states of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin (FEMA, 2010d).

**Region 6:** The states of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas (FEMA, 2010d).

**Region 7:** The states of Iowa, Kansas, Missouri, and Nebraska (FEMA, 2010d).

**Region 8:** The states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming (FEMA, 2010d).


**Region 10:** The states of Alaska, Idaho, Oregon, and Washington (FEMA, 2010d).
Risk management: The process of identifying, controlling, and minimizing the impact of uncertain events (FEMA, 2009c; Shaw & Smith, 2010).

Reconstitution: “The process by which surviving and/or replacement organization personnel resume normal agency operations from the original or replacement primary operating facility” (FEMA, 2009c, p. 6).

Test, training, and exercises (TT&E): “Measures to ensure that an organization’s continuity plan is capable of supporting the continued execution of the organization’s essential functions throughout the duration of a continuity situation” (FEMA, 2009c, p. 6).

Vital records management: “Electronic and hardcopy documents, references, and records that are needed to support essential functions during a continuity situation” (FEMA, 2009c, p. 6).

Delimitations

This study will be delimited to current senior, associate, and assistant athletic directors and facility directors from NCAA Division 1 schools.

Assumptions

The assumptions of this study are as follows:

1. All subjects will answer accurately and honestly all questions on the Continuity Level of Preparedness Questionnaire.

2. All subjects will be either a current senior, associate, or assistant athletic director or facility director from an NCAA Division 1A school and have prior knowledge and understanding of plans and procedures concerning continuity of operations.
Justification

Universities are beginning to take action regarding continuity planning. Six universities (Tulane University, University of Alaska-Fairbanks, University of California-Berkeley, University of Miami, University of North Carolina-Wilmington, and University of Washington) have collaborated with FEMA and created a document titled *Building a Disaster-Resistant University* (FEMA, 2003). Other documents, such as *ERM in Higher Education* (University Risk Management and Insurance Association, 2007), *Developing a Strategy to Manage Enterprise-wide Risk in Higher Education* (Cassidy, Goldstein, Johnson, Mattie, & Morley, 2001), and *Continuity Planning for Schools and Universities* (Henderson, 2005; Henderson, December 2005), share similar concerns regarding risk management and continuity planning at institutions of higher education. These documents focus on pre-disaster planning and mitigation actions and shed light on the unique planning considerations of institutions of higher education. Even though these documents fail to cover all aspects of continuity planning, they do take into consideration multiple elements of a viable continuity plan. Henderson (2005) reported that even if a university has a COOP plan in place, each organizational unit within that university should be responsible for its own specific responsibilities, which include disaster preparations and response assignments. Henderson (2005) stated that it is not uncommon for some departments of schools and universities to have excellent plans while other departments have no plans. Since the athletic department falls into this category, the primary focus of this study is to assess and document the level of preparedness of athletic
departments at NCAA Division 1 colleges and universities. Currently, there is a lack of literature supporting the preparedness level of athletic departments regarding continuity planning. However, studies have been conducted at universities on various elements of continuity of operation planning within athletic departments. These studies are examined and explained in the literature review.
CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter reviews literature relevant to the involvement of non-federal entities with an emphasis on state and private sectors. By way of organization, it divides the literature into continuity of operation planning (COOP), Federal Emergency Management Agency (FEMA), theoretical frameworks, Elements of COOP, National Collegiate Athletic Association (NCAA) Division 1 studies, potential hazards, and conclusion.

Continuity of Operation Planning

Because of the changing threat of environment and recent emergencies, the need for continuity of operation planning capabilities has become more prevalent in agencies and public institutions (Shaw & Harrald, 2004). All organizations face the possibility of disruptive events affecting normal operations in some capacity; therefore, organizations have used functions such as risk management, emergency response, and contingency planning as a means to mitigate relevant threats to their environment (Shaw & Harrald, 2004). One way these facilities can combat against these threats of disasters is preparedness (Waugh, 2000). McIntire (2007) defined disasters “as deadly, destructive, and disruptive events that occur when a hazard interacts (or multiple hazards interact) with human vulnerability” (p. 2). Taking this definition at face value means that even a threat could be considered a disaster if it causes an event to be disrupted. The threat in and of itself is considered a hazard and cannot cause a catastrophe until it is carried out.
The National Continuity Policy Implementation Plan and the National Security Presidential Directive 51/Homeland Security Presidential Directive 20 define *continuity of operation planning* (COOP) as “an effort within individual executive departments and agencies to ensure that Primary Mission Essential Functions (PMEFs) continue to be performed during a wide range of emergencies, including localized acts of nature, accidents, and technological or attack-related emergencies” (Petersen, 2007, p. 3). These primary essential functions are a subset of the mission essential functions which must be performed continuously uninterrupted or resumed within 12 hours after an event (FEMA, 2009c). Both mission essential functions and primary essential functions provide the organization the ability to maintain the safety of the public, provide vital services, and sustain the economic base in case of a disruption of normal operations (FEMA, 2009c). The United States policy regarding all federal agencies is to have an effective and comprehensive continuity plan in place (FEMA, 2001). During President Ronald Reagan’s years of service in the oval office, he passed Executive Order 12656 which assures continuity of government. This order mandates that all levels of government should have sufficient capabilities to withstand an emergency regardless of nature (Executive Order No. 12656, 1988). As an enforcement measure, Presidential Declaration Directive 67 empowered FEMA with the responsibility of assuring compliance across the Federal Executive Branch in regard to developing, executing, facilitating, overseeing, and accessing the status of COOP capabilities (FEMA, 2001). FEMA has played a significant role in COOP planning in the
governmental sector and devoted itself to assisting and preparing other entities in COOP planning by providing financial resources and relevant literature specific to each type of organization (FEMA, 2003; FEMA, 2009c; FEMA, 2009e).

Ketterer et al. (2007) associated the phrase “decade of disaster” in an attempt to adequately portray the first 10 years of the 21st century. In order to support this claim, Ketterer et al. used data from the emergency management database which declared the top three disasters according to number of deaths in 2005 were Pakistan, Guatemala, and the United States. The report continued to list the countries that suffered the most natural disasters in 2005 by listing the Republic of China with 31, India with 30, and the United States with 16. FEMA reported that within the last 10 years there have been over 560 presidential disaster declarations in every region of the United States (FEMA, 2010f). Even though the majority of these events fell into the severe storm category, other major disasters such as hurricanes, earthquakes, typhoons, fires, floods, and terrorist attacks totaled 109. At least two of these major disasters could be found in each of the 10 regions designated by FEMA (2010f). In 2010, there were 81 major federal disaster declarations across the United States (FEMA, 2010e). The financial costs of these natural disasters can be horrendous. For example, estimates for the cost of Hurricanes Katrina and Rita were assessed at $131 billion (Ketterer et al., 2007).

Recent events from this decade, starting with the devastating effects of September 11, 2001, have reinforced the need for businesses to consider and put in place continuity capabilities and planning (Barbara, 2006; Whitworth,
Every city is susceptible to a major disaster; therefore, organizations and institutions should have a continuity plan in place. To reiterate this fact, Henderson (2005) stated that 80% of the states within the United States are at risk for earthquake damage. Henderson also says that 10% of the United States land area is subject to flooding. “Continuity cannot be an afterthought for organizations as they strive to perform their essential functions” (U.S. Department of Homeland Security, 2008, p. 2).

FEMA (2009a) supports the idea that public and private organizations should provide continuity plans. It states that continuity planning allows for the performance of essential functions during any disruption of normal operations. This planning process is a fundamental responsibility to our nation’s citizens (FEMA, 2009c). FEMA continues to stress the importance of these plans by stating that

Today’s changing threat environment and the potential for no-notice emergencies, including localized acts of nature, accidents, technological system failures, and military or terrorist attack-related incidents, have increased the need for continuity capabilities and planning across all levels of government and the private sector. (2009c, p. 2).

COOP, commonly called business continuity planning (BCP) in the private sector, seeks to recover from all hazards that may pose a threat to the primary essential functions of the organization. These threats could come from natural disasters, such as fires or floods, but they could also resemble the form of unethical operations or the collapse of a key supplier (Gallagher, 2003).
Dunaway (2010) reported the two key factors that determine the adoption of continuity planning measures for private organizations are the size of the organization and previous experience with a disaster. The data, retrieved from 145 businesses, industries, and non-profit organizations, revealed four factors that could influence an organization to reconsider its need for COOP planning.

Dunaway (2010) identified these factors as follows:

1. *Geographic proximity (exposure)*: the physical proximity or exposure of a private sector entity to hazards or threats that effect the organization and its environment.

2. *Temporal proximity (experience)*: whether, and if so, how recently a private sector entity had experience with a disaster or emergency that affected the organization.

3. *Proximity of capability (capability)*: whether the private sector entity has at hand the capability to manage a threat to its viability assessed as a function of the entity’s size.

4. *Organizational proximity (collaboration)*: whether or not the private sector entity participates in a collaborative organization for regional emergency planning and preparedness (p. 126).

In 2007, the Chartered Management Institute and the Civil Contingencies Secretariat completed the eighth survey on BCM since 1999 (Woodman, 2007). From the 10,600 institute members surveyed, a total of 1,257 responded. Woodman (2007) compiled and presented the research which addressed a wide range of threats that companies encounter across the United Kingdom. In the
study, Woodman (2007) identified proximity of capability as a factor in businesses having a BCP in place, and large organizations (over 250 employees) are more likely to have BCPs than small or medium organizations. The size of the organization supported Dunaway’s (2010) research as a key factor in determining BCP. Woodman (2007) also stated that BCPs are more common in the public sector than in private or not-for-profit organizations. This finding by Woodman may be due to mandates by the Civil Contingencies Act on public sector organizations. Interestingly, Woodman (2007) lists construction and education at the bottom for those companies having BCPs.

Previous experience with a disaster has proved to be an ineffective means to assure COOP planning simply because many organizations cease to exist after a disaster. According to Gallagher (2003), 40% of enterprises that experience a disaster close their doors within five years. Cerullo and Cerullo (2004) cited a similar finding that 43% of companies never reopen and another 29% fail within two years after such a disaster. Runyan and Huddleston (2009) interviewed small business owners and local officials from the Gulf Coast after Hurricane Katrina and found that they did not plan for disasters and were having difficulties recovering from the impact of Katrina. Therefore, COOP planning must be integrated before a disaster. The highest level of management must brainstorm all potential threats to organizations and make plans for combating these hazards (FEMA, 2009c).

Key considerations in reducing organizational failure include assuring continuous performance of essential functions, protecting essential facilities,
reducing loss of life, and achieving an orderly and timely recovery from an emergency (FEMA, 1999). The Health and Human Services Disaster Recovery Leadership Network (DRLN) of Pinellas County (2007) addressed the complexity of creating a COOP and stated the following:

Developing a COOP requires forethought, flexibility, and more than a little fearlessness. It means spending considerable time, effort and possibly some money anticipating worst-possible scenarios. It means preparing, even practicing, for a major disaster's impact on every aspect of business, community, and life as we typically know it. It means recognizing that some of your organization’s most severe losses will occur after the initial catastrophe and disruption of services; this may include subsequent loss of funding, employee attrition and damage to the agency’s reputation. (p. 9)

The Health and Human Services DRLN (2007) continues to stress the importance of COOP by promoting interagency and inter-governmental collaboration. The DRLN works with human service agencies in an effort to prepare these agencies to assist the public at the earliest opportunity should a major disaster occur (Health and Human Services DRLN, 2007). This organization has put together a workbook for human services which details the process for continuity of operations planning and disaster recovery. Its ultimate view of a COOP plan is simply a “how-to” plan. Momani (2010) found only 10% out of 35% of small- and medium-sized businesses with a comprehensive disaster recovery plan actually implement the plans.
Federal Emergency Management Agency

FEMA was formed in 1979 when President Jimmy Carter passed Executive Order (EO) 12127 naming FEMA as the centralized agency responsible for disaster-related federal emergency functions (FEMA, 2010c). This executive order merged over 100 programs responsible for preparation and quick response to disasters (U.S. Department of Homeland Security, 2009). Multiple agencies, such as the Federal Insurance Administration, the Federal Disaster Assistance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, and the Federal Preparedness Agency of the General Services Administration were included in the merger (FEMA, 2010c). The purpose for the creation of FEMA was to merge these agencies into one centralized agency as a means to decrease the complexity of seeking federal disaster relief for states and local governments (FEMA, 2010c). Multiple changes to this new agency continued to occur throughout the years.

One major change occurred with the formation of the United States Department of Homeland Security (DHS). In 1998, officials in Washington created the U.S. Commission on National Security/21st Century because of the belief that the U.S. National Security Policies needed to be reexamined (U.S. Department of Homeland Security, 2009). This belief was directly associated with the rising threat of terrorism. The Commission preformed a comprehensive review of the security polices and provided a strategy which included a recommendation for a National Homeland Security Agency. The vision of this
agency included the transfer of four federal agencies; the Coast Guard, the Customs Service, the Border Patrol, and FEMA.


Currently, FEMA is the governing body responsible for ensuring that federal agencies have a comprehensive and effective program in place which ensures essential Federal functions are maintained under all hazards and circumstances (FEMA, 2001). This responsibility includes coordinating “the federal government’s role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terrors” (FEMA, 2010c, para.1). With all the numerous activities that fall under FEMA’s responsibilities, the core of their existence is to build and support our nation’s emergency management system (FEMA, 2010h).

Theoretical Frameworks

Multiple developmental cycles for continuity of operation planning can be found in the body of literature (Gibb & Buchanan, 2006; Lam, 2002; Maheshwari, Rahul, Gaurav, & Singh, 2010; Shaw & Harrald, 2004; Smit, 2005; Smith, 2002). FEMA promotes the continuity program management cycle (CPMC) as a
standardized management cycle that ensures consistency across all continuity programs. “It establishes consistent performance metrics, prioritizes implementation plans, promulgates best practices, and facilitates consistent cross-agency continuity evaluations” (FEMA, 2009c, p. 5). The continuity program management cycle (CPMC) has been recommended by FEMA for the use of all organizations in the creation and implementation of its continuity programs (FEMA, 2009c). The supporting structures for CPMC lie within its leaders, staff, communications, and facilities (FEMA, 2009c). These four key areas, built upon the foundation of in-depth planning and program management, enable the organization to perform its essential functions and increase its continuity capacity. The cyclical process occurs through testing, training, and exercising the plan so that a proper evaluation may be made on the process and corrective actions taken if necessary. This cyclical process is common with all BCP models in that testing and training are utilized in order to determine discrepancies or weaknesses in the plan and corrective measures are implemented. The essential functions for COOP that are covered in this model are used as the framework for this study. Other models were examined and will be discussed and compared with the CPMC.

All-Hazard Approach

An all-hazard approach is a philosophy that current disaster and emergency management agencies use to address the essential phases of emergency management (Whitworth, 2006). Many public institutions have prepared for these uncertain events through the development of all-hazard
planning (McConnell & Drennan, 2006). This approach seeks to identify all potential threats that may disrupt normal operations and essential functions and conduct risk assessments and vulnerability analyses that address mitigation, preparedness, response, and recovery (Whitworth, 2006). An all-hazard approach seems to comply with the goal of continuity planning in that it seeks to reduce the consequences of any disruptive event (FEMA, 2009c).

**Strategic Approach**

The strategic approach utilizes a top-down model in which all business recovery activities flow from the organization’s strategic goals (Institute of Management and Administration [IOMA], 2007). It is “an approach that is business-driven, based on a combination of planning and management, and potentially leads to long-term value creation and organizational advantage” (Herbane, Elliott, & Swartz, 2004, p. 439). Ritchie (2004) noted that the scope and direction of the organization should take into account changing environments, markets, and customers with the primary purpose of meeting stakeholder expectations. The strategic approach naturally flows from the field of crisis management, which is a precursor to BCM (Herbane et al., 2004). This is evident in Smith’s (2002) definition of BCM which states,

> Business Continuity Management (BCM) is not just about disaster recovery, crisis management, risk management, control or technology recovery. It is not just a professional specialist discipline but a business owned and driven issue that unifies a broad spectrum of business and management disciplines. In particular it provides the strategic and
operational framework to review and where appropriate redesign the way an organization provides its products and services whilst increasing its resilience to disruption, interruption or loss. (p. 3)

Shaw and Harrald (2004) grouped business continuity and crisis management into one model based on their belief that these two terms were strongly correlated. This model served as a framework for the creation of an upper level educational course used by FEMA for Higher Education projects (Shaw & Harrald, 2004). The strategic approach strays away from following “best practices” in business continuity planning because each corporation has different objectives that target the peculiar dimensions of its business. Herbane et al. (2004) recognized this approach as a means to enhance continuity of operation capabilities in the event of a crisis or disaster. Strategic planners focus on improving organizational performance by gaining an understanding of their political environment, their competition, and their response to occurrences that affect normal operations (Herbane et al., 2004). Again, by using the strategic approach, companies seek to prepare defensively against crises while maintaining offensive strategies to competitively compete in their market.

**Holistic Approach**

The holistic approach is very similar to the strategic approach. The holistic approach “identifies potential impacts that threaten an organization and provides a framework for building resilience and the capability for an effective response that safeguards the interests of its key stakeholders, reputation, brand and value creating activities” (Business Continuity Institute [BCI], 2007, p. 5).
Woodman (2007) used this BCI definition as the foundation for the research conducted by the Chartered Management Institute from his study. By definition, BCI seems to resemble the strategic approach with the only difference between the priorities of the models. The holistic approach to BCP seeks to assess and address every business function within the organization with the idea that segmentation by its very nature is incomplete (Glenn, cited in Ketterer et al., 2008). Lam (2002), Glenn (cited in Ketterer et al., 2008), and Smit (2005) are proponents of the holistic approach to BCI. Lam (2002) reported that the holistic approach can be identified by the organization’s business continuity policy. Lam identified eight core steps in the business continuity cycle that correspond with the business continuity policy. These core steps are as follows:

1. Initiate the BCP project.
2. Identify business threats.
3. Conduct a risk analysis.
4. Establish business continuity plan.
5. Design business continuity plan.
6. Define business continuity process.
7. Test business continuity plan.

Glenn (cited in Ketterer et al., 2007) stated organizations that only consider certain areas or segments of an organization to conduct BCP miss the mark. These core steps enable an organization to create a business continuity policy while establishing a holistic plan in the process (Lam, 2002).
Business Assurance and Risk Mitigation Approach

The business assurance and risk mitigation (BARM) approach allows organizations to implement high-impact continuity and security elements at a minimum cost (Shaw & Smith, 2010). This approach seeks to validate the practice of continuity planning by determining if the implementation of continuity practices is worth the financial cost. This tactic is accomplished by comparing “the cost of implementing practices versus the cost of a major security or continuity flaw which may result in significant loss of business, growth and viability of the organization” (Shaw & Smith, 2010, p. 332). Shaw and Smith (2010) agree that the developing stage of BCP should be kept simple for the understanding of all employees. This training can take place during new employee orientation as a cost-saving measure. Emergency evacuation and tabletop exercises should be meaningful and simple.

Continuity of Operation Planning Elements

FEMA (2009a) has updated its components of a continuity plan to consist of 10 elements of a viable continuity capability along with four supporting components of a continuity program foundation. These elements, which serve as the essential components necessary for COOP in this study, include the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j) reconstitution operations; (k) program plans and procedures; (l) risk management; (m) budgeting and acquisition of
resources; and (n) continuity plan operational phases and implementation.
(FEMA, 2009a; FEMA, 2009c). These main categories are prevalent in the
literature. For instance, the National Fire Protection Association (2010)
compares its criteria for business continuity programs with the Disaster Recovery
Institute International (DRII) Professional Practices for Business Continuity
Practitioners and the Disaster Recovery Institute International as well as with the
elements of the Department of Homeland Security and the Federal Emergency
Management Agency. Gibb and Buchanan (2006) also mentioned these
elements.

*Essential Functions*

The foundation to any continuity plan is essential functions; therefore,
these functions must be determined before considering any of the other
continuity elements (FEMA, 2009c). Essential functions allow an organization to
provide vital services, exercise civil authority, maintain the safety of the general
public, and sustain the industrial and economic base (FEMA, 2009c). These
critical functions vary depending on the organization because they are primarily
determined by the organization’s customers and their needs. Many authors,
including Cerullo and Cerullo (2004) and Tammineedi (2010), call the process of
identifying these critical functions the Business Impact Analysis (BIA). Once
risks are identified, it is critical to rank or prioritize them by probability of
occurrence and level of impact on the business. When considering these risks
for the BIA, a “worst case scenario” approach should be used (Tammimeedi,
2010). BIA phase then reviews these scenarios and attempts to predict the
impact caused by these events upon the organization’s operations (Lasecki, 2009).

As noted earlier, a comprehensive continuity plan cannot be adequate unless essential functions have been identified and prioritized, yet more than 40% of companies that have a so-called business continuity plan have never conducted a business impact analysis (Cerullo & Cerullo, 2004). This failure to include a BIA can be problematic and may contribute to businesses closing down after a disaster. For example, Gallagher (2003) noted that 40% of enterprises that experience a disaster are closed down within five years. Another study cited by Cerullo and Cerullo (2004) found that 43% of companies never reopen after a major disaster and another 29% fail within two years. FEMA’s study on the effects of Hurricane Andrew reported that 80% of damaged businesses without a BCP failed within two years (Cerullo & Cerullo, 2004). Therefore, organizations would be wise to identify their essential functions and conduct a BIA so that crucial programs and services to the organization’s mission are not interrupted (Health and Human Services DRLN, 2007).

Delegations of Authorities

Another element needed for a viable continuity plan is called delegations of authorities. Pre-delegating key leaders ensures a rapid response to emergencies by training personnel to carry out specific duties when COOP is activated (FEMA, 2009c). FEMA recommends these delegations be at least three positions deep to ensure that Mission Essential Functions (MEFs) and PMEFS are carried out during an emergency. All employees should know who is
responsible to make key decisions during a continuity situation by creating a
predetermined chain of command (Momani, 2010). This plan will help clear any
confusion if a key leader is incapacitated during a crisis. Delegation of authority
should outline the authority of key decision makers in determining their power to
re-delegate functions and activities as they deem appropriate (FEMA, 2009c). Delegations of authorities should be documented and kept with the other vital
records.

Orders of Succession

Orders of succession are also an essential part of continuity planning. In
the event key personnel become unavailable to perform their duties, orders of
succession would designate the critical roles and responsibilities to other
employees of the organization (FEMA, 2009c). These employees would take on
these roles and responsibilities if and when key leadership were unable to
perform their jobs such as death or resignation. Orders of succession should be
at least three positions deep and geographically dispersed (FEMA, 2009c). This
plan of action allows the organization to facilitate survivability and availability of
successors (Whitworth, 2006). NFPA (2010) lists order of succession under
common plan requirements. It states that entities shall identify lines of
succession and include them in continuity plans. These succession lines should
be identified by position titles rather than individual names (Whitworth, 2006) and
should be documented and kept with the other vital records (FEMA, 2009c).
Continuity Facilities

Continuity facilities are another critical element in the continuity planning process. The first requirement for an alternate facility is the capability to maintain essential functions in a threat-free environment (Whitworth, 2006). Safety considerations such as security measures must be taken into account for those employees who are being relocated to a new site (FEMA, 2009c). Before alternate facilities are determined, a risk assessment should be conducted in order to determine the likelihood of disruptions. Training on relocation procedures should be offered to all employees. Organizations should also determine alternate uses for their primary facility as well as considerations for virtual offices. Continuity facilities can be classified as a “hot site” or a “cold site” (Whitworth, 2006). The only difference between these two facilities is that the hot site is fully functional to resume normal operations. The cold site may require installation of essential equipment before normal operations can be resumed. Another alternative option for organizations is establishment of agreements with other businesses to use their facilities in the event of an emergency. In any case, an inventory of equipment should be recorded with the minimum supplies consisting of essential equipment for continued operations, water supply, electricity, communication capabilities, and generators (Whitworth, 2006).

Devolution of Control and Direction

Devolution of control supports the organization when leadership or key staff personnel are incapable of performing essential functions (FEMA, 2009c). Devolution, also known as “fail over,” allows for the transfer of essential functions
from the organization’s primary staff and facilities to other employees and facilities (Florida Atlantic University Coop Plan, n.d.). FEMA states that the devolution plan should address notice and no notice events. The planning should be developed as a means to identify and transfer essential functions to a safe and secure environment as well as sustain operational capability for an extended period (FEMA, 2009c). Universities should consider pursuing agreements with other universities or similar entities as a consideration in developing their devolution plan (Florida Atlantic University Coop Plan, n.d.).

**Continuity Communication**

The success of any continuity plan is dependent on effective communication internally and externally (FEMA, 2009c). All communication tools should be reliable, redundant, and interoperable until normal operations can be continued (NFPA, 2010). These capabilities should be used as advisory and warning systems for employees, stakeholders, emergency responders, and other pertinent outside entities (NFPA, 2010). All communications should resemble those capabilities used during day-to-day operations. Secure and non-secure communications, such as voice systems, video conferencing, information technology systems, and other messaging systems, must be scrutinized on their resiliency under various threats and disruptions (FEMA, 2009c).

**Vital Records Management**

Vital records are simply those files and documents necessary for performing essential functions (Health and Human Services DRLN, 2007). FEMA places these vital records into two separate categories: emergency
operating records and rights and interests records (FEMA, 2009c). Emergency operating records are simply those records needed to continue essential functions during an emergency. One of these records is the continuity of operation plan that includes delegations of authority, staffing assignments, orders of succession, and so forth. The other category is rights and interests records which include documents such as payroll, social security, insurance records, and inventory records. This category focuses on the protection of legal and financial rights of the organization and its personnel (FEMA, 2009c). All of these records and databases should be stored in electronic and paper form and be made accessible to those with responsibilities defined in the plans (Bjelmrot, 2007).

Health and Human Services DRLN (2007) states that these records should be stored in a fireproof and waterproof environment as well as in multiple locations. Policies should also be in place for review and updating these records on a routine basis.

*Human Capital*

People are one of the most important components in having a continuity plan. Businesses that fail to focus on the human aspect in creating their BCP have missed the mark (Ketterer et al., 2007). Saving lives and reducing the chance of further injuries or deaths during an emergency should be top priority. People need to know that their well-being is not compromised during an emergency. Communication is vital during an emergency. Organizations should have procedures in place that incorporate a process for accounting and contacting personnel during an emergency as well as a contact number or
website for the employee to contact the organization during an emergency (FEMA, 2009c). Other important issues that concern employees are pay, leave, work scheduling, and staffing. BCPs that are created with the best interest for the employees have the greatest chance of working (Ketterer et al., 2007).

**Test, Training, and Exercise (TT&E) Programs**

Test, training, and exercise programs become the fruition of all the preparatory work put into creating the COOP. This essential element allows the continuity manager to see the pieces of the puzzle come together. It provides the organization immediate feedback on the effectiveness of the plan and its ability to perform essential functions during emergencies (FEMA, 2009c). Testing is used to ensure that “equipment and procedures are maintained in a constant state of readiness to support continuity activation and operations” (FEMA, 2009c, p. K-1). Testing should be conducted at least once a year with results of the testing documented.

U.S. Department of Homeland Security (2007a) created a national standardized program called the Homeland Security Exercise and Evaluation Program (HSEEP) which enables exercise planners to create, design, conduct, and evaluate exercises to improve organizational preparedness. It should be noted that creating and implementing exercise policies is an evolving process that will constantly change (U.S. Department of Homeland Security, 2007b). Continual testing and training will assist in determining these changes.

Flin (1996) suggested multiple ways to evaluate training methods. These methods are as follows:
The most common training methods are exercises, simulations, case studies of major incidents, lectures (on leadership, principles of command, operational procedures), directed reading (the military favour biographies of famous commanders, accounts of battles and texts on command), and on-the-job learning. (p. 70)

These training methods could be divided into two types of categorical exercise drills: discussion-based and operational-based (Cerullo & Cerullo, 2004). Discussion-based exercises are exercises that utilize the human mind to process a course of action during various disasters. Beckman (2006) found that discussion-based exercises are cost-effective compared to operational exercises. Flin (1996) found that these exercises can range anywhere from directed readings to tabletop exercises. Some discussion-based exercises, such as lectures, case studies, and background readings, are used for compilation of knowledge about a major incident. This knowledge usually comes from a specialist who has either experienced the incident firsthand or has received a detailed account of the particular incident (Flin, 1996). These exercise drills are very useful in formulating an emergency response plan and providing insight on successful and non-successful scenarios that occurred in the past.

Other training exercises, such as seminars, workshops, and tabletop drills, are also useful in evaluating the emergency response plan (Flin, 1996). The tabletop scenario is a specific simulation that usually consists of key personnel, in supervisory positions, who come together to discuss possible emergency situations (Lindell, Prater, & Perry, 2007). Any type of emergency is “fair game”
during these scenarios. Once an emergency topic is chosen, the selected group will perform a “walk-through” analysis of the scenario. This analysis is to make certain that everyone knows his or her specific role in responding to the disaster. These informal discussions are usually a few hours in length and lead to a reduction of stress among participants (McIntire, 2007).

A drill is a hands-on exercise used for a single-function response (Beckman, 2006). This exercise is narrow and precise in nature and seeks to improve a certain function by reducing time and effort during the response and recovery phase. This small and limited exercise allows for immediate discussion and feedback. Another advantage of this operational exercise is it only takes a few hours from start to finish (McIntire, 2007). Another operational exercise is called a functional exercise. This exercise is sometimes called a control post-exercise and consist of small exercises with different entities working together to accomplish the same task (Bechman, 2006). Unlike drills, functional exercises can incorporate other agencies in an attempt to control the situation; however, they are still limited in scope. These exercises also are good for testing of equipment used in an emergency. Full-scale exercises encompass all agencies and departments that are deemed necessary to control the situation (McIntire, 2007). These large simulations involve nearly every organization that normally would be involved in a disaster. It is treated as a real-life situation and involves multi-agency collaboration. Each participating department can learn numerous lessons through the use of full-scale exercises. Operational- and discussion-based exercises enable all participants to understand the key functions of ERP.
During these exercises participants will assemble and discuss their roles in an emergency while becoming acquainted with policies and procedures set forth by the facility’s emergency response plan (McIntire, 2007). Test, training, and exercises are important for continuity planning. However, most sporting venues that use these exercises to practice emergency plans and procedures usually are found in the professional realm with collegiate venues lacking in overall security measures (Beckman, 2006).

Risk Management

Effective risk management programs are not a regular part of most colleges and universities (Cassidy et al., 2001); however, hazard mitigation is a good investment for all higher education institutions (FEMA, 2003). Therefore, FEMA has collaborated with six universities in order to create an action plan for building a disaster resistant university. This publication is designed for institutions that are just getting started in becoming disaster resistant; however, it also serves to provide a foundation to COOP planning. The document includes COOP elements but mainly offers ideas and suggestions in the identification of hazards and risk assessment, organizing and identifying resources, and developing and implementing a mitigation plan (FEMA, 2003). FEMA has furnished literature for universities to become disaster resistant and provided funding opportunities to these universities in order to become compliant in hazard mitigation planning using the Disaster Resistant University (DRU) model outlined in Building a Disaster Resistant University (FEMA, 2003). The University of Southern Mississippi (USM) was one of the public four-year institutions in
Mississippi that was awarded grant money to provide a safer environment, protect assets, and ensure continuity of operations. In addition to meeting these objectives, USM outlined and documented prioritized mitigation strategies that address both natural and manmade hazards. These mitigation measures include policy actions, planning initiatives, and physical improvements to address specific vulnerabilities (USM, 2010). Another tool that has been useful in preparing colleges and universities for all forms of disasters is the National Campus Safety and Security Project designed by the National Association of College and University Business Officers (2008). All these actions are the first steps in COOP planning but are necessary in achieving COOP capabilities.

Since risk is prevalent in life and cannot be eliminated from the environment, actions should be taken to minimize the possibility of such losses resulting from various types of risk (Hall, 2006). In order to manage risk, it is important to understand the meaning of risk. ASIS International (2003) defines risk as “the possibility of loss resulting from a threat, security incident, or event” (p. 5). The NFPA (2007) identified these potential hazards in three categories: natural hazards, human-caused events, and technological-caused events.

Natural hazards are those hazards beyond the control of human vices. These hazards include geological, meteorological, and biological events. Geological and meteorological hazards include hazards such as earthquakes, volcanoes, landslides, tsunamis, flash floods, snow storms, lightning strikes, forest fires, drought, tornados, and hurricanes. Biological events are different in
that they are epidemic in nature. Examples of these hazards include smallpox, SARS, BSE, plague, and West Nile virus (NFPA, 2007).

According to FEMA (2009d), during the last 10 years over 550 presidential disasters in America have resulted from these natural hazards with the majority falling within the meteorological group (presidential disaster). Presidential disasters are only declared if the individual state or local government does not have the capability to provide adequate assistance to those affected by the disaster (FEMA, 2009d).

Another potential hazard that organizations may experience is within the scope of humanity. These hazards are human-caused events that occur either intentionally or accidentally. Examples of these hazards are terrorism, labor disputes, air pollution, energy failure, explosions, building collapse, and economic depression (NFPA, 2007).

The last potential hazard category that organizations may experience comes in the form of technology. These technological-caused events can be unrelated to natural- or human-caused events. Examples include computer mainframes, software, telecommunications, and ancillary support equipment (NFPA, 2007).

Once all risks have been identified, the organization should categorize the risks by frequency and severity of the hazard. Potential impact and damage to people, property, operations, and the environment should be considered in the process. Multiple strategies are used to establish a viable and effective way to manage risks. A risk management plan must include a comprehensive
assessment that identifies all potential hazards or threats with clarification on the magnitude and frequency of these events (Lasecki, 2009). Gallagher’s (2003) definition seems to emulate many other sources within the current literature. Gallagher defines risk management as “the process of identifying risks, evaluating their potential consequences and determining the most effective methods of controlling them or of responding to them” (p. 8). According to Fried (2010), risk management focuses on identifying risks and eliminating or reducing those risks. Ammon (2010) used a similar strategy called the DIM process, which simply means to develop, implement, and manage the risk management plan. In order to develop the plan, all risks must be identified and categorized by relative frequency and severity of the events keeping in mind that the main focus is to reduce or eliminate the threat or hazard (NFPA, 2007).

The risk management plan must transition to the implementation stage. This stage requires effective communication with all employees regarding the risk management process. Each person must understand his or her role for implementing the plan (Ammon, 2010). Fried (2010) mentioned one way an organization can assist in the implementation of the risk management plan is using the ECT approach. This approach uses seven words that end with the letters ect as an easy-to-remember guideline to follow. These seven elements consist of reflect, deflect, detect, inspect, correct, reinspect, and reflect. Again, this process should be cyclical in nature in order to assure best practices are being implemented.
Once implementation is accomplished, the risk management plan must be managed. Managing the plan is a cyclical process. The risk manager is responsible for monitoring the plan, conducting inspections, supervising training, reviewing accidents, and implementing any changes in the process (Ammon, 2010).

**Reconstitution**

Reconstitution is simply returning back to normal operations and usually occurs immediately after an event (FEMA, 2009c). Reconstitution plans should be made regardless of the level of disruption caused by the event. It should include instructions for a safe and orderly return to the primary facility. It can coincide with recovery and restoration procedures. A prioritized approach to returning to normal business operations and an examination of the facility to make sure it is safe and operable for employees should be included in the plan. Once the facility is determined safe and operable, a checklist of essential equipment or other essential items that allow the organization to function should be prioritized and completed with communication of completion directed to a central location or a specified individual (FEMA, 2009c). While this process is underway, essential functions should be maintained either from the alternate site or primary facility until the facility is ready for the transfer.

**Program Plans and Procedures**

In order for BCM to be effective, it must align with the organization’s mission statement (Freestone & Lee, 2007). An organization must be capable of responding to a continuity incident or event at a given time (FEMA, 2009c). One
way to achieve this readiness capability is by embedding BCM into the organization’s culture (Freestone & Lee, 2007). However, if BCM is going to become part of the organization’s culture, leadership must be the driving force behind it (Karakasidis, 1977). Training and awareness programs that include BCM training for new and existing staff should be offered on a regular basis in order for staff to become familiar with all aspects of the plan. Staff should be familiar with the location of the alternate continuity facility (Freestone & Lee, 2007). Plans and procedures for activating the BCP should be well-defined and include instructions for moving to the alternate facility, moving vital records, acquiring necessary supplies, and notifying appropriate personnel (FEMA, 2009c).

**Budgeting and Acquisition of Resources**

Budgeting for COOP planning is a difficult task and must go through the planning process in order to ensure continuity resources are available during a crisis (FEMA, 2009c). Companies must identify all supporting requirements necessary to implement an effective continuity program. Some of these supporting requirements consist of people, supplies, communications, facilities, technology, infrastructure, and transportation. During the planning stage, the organization needs to identify and prioritize the allocation of budgetary resources with a plan for utilizing these resources on an emergency basis. The development of a multiyear strategy or budgeting plan may be used as a means to meet budgetary requirements, such as acquiring, equipping, maintaining, and improving the prioritized needs of the organization (FEMA, 2001).
budgetary plan also considers the costs associated with continuity test, training, and exercise activities (FEMA, 2009c).

**NCAA Division 1 Studies**

Even though literature is lacking concerning COOP in collegiate athletic departments, multiple studies have been conducted on certain continuity elements at Division 1 athletic departments that have led the author to suspect that COOP planning may be needed in collegiate athletic departments. The following studies have focused on emergency preparedness and planning at NCAA Division 1 schools and universities.

Beckman (2006) studied awareness and perceptions of emergency responders that may be used in the event of an emergency at a Division 1A football game. Beckman simulated a tabletop exercise by using 27 participants including representation from agencies such as the institution’s athletic department, AAA ambulance, university police, American Red Cross, police department, fire department, State Health Department, State Department of Homeland Security, Emergency Management, and other Institutional decision makers responsible for emergency response. The participants were required to attend a four-hour tabletop session and take a pretest and posttest. The questionnaire asked 18 statements regarding awareness and perceptions of emergency response training, agency and interagency roles and responsibilities during an emergency, and the attractiveness of Division 1 A collegiate stadiums as a terrorist target. Participants of the study were given the institution’s emergency action plan to assess its effectiveness during the exercise; however,
many of the responders indicated that they were not familiar with the plan. Overall, this study revealed a lack of testing and training programs in Division 1 athletic departments.

Cunningham (2007) surveyed 238 athletic administrators from 119 Division 1A football athletic departments to determine perceived capabilities in regard to event security management. Questions from the survey incorporated themes such as emergency evacuation planning, emergency management, security policies, agency collaboration, credential control, perimeter control, liability, and spectator control. According to Cunningham, each of these themes is needed for effective security event management. Participation in the study was limited to 40% ($n = 81$) of the administrators responsible for game day security. Of these respondents, 60% had no formal training or education in event security management. Cunningham (2007) is not the only study that reveals weaknesses in athletic department preparedness. Baker, Connaughton, Zhang, and Spengler (2007) investigated risk management measures implemented after September 11, 2001, in regard to terrorism. Baker et al. surveyed football stadium managers for all NCAA Division 1A football stadiums. As a result, the study revealed 47% of participants had never received terrorism-related training. One positive statistic that evolved through the study was 87% of football stadiums had emergency action plans and these plans are reviewed at least annually. However, even though these institutions are compliant with literature recommendations, they fail miserably in providing training. Baker et al. (2007) reported that only 25% of these institutions have emergency action plans,
actually practice mock or simulated attacks, and only 13% provide formal training to their staff regarding terrorism training. Other researchers, such as Pantera et al. (2003), continue to confirm similar findings in regard to training preparedness in athletic venues. These studies reveal a major need for schools to train their staff and personnel on how to effectively respond to an emergency.

A survey of lightning policies was conducted at 48 Division 1 football institutions from Florida, Michigan, New York, North Carolina, and Pennsylvania and concluded that only 8% \((n = 4)\) of these institutions have a written lightning policy (Walsh, Hanley, Graner, Beam, & Bazluki, 1997). These particular states were selected for the study because they ranked in the top 5 for combined injuries and deaths in a 35-year timeframe which correlates to 31% of the 13,012 reported injuries and deaths from lightning in the United States. Gratz, Church, and Noble (2004) conducted a similar study of Division 1 football stadiums in an attempt to promote lightning safety policies at these large stadiums. Gratz et al. reported an 18% increase in college football attendance from nearly 29.3 million to over 34.6 million from the four years starting in 2000-2003. “Lightning is the most dangerous weather hazard that people encounter each year” (Gratz et al., 2004, p. 3), and stadiums are continually increasing in total attendance at football games nearly every year. Therefore, institutions should consider the safety of spectators if and when lightning strikes their stadiums.
Potential Hazards

*Inclément Weather*

Normal operations can be effected by all types of potential hazards. Natural hazards such as hurricanes, floods, and tornados are usually the culprits that cause most of the disruptions of normal operations. Hurricanes Katrina and Rita catapulted the awareness for the need of COOP planning in higher education and athletic departments. After Katrina, students from at least 12 colleges and universities were displaced around the country waiting for direction from their institution on what to do next. Even before this major disaster occurred, literature concluded that institutions were not prepared for such an event. For example, Henderson (2005) stated that schools and universities were focusing more on emergency action plans than on continuity planning. Wolverton (2005) found that many institutions have crisis management plans; however, these plans do not account for major disasters that displace athletes or cause cancellations in athletic events. Wolverton quotes the Commissioner of the Sunbelt Conference as saying that “[c]onferences and teams make plans for if it rains, but we don’t plan much beyond that” (p. 37). However, despite the lack of preparedness, Tulane University became an example to the other institutions by the way it communicated to its students. The university’s president, Scott S. Cowen, posted a blog on Tulane’s website that informed faculty, staff, and students of the progress that was being made on behalf of those involved. After it was apparent that the university would remain closed at least though the fall semester, he focused on getting help for the students. On September 1, 2005,
he was able to speak with representatives from the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the American Association of State Colleges and Universities. Later that day, a conference call was held to discuss how other universities around the country could provide assistance to the students at Tulane. These accrediting bodies of Higher Education along with the American Association of Community Colleges, the Council of Independent Colleges, and the Association of Jesuit Colleges and Universities made a decision to allow currently paid students to attend their respective institutions without charge for tuition. Provisions for student athletes were also included in the plan. Cowen made clear that the athletic program was an integral part of reestablishing its program. Cowen (2005) stated that “we want our athletes to carry the torch, face, and name of Tulane University during this difficult time” (p.1). However, even though the financial aspect was covered for athletics, other problems arose. Some examples of the chaotic havoc that took place in the athletic department at Tulane were occurring at other institutions as well. For instance, Tulane’s football team, by way of Houston, ended up at Louisiana Tech, the golf teams went to Southern Methodist University, Texas A & M hosted the men’s basketball and tennis team along with the women’s volleyball, soccer, tennis, and swimming and diving teams. Texas Tech hosted the baseball team and women’s basketball team. Many of the nonathletic students were sent to Jackson State University during the evacuation but were allowed to attend other schools of their choice until the Tulane resumed normal operations (Wolverton, 2005). Many of
these logistical problems could have been prevented through proper planning (Fried, 2010).

Hurricanes Katrina and Rita are just two of the many examples found in the body of literature of where inclement weather has caused havoc upon athletic departments. For example, in 2010, the Iowa State Cyclones closed multiple parking lots for the opening football game due to summer flooding (“Parking for First Iowa State Football Game Impacted by Flooding,” 2010). Even though the flooding did not impact the game itself, it caused loss of revenues for the facility as well as last minute planning to redirect traffic to other parking lots. Multiple tailgaters were forced to leave their recreational vehicles at home due to lack of parking space. In 2008, a tornado ripped a hole in the Georgia Dome roof where the Southeastern Conference men’s basketball tournament was being played. The tournament had to be postponed and moved to a smaller stadium across town with the only fans being immediate family members of the players and the schools’ band members and cheerleaders (Dougherty, 2010). In 2002 a tornado blasted through the Mississippi University for Women’s (MUW) campus causing significant damage to multiple buildings with one building being completely destroyed. Other damages caused by this tornado included loss of power lines, destroyed cars, and multiple shattered windows on campus. Fortunately, no deaths occurred on campus (MUW, 2002). Hurricane Camille caused catastrophic damage to the USM’s Gulf Coast Research Lab in 1969 (USM, 2010). An unusual amount of heavy snow in Britain caused thousands of schools to close and forced the cancellation of multiple sporting events including
the postponement of two League Cup soccer games (“Britain Blasted by Heavy Snow,” 2010). During the Vancouver Olympics in Canada, the first official training run was canceled for women’s downhill skiing due to dense fog (“Vancouver Olympics Cancel Trial Run,” 2010). Many other problems that arose at the Vancouver Olympics can be attributed to an unusual rise in temperatures and the lack of snow and ice (“Vancouver Olympics Unusual Temperatures,” 2010). Broom (cited in “Vancouver Olympics Unusual Temperatures,” 2010) reported that over 28,000 tickets were canceled due to the weather and represented a revenue loss of $1.5 million. Even though multiple hours of time and effort were put into making Canada shine during this worldwide event, the lack of cooperation in weather had the opposite effect.

**Biological Hazards**

Inclement weather, such as hurricanes, floods, and tornados, are not the only culprits that cause disruptions of normal operations. Other natural hazards have been documented to have the same effect on day-to-day operations. Concerning biological natural hazards in Manila, Philippines, the Commission of Higher Education postponed college classes because of an H1N1 threat (Tan, 2009). The same thing happened in Alabama when Stillman College had to cancel a football game due to fears created by H1N1 virus (“Alabama College Forfeits Football Game Due to H1N1 Fears,” 2009). However, even this type of disaster is not new to athletics. In 1989, Siena campus experienced a measles outbreak which caused several basketball games including the North Atlantic Conference Tournament to be quarantined (Siena Saints, 2011).
Human Hazards

Another common type of hazard which has caused havoc in the university and sporting realm are human-caused events. Included in these events are the publicized shootings that occurred at Alabama, Virginia Tech, and more recently at the University of Texas. Terrorism also is included under human-caused events and has become a force to be reckoned with. Barbisch (2005) stated that, “The objective in terrorism is to create destruction and chaos that result in feelings of overwhelming fear and vulnerability for those under attack” (p. 77). Since the attacks of 9/11, America has finally comprehended the imminent danger that terrorists pose to this country. Even though these attacks were not the first terrorist attacks in America, they were the most powerful in their effects (Johnson, 2005). It is an extremely hard task to fight against terrorism because terrorists do not value human life and they are willing to sacrifice themselves in order to reach their objective. Terrorism is unpredictable because not all terrorists need a purpose or an objective to commit an act of violence (Johnson, 2005). In October 2005 a student from the University of Oklahoma committed suicide by detonating a 3-pound bomb 200 yards from Memorial Stadium (Gardiner, 2006). This same student reportedly tried to get in the facility two times but was stopped by security in order to check his backpack. The student then fled to a tree where the explosives detonated possibly unintentionally. It was ruled a suicide but no one is positive that it was not an attempted terrorist attack (Faulk, 2005). The National Football League Commissioner Roger
Goodell stated that sports-packed stadiums pose a real risk for terrorism.

Goodell stated that

We have to remain vigilant and our efforts must be geared toward an aggressive position to keep attacks from happening at our sporting events. Because if it happens in another stadium, then it will affect us all. We have to make sure that our fans come to games, feel comfortable about being there and know that they will be safe. (p. 2)

Hall et al. (2007) reported that suicide terrorism is an effective way to achieve the goal of mass casualties and mass humiliation. Hall et al. continue to contend that it is impossible to ensure human-caused events do not occur; therefore, it is imperative that organizations prepare, respond, and recover for these types of emergencies.

Terrorism is only one example of human-caused hazards that disrupt sporting events. Other examples of hazards that have caused problems at sporting events are malfunctions in equipment or supplies. For example, a minor league baseball team experienced a malfunction in its firework display causing fans to run for safety and injuring two people (“Firework Malfunction,” 2010).

**Technological Hazards**

Escalators are another potential problem at sporting events. There are nearly 6,000 escalator-related injuries reported at emergency rooms throughout the United States each year (“Scottrade Accident is Probed,” 2010). However, no matter what causes the disruption, institutions need to be prepared.

According to Fried (2010), “Safety is the most important element for any facility”
The National Collegiate Athletic Association (2010) echoes Fried by stating that “it is the responsibility of each member institution to protect the health of and provide a safe environment for each of its participating student-athletes” (p. 3). Customers and consumers need to know that facilities are prepared to handle a worst case scenario (Fried, 2010). Forseeability is essential for proper security management. Nearly every facility will have some security concerns, but proper planning can prevent many of these security and safety problems experienced in the past (Fried, 2010).

Conclusion

There are multiple definitions and approaches to business continuity planning. Most researchers’ definitions agree that BCP is an “ongoing process supported by senior management and funded to ensure that the necessary steps are taken to identify the impact of potential losses, maintain viable recovery strategies, recovery plans, and continuity of services” (NFPA, 2010, p. 4).

Natural disasters and terrorism continue to pose serious threats on organizations; therefore, businesses must become proactive in preparing for the unexpected (Wheatman, 2001). An all-hazard approach prepares organizations for any disruptive event by identifying all potential threats that may disrupt normal operations (Whitworth, 2006).

Collegiate athletic departments face the same threats of private and public businesses. Multiple disruptive events have caused havoc at various athletic events causing change of venues, loss of revenue, injuries, and deaths. In order to combat against these disruptive events and provide a safe environment for
everyone, athletic departments must be proactive in assuring that necessary steps are implemented to maintain normal operations. Creating, implementing, and practicing continuity of operation planning reduces the chaos caused by disruptive events and expedites the process of returning to normal operations.
CHAPTER III

METHODOLOGY

This chapter provides an overview of the methods and procedures used to examine continuity of operations planning preparedness of the National Collegiate Athletic Association (NCAA) Division 1 athletic departments. The chapter outlines the research design, participants, instrumentation, procedures, and data analysis used in this research process.

Research Design

For this study, a quantitative descriptive methodology design was used to examine the level of continuity of operations planning preparedness in collegiate athletic departments. The independent variables included information regarding demographics of schools, such as student enrollment, conference affiliation, type of institution, total athletic budget, and the occurrence of a presidential declared disaster. The dependent variable was the overall score analyzed from the questions located in the Athletic Department Survey of Continuity of Operation Planning Preparedness. Questions were formulated to encapsulate the ten elements of a viable continuity capability and the four supporting components of a continuity program foundation taken from the Continuity Assistance Tool (CAT) for Non-Federal Entities and the Continuity Guidance for Non-Federal Entities (FEMA, 2009a; FEMA, 2009c). Continuity planning is a fundamental responsibility of public and private entities; therefore, it is highly recommended that athletic departments reinforce their compliance with federal government guidelines and recommendations (FEMA, 2009c).
Participants

The aim of this study is to examine continuity of operations planning preparedness of the National Collegiate Athletic Association (NCAA) Division 1 athletic departments. The researcher will use a stratified, voluntary sample of senior, associate, and assistant athletic directors, and facility directors from NCAA Division 1 athletic programs nationwide. All NCAA Division 1 schools listed in 2008-2009 data from the U.S. Department of Education (2008-2009) were asked to voluntarily participate in this study.

Instrumentation

A questionnaire was developed by the researcher to examine athletic departments' level of preparedness in regard to continuity planning preparedness. The survey was created through a process of researching relevant literature, revisions and recommendations from an expert panel, utilization of a focus group, content validity testing, and modifications and revisions of the preliminary scale. The survey consisted of Part I: Athletic Department Survey of Continuity of Operation Planning Preparedness and Part II: Demographics.

Part I: Athletic Department Survey of Continuity of Operation Planning Preparedness contains 42 questions derived from the 10 elements of a viable continuity capability and 4 supporting components outlined in the Continuity Guidance for Non-Federal Entities (FEMA, 2009c). The elements and components include the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity
communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j) reconstitution operations; (k) program plans and procedures; (l) risk management; (m) budgeting and acquisition of resources; and (n) continuity plan operational phases and implementation. Questions specifically regarding program plans and procedures were not created because of major similarities in the other elements and components. Two other supporting measurement tools that clarified and explained these elements and components was found in the Continuity Assistant tools for Non-Federal entities (CAT) (FEMA, 2009a) and the Continuity Evaluation Tool Measurement (FEMA, 2009b). All three of these publications were created by the United States Department of Homeland Security in compliance with multiple authorities such as the National Infrastructure Protection Plan, the National Incident Management System (NIMS), Homeland Security Presidential Directive 1, and the National Exercise Program Implementation Plan (FEMA, 2009a; FEMA, 2009b; FEMA, 2009c). These elements and components are prevalent in the literature; however, most sources rarely use the same 14 components as a standard for COOP. Multiple ideas on which components should be included in continuity planning vary throughout the literature. For instance, the National Fire Protection Association (NFPA) (2010) compares its criteria for continuity of operation planning programs with the Disaster Recovery Institute International (DRII) Professional Practices for Business Continuity Practitioners and the Canadian Standards Association (CSA) Z1600-08 Emergency Management and Business Continuity Programs.
Other sources shared similar components in continuity of operation planning such as The ASIS General Security Risk Assessment Guideline (2003) and the Good Practice Guidelines 2008 (BCI, 2007). The researcher used FEMA’s elements and components because FEMA’s continuity of operations program “provides the foundation for the nation’s first Essential Function, Enduring Constitutional Government, and the foundation for the tiers of the National Response Framework, operational governments at all levels-local, State, and Federal-capable of performing their essential functions, under all conditions” (FEMA, 2010a, para.1). FEMA is the governing body responsible for ensuring that all federal agencies have a comprehensive and effective program in place in order that essential Federal functions are maintained under all hazards and circumstances (FEMA, 2001). This responsibility includes coordinating “the federal government’s role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terrors” (FEMA, 2010c, para.1). Also, a primary goal of FEMA is to support colleges and universities by helping create an emergency management system capable to sustain continuity of operations by taking an all-hazard approach (FEMA, 2010b). Questions from the Athletic Department Survey of Continuity of Operation Planning Preparedness were assessed using a 5-point Likert scale with 1 being No Progress, 2 being Limited Progress, 3 being Moderate Progress, 4 being Substantial Progress and 5 being Objective Achieved. These five categories came from the task rating criteria listed in the Continuity Evaluation Tool: Version 7 (FEMA, 2009b). The
researcher used task rating criteria to define the categories. The categories are defined as: 1. no progress has been made toward achieving the identified continuity requirement; 2. preliminary efforts have been initiated such as plans to develop this aspect of the capability; 3. significant efforts are underway but important gaps remain; 4. Efforts in this area are established and mature with few non-significant gaps; 5. Requirement is fully achieved with regard to this capability.

Part II: Demographics will include school name, conference affiliation of school, location of school, number of students enrolled at school, athletic budget, orientation of school (private or public), and whether the school has experienced a presidential disaster declaration within the last 10 years. A presidential disaster declaration will be defined as an institution receiving federal funding due to a disaster. The student body and the athletic budget will consist of four categories based on quartile percentages calculated from NCAA Division 1 schools using figures from 2009 equity in athletics data retrieved from the U.S. Department of Education (2008-2009). The student categories are < 5,000, 5,001 to 10,000, 10,001 to 15,000, and > 15,000. The athletic budget categories are < $9,500,000, $9,500,000 to $14,500,000, $14,500,001 to $27,000,000, and > $27,000,000.

Procedures

The Athletic Department Survey of Continuity of Operation Planning Preparedness was created by using FEMA’s guidelines for COOP. The researcher used the 10 elements of a viable continuity capability and 4
supporting components outlined in the Continuity Guidance for Non-Federal Entities (FEMA, 2009c) as the foundation for the creation of the questions listed in the Athletic Department Survey of Continuity of Operation Planning Preparedness. Once the instrument was formed, it went through content and face validity measures using a focus group and a panel of experts to determine relevance, clarity, appropriateness, and other issues regarding the nature of the instrumentation (Krueger, 1998). Face validity measures determined if the reading level was appropriate to respondents and if wording could be obtrusive toward any particular subgroup. Content measures determined those items that were redundant, poorly worded, or simply needed to be deleted (Churchill, 1979). Content validity was derived from a systematic and technical analysis of the test content. Hopkins (1998) defined content validity as “the degree to which the items of that test are a representative sample of the content universe or behavior of the domain being assessed” (p. 77). The expert panel consisted of an emergency and fire safety coordinator from the Institution of Higher Education Board, a flood plan development officer from city government, an assistant facility director from an NCAA Division 1 university, and an assistant vice president of information systems from a community bank. Each person had training and experience in continuity of operation planning (COOP). Some of their specialty training was more specific to certain areas, but all of these personnel helped plan and train employees in COOP procedures.

Feedback was assessed and the instrument was refined. Approval from the Institutional Review Board (IRB) was requested to distribute the survey to
participants by using an electronic version or a mailed version. Once permission was granted from IRB, a pilot study was conducted using senior, associate, and assistant athletic directors and facility directors of universities and colleges who are classified as a NCAA Division II school. The researcher selected one private and one public institution, with the largest student body, from each of the 10 regions specified by the Federal Emergency Management Agency (FEMA) to participate in the pilot study (2010d). Selection of these institutions was based on the information from the 2009 equity in athletics data retrieved from the U.S. Department of Education (2008-2009). Regions that failed to meet these specific requirements and non-respondents to the surveys were replaced by other similar institutions. A projected sample of at least 12 participants was selected to participate in the pilot study. The researcher trained an assistant to help with the data collection. This assistant was used to collect the participants’ names and email addresses for the pilot study. Contact information was retrieved from the 2009-2010 National Directory of College Athletics publication (NACDA, 2009), the institution’s athletic website, or by calling the institution’s athletic department.

Once the individual responsible for COOP in the athletic department was identified, the researcher or assistant informed him or her about the study via email and ask for voluntary participation. The email consisted of the online hyperlink to the survey, a voluntary participation statement, IRB approval statement, and the researcher’s contact information. The questionnaire was administered by using an online measuring tool called Survey Monkey. Completion of the survey took approximately ten to fifteen minutes. Once the
email was sent, the researcher gave the participants two working days to fill out the questionnaire. After two working days passed, a follow-up email was sent reminding them about the survey. After two more working days passed, the researcher assumed that the participant has declined to participate in the pilot study and other similar institutions were contacted to take the place of the declined participant.

The minimum numbers of surveys (n=10) were completed and the data was entered into SPSS for analyses. The purpose of this pilot study was to further understand the face validity of the instrument from the perceptive of a similar population and determine the internal consistency by measuring the Cronbach alpha statistic which should exceed .70 to meet reliability requirements (Cronbach, 1951).

The pilot study was completed and analyzed. The researcher dropped 16 questions from the original survey due to multiple responders failing to complete the entire survey. Once these questions were dropped, an analysis on the final 26 questions was run using SPSS. The Cronbach alpha statistic score of .985 was more than acceptable to send the survey to the targeted participants. Procedures for the targeted participants were similar to the pilot study. Approval from the Institutional Review Board was obtained to conduct the study. The researcher collected the participants’ names and email addresses from the 2009-2010 National Directory of College Athletics publication (NACDA, 2009), the institution’s athletic website, or by calling the institution’s athletic department. Once the individual responsible for COOP in the athletic department was
identified, the researcher informed him or her about the study via email. An email, from the researcher’s email address, was sent to those participants (n=344) informing him or her about the study via email and asking for voluntary participation. The email consisted of the online hyperlink to the survey, a voluntary participation statement, an IRB approval statement, a rational statement for the study, and the researcher’s contact information. Step-by-step directions were in the email as a means to access the online hyperlink to the survey. The survey was administered by utilizing an online measuring tool called Survey Monkey. This online measuring tool has security features that provide assurance to the participants that confidentiality was maintained. Only the researcher and advisor had the login information and password needed to access the material. All other confidential materials were stored in a locked filing cabinet or a password coded computer. Participants can expect the survey to take approximately five to ten minutes to complete. The researcher gave the participants two working days after the initial email was sent, to fill out the questionnaire. Once two working days passed, a follow-up email was sent reminding them about the survey. After seven working days passed, the researcher sent a final email allowing the participants one last chance to respond to the survey. The researcher then closed the survey to compile all the completed surveys to review the response rate. The response rate was not considerably lower than the approximated 30% (N=103), so the researcher did not send a mailed copy of the survey to those participants who failed to participate in the study using the online version. A sufficient number of surveys
(N=91) were completed and the data was entered into SPSS version 16.0 for analyses (SPSS, 2007).

Data Analysis

Analysis of variance (ANOVA) was used to analyze $H_1$ through $H_6$ with the level of significance at $p < .05$. Tukey’s HSD tests will be used to follow up on any significant ANOVA’s found within the hypotheses. The researcher determined how to deal with missing data on the Athletic Department Survey of Continuity of Operation Planning Preparedness once the surveys were completed. The researcher expected approximately a 34.4% return rate of completed surveys (N=100). Descriptive statistics (means, standard deviations, and frequencies) were also used to analyze the demographic variables and hypotheses. SPSS (Version 18) was used to conduct the data analysis.
CHAPTER IV
STUDY ONE
CONTINUITY OF OPERATIONS PLANNING PREPAREDNESS
OF NCAA DIVISION 1 ATHLETIC DEPARTMENTS

Introduction

Disasters and emergencies happen! Ketterer et al. (2007) associated the phrase “decade of disaster” in an attempt to adequately portray the first 10 years of the 21st century. In order to support this claim, Ketterer et al. used data from the emergency management database, which declared that the top three disasters according to number of deaths in 2005 were Pakistan, Guatemala, and the United States. The report continued to list the countries that suffered the most natural disasters in 2005 by listing the Republic of China with 31, India with 30, and the United States with 16. The Federal Emergency Management Agency (FEMA) reported that within the last 10 years there have been over 560 presidential disaster declarations in every region of the United States (FEMA, 2010f). This means the disaster was beyond the capability of the state and local government to respond; therefore, federal funding was granted for appropriate response and recovery (FEMA, 2010g). In 2010, there were 81 major federal disaster declarations across the United States (FEMA, 2010e). To reiterate the severity of these threats, Henderson (2005) stated that 80% of the states within the United States are at risk for earthquake damage. Henderson also says that 10% of the United States land area is subject to flooding. FEMA (2009c) continues to stress the importance of these plans by stating that
Today’s changing threat environment and the potential for no-notice emergencies, including localized acts of nature, accidents, technological system failures, and military or terrorist attack-related incidents, have increased the need for continuity capabilities and planning across all levels of government and the private sector. (p. 2)

The Federal Emergency Management Agency (FEMA) supports the idea that public and private organizations should provide continuity plans which allows for performance of essential functions during any disruption of normal operations. It views these plans as a basic entitlement to the nation’s citizens (2009a).

Colleges and universities are no exception to the rule. After Hurricane Katrina in 2005, students from at least 12 colleges and universities were displaced and relocated to other areas in the country waiting for direction from their institution on what to do next (Wolverton, 2005). Some examples of the chaotic havoc which took place in the athletic department at Tulane also occurred at other institutions. For instance, Tulane’s football team, by way of Houston, ended up at Louisiana Tech; the golf teams went to Southern Methodist University; and Texas A & M hosted the men’s basketball and tennis team along with the women’s volleyball, soccer, tennis, and swimming and diving teams. Texas Tech hosted the baseball team and women’s basketball team. Many of the nonathletic students were sent to Jackson State University during the evacuation but were allowed to attend other schools of their choice until Tulane resumed normal operations (Wolverton, 2005). Many of these logistical problems could have been prevented through proper planning (Fried, 2010).
Continuity planning is necessary to combat all threats including weather, crowd management, and terrorism. Hall, Marciani, and Cooper (2008) shed light on the potential of sport venues as terrorist targets. For example, the Federal Bureau of Investigation (FBI) posted warnings that reported some terrorist groups were downloading stadium images. The downloading of this information supports the tactics of these terrorist groups by targeting large groups of people in one place. There are multiple examples of unexpected events that have closed down normal operations in athletic organizations from little league to professional teams. Therefore, continuity planning is critical in order to assure that all institutions maintain normal operations if or when an unexpected event occurs (e.g. weather, crowd control, or terrorism).

Previous studies regarding specific elements of continuity of operations planning have been conducted at numerous NCAA Division 1 athletic departments (Baker, Connaughton, Zhang, & Spengler, 2007; Beckman, 2006; Cunningham, 2007; Gratz, Church, & Noble, 2004; Hall, 2006; Walsh, Hanley, Graner, Beam, & Bazluki, 1997). These studies revealed weaknesses and flaws in athletic departments’ policies and procedures in regards to risk management, emergency management, emergency preparedness, training preparedness, and emergency action policies and plans. Even though the previous studies allude to the fact that athletic departments are lacking concerning various elements in COOP, research is lacking concerning COOP as a whole in collegiate athlete departments. Therefore, the primary focus of this study was to assess the level
of preparedness in regards to continuity of operation planning of athletic departments at NCAA Division 1 colleges and universities.

The following hypotheses were used to guide this study:

$H_1$: There will be no significant difference in the level of preparedness among athletic programs based on geographical locations of the 10 regions declared by FEMA.

$H_2$: There will be no significant difference in the level of preparedness among athletic programs based on membership in a conference.

$H_3$: There will be no significant difference in the level of preparedness among athletic programs based on the number of students enrolled at the institution.

$H_4$: There will be no significant difference in the level of preparedness among athletic programs based on a presidential declared disaster occurring within the last 10 years.

$H_5$: There will be no significant difference in the level of preparedness among athletic programs based on athletic budget.

$H_6$: There will be no significant difference in the level of preparedness among athletic programs based on type of institution (public or private).

Review of Related Literature

*Continuity of Operations Planning*

Because of the changing threat of environment and recent emergencies, the need for continuity of operation planning capabilities has become more prevalent in agencies and public institutions (Shaw & Harrald, 2004). All
organizations face the possibility of disruptive events affecting normal operations in some capacity; therefore, organizations have used functions such as risk management, emergency response, and contingency planning as a means to mitigate relevant threats to their environment (Shaw & Harrald, 2004). One way these facilities can combat against these threats of disasters is through preparedness (Waugh, 2000). McIntire (2007) defined disasters “as deadly, destructive, and disruptive events that occur when a hazard interacts (or multiple hazards interact) with human vulnerability” (p. 2). Taking this definition at face value means that even a threat could be considered a disaster if it causes an event to be disrupted. The threat in and of itself is considered a hazard and cannot cause a catastrophe until it is carried out.

The National Continuity Policy Implementation Plan and the National Security Presidential Directive 51/Homeland Security Presidential Directive 20 define continuity of operation planning (COOP) as “an effort within individual executive departments and agencies to ensure that Primary Mission Essential Functions (PMEFs) continue to be performed during a wide range of emergencies, including localized acts of nature, accidents, and technological or attack-related emergencies” (Petersen, 2007, p. 3). These primary essential functions are a subset of the mission essential functions which must be performed continuously uninterrupted or resumed within 12 hours after an event (FEMA, 2009c). Both mission essential functions and primary essential functions provide the organization the ability to maintain the safety of the public, provide vital services, and sustain the economic base in case of a disruption of normal
operations (FEMA, 2009c). The United States policy regarding all federal agencies is to have an effective and comprehensive continuity plan in place (FEMA, 2001). During President Ronald Reagan’s years of service in the oval office, he passed Executive Order 12656 which assures continuity of government. This order mandates that all levels of government should have sufficient capabilities to withstand an emergency regardless of nature (Executive Order No. 12656, 1988). As an enforcement measure, Presidential Declaration Directive 67 empowered FEMA with the responsibility of assuring compliance across the Federal Executive Branch in regard to developing, executing, facilitating, overseeing, and accessing the status of COOP capabilities (FEMA, 2001). FEMA has played a significant role in COOP in the governmental sector and devoted itself to assisting and preparing other entities in COOP by providing financial resources and relevant literature specific to each type of organization (FEMA, 2003; FEMA, 2009c; FEMA, 2009e).

Recent events from this decade, starting with the devastating effects of September 11, 2001, have reinforced the need for businesses to consider and put in place continuity capabilities and planning (Barbara, 2006; Whitworth, 2006). Again, eighty percent of all states within the United States are at risk for earthquake damage with 10 percent of these states subject to flooding (Henderson, 2005). Therefore, “Continuity cannot be an afterthought for organizations as they strive to perform their essential functions” (U.S. Department of Homeland Security, 2008, p. 2).
COOP, commonly called business continuity planning (BCP) in the private sector, seeks to recover from all hazards that may pose a threat to the primary essential functions of the organization. These threats could come from natural disasters, such as fires or floods, but they could also resemble the form of unethical operations or the collapse of a key supplier (Gallagher, 2003).

Dunaway (2010) reported the two key factors that determine the adoption of continuity planning measures for private organizations are the size of the organization and previous experience with a disaster. The data, retrieved from 145 businesses, industries, and non-profit organizations, revealed four factors that could influence an organization to reconsider its need for COOP planning. Dunaway (2010) identified these factors as follows:

1. **Geographic proximity (exposure):** the physical proximity or exposure of a private sector entity to hazards or threats that affect the organization and its environment.

2. **Temporal proximity (experience):** whether, and if so, how recently a private sector entity had experience with a disaster or emergency that affected the organization.

3. **Proximity of capability (capability):** whether the private sector entity has at hand the capability to manage a threat to its viability assessed as a function of the entity’s size.

4. **Organizational proximity (collaboration):** whether or not the private sector entity participates in a collaborative organization for regional emergency planning and preparedness. (p. 126)
In 2007, the Chartered Management Institute and the Civil Contingencies Secretariat completed the eighth survey on BCM since 1999 (Woodman, 2007). From the 10,600 institute members surveyed, a total of 1,257 responded. Woodman (2007) compiled and presented the research which addressed a wide range of threats that companies encounter across the United Kingdom. In the study, Woodman (2007) identified proximity of capability as a factor in businesses having a BCP in place, and large organizations (over 250 employees) are more likely to have BCPs than small or medium organizations. The size of the organization supported Dunaway’s (2010) research as a key factor in determining BCP. Woodman (2007) also stated that BCPs are more common in the public sector than in private or not-for-profit organizations. This finding by Woodman may be due to mandates by the Civil Contingencies Act on public sector organizations. Interestingly, Woodman (2007) lists construction and education at the bottom for those companies having BCPs.

Previous experience with a disaster has proved to be an ineffective means to assure COOP planning simply because many organizations cease to exist after a disaster. According to Gallagher (2003), 40% of enterprises that experience a disaster close their doors within five years. Cerullo and Cerullo (2004) cited a similar finding that 43% of companies never reopen and another 29% fail within two years after such a disaster. Runyan and Huddleston (2009) interviewed small business owners and local officials from the Gulf Coast after Hurricane Katrina and found that they did not plan for disasters and were having difficulties recovering from the impact of Katrina. Therefore, COOP planning
must be integrated before a disaster. The highest level of management must brainstorm all potential threats to organizations and make plans for combating these hazards (FEMA, 2009c).

Key considerations in reducing organizational failure include assuring continuous performance of essential functions, protecting essential facilities, reducing loss of life, and achieving an orderly and timely recovery from an emergency (FEMA, 1999). The Health and Human Services Disaster Recovery Leadership Network (DRLN) of Pinellas County (2007) addressed the complexity of creating a COOP and stated the following:

Developing a COOP requires forethought, flexibility, and more than a little fearlessness. It means spending considerable time, effort and possibly some money anticipating worst-possible scenarios. It means preparing, even practicing, for a major disaster's impact on every aspect of business, community, and life as we typically know it. It means recognizing that some of your organization's most severe losses will occur after the initial catastrophe and disruption of services; this may include subsequent loss of funding, employee attrition and damage to the agency’s reputation. (p. 9)

Theoretical Frameworks

Multiple developmental cycles for continuity of operation planning can be found in the body of literature (Gibb & Buchanan, 2006; Lam, 2002; Maheshwari, Rahul, Gaurav, & Singh, 2010; Shaw & Harrald, 2004; Smit, 2005; Smith, 2002). FEMA promotes the continuity program management cycle (CPMC) as a
standardized management cycle that ensures consistency across all continuity programs. “It establishes consistent performance metrics, prioritizes implementation plans, promulgates best practices, and facilitates consistent cross-agency continuity evaluations” (FEMA, 2009c, p. 5). The CPMC has been recommended by FEMA for the use of all organizations in the creation and implementation of its continuity programs (FEMA, 2009c). The supporting structures for CPMC lie within its leaders, staff, communications, and facilities (FEMA, 2009c). These four key areas, built upon the foundation of in-depth planning and program management, enable the organization to perform its essential functions and increase its continuity capacity. The cyclical process occurs through testing, training, and exercising the plan so that a proper evaluation may be made on the process and corrective actions taken if necessary. This cyclical process is common with all BCP models in that testing and training are utilized in order to determine discrepancies or weaknesses in the plan and corrective measures are implemented.

Currently, FEMA is the governing body responsible for ensuring that federal agencies have a comprehensive and effective program in place which ensures essential Federal functions are maintained under all hazards and circumstances (FEMA, 2001). This responsibility includes coordinating “the federal government’s role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terrors” (FEMA, 2010c, para.1). With all the numerous activities that fall under FEMA’s responsibilities, the core of their
existence is to build and support our nation’s emergency management system (FEMA, 2010h). With this said, FEMA (2009a) has created standards for COOP. The components for these standards consist of 10 elements of a viable continuity capability along with four supporting components of a continuity program foundation. These elements, which serve as the framework necessary for COOP in this study, include the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j) reconstitution operations; (k) program plans and procedures; (l) risk management; (m) budgeting and acquisition of resources; and (n) continuity plan operational phases and implementation. (FEMA, 2009a; FEMA, 2009c).

These main categories are prevalent in the literature. For instance, the National Fire Protection Association (2010) compares its criteria for business continuity programs with the Disaster Recovery Institute International (DRII) Professional Practices for Business Continuity Practitioners and the Disaster Recovery Institute International as well as with the elements of the Department of Homeland Security and the Federal Emergency Management Agency. Gibb and Buchanan (2006) also mentioned these elements in their article A Framework for Business Continuity Management. The NFPA (2010) has created charts that compare these elements based on content of each organization’s particular framework.
**All-Hazard Approach.** An all-hazard approach is a philosophy that current disaster and emergency management agencies use to address the essential phases of emergency management (Whitworth, 2006). Many public institutions have prepared for these uncertain events through the development of all-hazard planning (McConnell & Drennan, 2006). This approach seeks to identify all potential threats that may disrupt normal operations and essential functions and conduct risk assessments and vulnerability analyses that address mitigation, preparedness, response, and recovery (Whitworth, 2006). An all-hazard approach seems to comply with the goal of continuity planning in that it seeks to reduce the consequences of any disruptive event (FEMA, 2009c).

**Strategic Approach.** The strategic approach utilizes a top-down model in which all business recovery activities flow from the organization's strategic goals (Institute of Management and Administration [IOMA], 2007). It is “an approach that is business-driven, based on a combination of planning and management, and potentially leads to long-term value creation and organizational advantage” (Herbane, Elliott, & Swartz, 2004, p. 439). Ritchie (2004) noted that the scope and direction of the organization should take into account changing environments, markets, and customers with the primary purpose of meeting stakeholder expectations. The strategic approach strays away from following “best practices” in business continuity planning because each corporation has different objectives that target the peculiar dimensions of its business.

**Holistic Approach.** The holistic approach is very similar to the strategic approach. The holistic approach “identifies potential impacts that threaten an
organisation and provides a framework for building resilience and the capability for an effective response that safeguards the interests of its key stakeholders, reputation, brand and value creating activities” (Business Continuity Institute [BCI], 2007). Woodman (2007) used this BCI definition as the foundation for the research conducted by the Chartered Management Institute from his study. By definition, BCI seems to resemble the strategic approach with the only difference between the priorities of the models. The holistic approach to BCP seeks to assess and address every business function within the organization with the idea that segmentation by its very nature is incomplete (Glenn, cited in Ketterer et al., 2008).

*Business Assurance and Risk Mitigation Approach*. The business assurance and risk mitigation (BARM) approach allows organizations to implement high-impact continuity and security elements at a minimum cost (Shaw & Smith, 2010). This approach seeks to validate the practice of continuity planning by determining if the implementation of continuity practices is worth the financial cost. This tactic is accomplished by comparing “the cost of implementing practices versus the cost of a major security or continuity flaw which may result in significant loss of business, growth and viability of the organization” (Shaw & Smith, 2010, p. 332). Shaw and Smith (2010) agree that the developing stage of BCP should be kept simple for the understanding of all employees. This training can take place during new employee orientation as a cost-saving measure. Emergency evacuation and tabletop exercises should be meaningful and simple.
Collegiate Athletic Departments

Universities are beginning to take action regarding continuity planning. Six universities (Tulane University, University of Alaska-Fairbanks, University of California-Berkeley, University of Miami, University of North Carolina-Wilmington, and University of Washington) have collaborated with FEMA and created a document titled *Building a Disaster-Resistant University* (FEMA, 2003). Other documents, such as *ERM in Higher Education* (University Risk Management and Insurance Association, 2007), *Developing a Strategy to Manage Enterprise-wide Risk in Higher Education* (Cassidy, Goldstein, Johnson, Mattie, & Morley, 2001), and *Continuity Planning for Schools and Universities* (Henderson, 2005; Henderson, December 2005), share similar concerns regarding risk management and continuity planning at institutions of higher education. These documents focus on pre-disaster planning and mitigation actions and shed light on the unique planning considerations of institutions of higher education. Even though these documents fail to cover all aspects of continuity planning, they do take into consideration multiple elements of a viable continuity plan. Henderson (2005) reported that even if a university has a COOP plan in place, each organizational unit within that university should be responsible for its own specific responsibilities, which include disaster preparations and response assignments. Henderson stated that it is not uncommon for some departments of schools and universities to have excellent plans while other departments have no plans (2005). This includes athletic departments. Athletic departments are found in most colleges and universities in the United States (Hall, Marciani, Cooper, &
Phillips, 2010). For instance, the National Collegiate Athletic Association (NCAA) houses over 1,300 member institutions (Hall, Bowers, & Martin, 2010). Other athletic associations include the National Association of Intercollegiate Athletics (NAIA) and the National Junior College Athletic Association (NJCAA).

Multiple disruptive events have caused havoc at various athletic events causing change of venues, loss of revenue, injuries, and deaths. In order to combat against these disruptive events and provide a safe environment for everyone, athletic departments must be proactive in assuring that necessary steps are implemented to maintain normal operations. Creating, implementing, and practicing continuity of operation planning reduces the chaos caused by disruptive events and expedites the process of returning to normal operations. All institutions are vulnerable to various potential hazards and they must be capable of responding to a continuity incident or event at a given time (FEMA, 2009c).

Potential Hazards

*Inclement Weather.* Normal operations can be affected by all types of potential hazards. Natural hazards such as hurricanes, floods, and tornados are usually the culprits that cause most of the disruptions of normal operations. Hurricanes Katrina and Rita catapulted the awareness for the need of COOP planning in higher education and athletic departments. Hurricanes Katrina and Rita displaced collegiate athletes to various institutions around the country (Wolverton, 2005). Even before this major disaster occurred, literature concluded that institutions were not prepared for such an event. However, despite the lack of preparedness, Tulane University became an example to the other institutions
by the way it communicated to its students. The university’s president, Scott S. Cowen, posted a blog on Tulane’s website that informed faculty, staff, and students of the progress that was being made on behalf of those involved. After it was apparent that the university would remain closed at least though the fall semester, he focused on getting help for the students. On September 1, 2005, he was able to speak with representatives from the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the American Association of State Colleges and Universities. Later that day, a conference call was held to discuss how other universities around the country could provide assistance to the students at Tulane. These accrediting bodies of Higher Education along with the American Association of Community Colleges, the Council of Independent Colleges, and the Association of Jesuit Colleges and Universities made a decision to allow currently paid students to attend their respective institutions without charge for tuition. Provisions for student athletes were also included in the plan. Cowen (2005) made clear that the athletic program was an integral part of reestablishing its program. Cowen stated that “we want our athletes to carry the torch, face, and name of Tulane University during this difficult time” (p.1). However, even though the financial aspect was covered for athletics, other problems arose.

Hurricane Katrina and Rita are just two of the many examples found in the body of literature of where inclement weather has caused havoc upon athletic departments. For example, in 2010, the Iowa State Cyclones closed multiple parking lots for the opening football game due to summer flooding (“Parking for
First Iowa State Football Game Impacted by Flooding," 2010). Even though the flooding did not impact the game itself, it caused loss of revenues for the facility as well as last minute planning to redirect traffic to other parking lots. Multiple tailgaters were forced to leave their recreational vehicles at home due to lack of parking space. In 2008, a tornado ripped a hole in the Georgia Dome roof where the Southeastern Conference men’s basketball tournament was being played. The tournament had to be postponed and moved to a smaller stadium across town with the only fans being immediate family members of the players and the schools’ band members and cheerleaders (Dougherty, 2010). In 2002 a tornado blasted through the Mississippi University for Women’s (MUW) campus causing significant damage to multiple buildings with one building being completely destroyed. Other damages caused by this tornado included loss of power lines, destroyed cars, and multiple shattered windows on campus. Fortunately, no deaths occurred on campus (MUW, 2002). Hurricane Camille caused catastrophic damage to the USM’s Gulf Coast Research Lab in 1969 (USM, 2010). An unusual amount of heavy snow in Britain caused thousands of schools to close and forced the cancellation of multiple sporting events including the postponement of two League Cup soccer games (“Britain Blasted by Heavy Snow," 2010). During the Vancouver Olympics in Canada, the first official training run was canceled for women’s downhill skiing due to dense fog (“Vancouver Olympics Cancel Trial Run,” 2010). Many other problems that arose at the Vancouver Olympics can be attributed to an unusual rise in temperatures and the lack of snow and ice (“Vancouver Olympics Unusual Temperatures,”
Broom (cited in “Vancouver Olympics Unusual Temperatures,” 2010) reported that over 28,000 tickets were canceled due to the weather and represented a revenue loss of $1.5 million. Even though multiple hours of time and effort were put into making Canada shine during this worldwide event, the lack of cooperation in weather had the opposite effect.

**Biological Hazards.** Inclement weather, such as hurricanes, floods, and tornados, are not the only culprits that cause disruptions of normal operations. Other natural hazards have been documented to have the same effect on day-to-day operations. Concerning biological natural hazards in Manila, Philippines, the Commission of Higher Education postponed college classes because of an H1N1 threat (Tan, 2009). The same thing happened in Alabama when Stillman College had to cancel a football game due to fears created by H1N1 virus (“Alabama College Forfeits Football Game Due to H1N1 Fears,” 2009). However, even this type of disaster is not new to athletics. In 1989, Siena campus experienced a measles outbreak which caused several basketball games including the North Atlantic Conference Tournament to be quarantined (Siena Saints, 2011).

**Human Hazards.** Another common type of hazard which has caused havoc in the university and sporting realm are human-caused events. Included in these events are the publicized shootings that occurred at Alabama, Virginia Tech, and more recently at the University of Texas. Terrorism also is included under human-caused events and has become a force to be reckoned with. Barbisch (2005) stated, “The objective in terrorism is to create destruction and chaos that result in feelings of overwhelming fear and vulnerability for those
under attack” (p. 77). Since the attacks of 9/11, America has finally comprehended the imminent danger that terrorists pose to this country. Even though these attacks were not the first terrorist attacks in America, they were the most powerful in their effects (Johnson, 2005). It is an extremely hard task to fight against terrorism because terrorists do not value human life and they are willing to sacrifice themselves in order to reach their objective. Terrorism is unpredictable because not all terrorists need a purpose or an objective to commit an act of violence (Johnson, 2005). In October 2005 a student from the University of Oklahoma committed suicide by detonating a 3-pound bomb 200 yards from Memorial Stadium (Gardiner, 2006). This same student reportedly tried to get in the facility two times but was stopped by security in order to check his backpack. The student then fled to a tree where the explosives detonated possibly unintentionally. It was ruled a suicide but no one is positive that it was not an attempted terrorist attack (Faulk, 2005). The National Football League Commissioner Roger Goodell stated that sports-packed stadiums pose a real risk for terrorism. Goodell stated that

> We have to remain vigilant and our efforts must be geared toward an aggressive position to keep attacks from happening at our sporting events. Because if it happens in another stadium, then it will affect us all. We have to make sure that our fans come to games, feel comfortable about being there and know that they will be safe. (p. 2)

Hall et al. (2008) reported suicide terrorism is an effective way to achieve the goal of mass casualties and mass humiliation. Hall et al. continue to contend
that it is impossible to ensure human-caused events do not occur; therefore, it is imperative that organizations prepare, respond, and recover for these types of emergencies.

Terrorism is only one example of human-caused hazards that disrupt sporting events. Other examples of hazards that have caused problems at sporting events are malfunctions in equipment or supplies. For example, a minor league baseball team experienced a malfunction in its firework display causing fans to run for safety and injuring two people (“Firework Malfunction,” 2010).

**Technological Hazards.** Escalators are another potential problem at sporting events. There are nearly 6,000 escalator-related injuries reported at emergency rooms throughout the United States each year (“Scottrade Accident is Probed,” 2010). However, no matter what causes the disruption, institutions need to be prepared. According to Fried (2010), “Safety is the most important element for any facility” (p. 299). The National Collegiate Athletic Association (2010) echoes Fried by stating that “it is the responsibility of each member institution to protect the health of and provide a safe environment for each of its participating student-athletes” (p. 3). Customers and consumers need to know that facilities are prepared to handle a worst case scenario (Fried, 2010). Forseeability is essential for proper security management. Nearly every facility will have some security concerns, but proper planning can prevent many of these security and safety problems experienced in the past (Fried, 2010).
NCAA Division 1 Studies

Even though literature is lacking concerning COOP in collegiate athletic departments, multiple studies have been conducted on certain continuity elements at Division 1 athletic departments that have led the author to suspect that COOP planning may be needed in collegiate athletic departments. The following studies have focused on emergency preparedness and planning at NCAA Division 1 schools and universities.

Beckman (2006) studied awareness and perceptions of emergency responders that may be used in the event of an emergency at a Division 1A football game. Beckman simulated a tabletop exercise by using 27 participants including representation from agencies such as the institution’s athletic department, AAA ambulance, university police, American Red Cross, police department, fire department, State Health Department, State Department of Homeland Security, Emergency Management, and other Institutional decision makers responsible for emergency response. The participants were required to attend a four-hour tabletop session and take a pretest and posttest. The questionnaire asked 18 statements regarding awareness and perceptions of emergency response training, agency and interagency roles and responsibilities during an emergency, and the attractiveness of Division 1A collegiate stadiums as a terrorist target. Participants of the study were given the institution’s emergency action plan to assess its effectiveness during the exercise; however, many of the responders indicated that they were not familiar with the plan.
Overall, this study revealed a lack of testing and training programs in Division 1 athletic departments.

Cunningham (2007) surveyed 238 athletic administrators from 119 Division 1A football athletic departments to determine perceived capabilities in regard to event security management. Questions from the survey incorporated themes such as emergency evacuation planning, emergency management, security policies, agency collaboration, credential control, perimeter control, liability, and spectator control. According to Cunningham, each of these themes is needed for effective security event management. Participation in the study was limited to 40% ($n = 81$) of the administrators responsible for game day security. Of these respondents, 60% had no formal training or education in event security management.

Cunningham (2007) is not the only study that reveals weaknesses in athletic department preparedness. Baker, Connaughton, Zhang, and Spengler (2007) investigated risk management measures implemented after September 11, 2001, in regard to terrorism. Baker et al. surveyed football stadium managers for all NCAA Division 1A football stadiums. As a result, the study revealed 47% of participants had never received terrorism-related training. One positive statistic that evolved through the study was 87% of football stadiums had emergency action plans and these plans are reviewed at least annually. However, even though these institutions are compliant with literature recommendations, they fail miserably in providing training. Baker et al. (2007) reported that only 25% of these institutions have emergency action plans,
actually practice mock or simulated attacks, and only 13% provide formal training to their staff regarding terrorism training. Other researchers, such as Pantera et al. (2003), continue to confirm similar findings in regard to training preparedness in athletic venues. These studies reveal a major need for schools to train their staff and personnel on how to effectively respond to an emergency.

A survey of lightning policies was conducted at 48 Division 1 football institutions from Florida, Michigan, New York, North Carolina, and Pennsylvania and concluded that only 8% \((n = 4)\) of these institutions have a written lightning policy (Walsh, Hanley, Graner, Beam, & Bazluki, 1997). These particular states were selected for the study because they ranked in the top 5 for combined injuries and deaths in a 35-year timeframe which correlates to 31% of the 13,012 reported injuries and deaths from lightning in the United States. Gratz, Church, and Noble (2004) conducted a similar study of Division 1 football stadiums in an attempt to promote lightning safety policies at these large stadiums. Gratz et al. reported an 18% increase in college football attendance from nearly 29.3 million to over 34.6 million from the four years starting in 2000-2003. “Lightning is the most dangerous weather hazard that people encounter each year” (Gratz et al., 2004, p. 3), and stadiums are continually increasing in total attendance at football games nearly every year. Therefore, institutions should consider the safety of spectators if and when lightning strikes their stadiums.

These previous studies provide reasons to doubt athletic departments’ level of preparedness regarding COOP. Therefore, this study will assess NCAA
Division 1 athletic departments' continuity of operations planning preparedness and determine if demographic variables influence their level of preparedness.

Methodology

Participants and Procedure

The participants of this study included a stratified, voluntary sample of senior, associate, and assistant athletic directors, and facility directors from NCAA Division 1 athletic programs nationwide. All NCAA Division 1 schools listed in 2008-2009 data from the U.S. Department of Education (2008-2009) were asked to voluntarily participate in this study (N=344). The researcher used Survey Monkey, an online measuring tool, to administer and gather the data. An email was sent to the participants explaining the nature of the study with the survey link attached in the email. After the initial survey was sent, a survey reminder was sent to those schools that failed to complete the survey each week for three weeks. The link for the survey remained open for approximately 6 weeks.

Instrument

The questionnaire, Athletic Department Survey of Continuity of Operation Planning Preparedness, was created by using FEMA's guidelines for Continuity of Operation Planning. The instrument went through content and face validity measures using a focus group and a panel of experts to determine relevance, clarity, appropriateness, and other issues regarding the nature of the instrumentation (Krueger, 1998). The expert panel consisted of personnel with
extensive training in Continuity of Operation Planning Procedures such as an emergency and fire safety coordinator from the Institution of Higher Learning Board, a flood plan development officer from city government, an assistant facility director from an NCAA Division 1 university, and an assistant vice president of information systems from a community bank. Feedback was assessed and the instrument was refined. Approval from the Institutional Review Board (IRB) was granted and a pilot study was conducted using senior, associate, and assistant athletic directors and facility directors of universities and colleges who were classified as a NCAA Division II school. Even though the pilot study produced a Cronbach alpha statistic score of .985, the researcher trimmed down the survey to 28 questions due to multiple participants failing to complete the survey. The final Chronbach Alpha statistic for this study was .973, which indicated that the instrument produced reliable scores for these respondents.

The survey consisted of Part I: Athletic Department Survey of Continuity of Operation Planning Preparedness and Part II: Demographics.

*Part I: Athletic Department Survey of Continuity of Operation Planning* Preparedness contained 26 questions derived from the 10 elements of a viable continuity capability and 4 supporting components outlined in the Continuity Guidance for Non-Federal Entities (FEMA, 2009c). The elements and components include the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j)
reconstitution operations; (k) program plans and procedures; (l) risk management; (m) budgeting and acquisition of resources; and (n) continuity plan operational phases and implementation. Questions from the Athletic Department Survey of Continuity of Operation Planning Preparedness was assessed using a 5-point Likert scale with 1 being No Progress, 2 being Limited Progress, 3 being Moderate Progress, 4 being Substantial Progress and 5 being Objective Achieved. These five categories came from the task rating criteria listed in the Continuity Evaluation Tool: Version 7 (FEMA, 2009b) and are categorically defined as: 1. no progress has been made toward achieving the identified continuity requirement; 2. preliminary efforts have been initiated such as plans to develop this aspect of the capability; 3. significant efforts are underway but important gaps remain; 4. Efforts in this area are established and mature with few non-significant gaps; 5. Requirement is fully achieved with regard to this capability.

**Part II:** Demographics included the school’s name, conference affiliation of school, location of school, number of students enrolled at school, athletic budget, orientation of school (private or public), and whether the school has experienced a presidential disaster declaration within the last 10 years. A presidential disaster declaration was defined as an institution receiving federal funding due to a disaster. The student body and the athletic budget consisted of four categories based on quartile percentages calculated from NCAA Division 1 schools using figures from 2009 equity in athletics data retrieved from the U.S. Department of Education (2008-2009). The student categories are < 5,000,
The athletic budget categories are $< 9,500,000$, $9,500,000$ to $14,500,000$, $14,500,001$ to $27,000,000$, and $> 27,000,000$.

**Data Analysis**

Based upon the exploratory nature of this study, the focus was to assess the level of preparedness of COOP in athletic departments. Therefore, the initial data analysis included descriptive statistics of frequencies, means, and standard deviations of the 26 Likert scale items taken from the Athletic Department Survey of Continuity of Operation Planning Preparedness. In addition to these descriptive statistics, an analysis of variance (ANOVA) was used to analyze $H_1$ through $H_6$ with the alpha level set at 0.05. Tukey’s HSD test was used to follow up on any significant ANOVA’s found within the hypotheses.

**Results**

The results of this study are presented numerically based on the six hypotheses that directed this study. The results will include demographic differences and significant findings found in the data.

**Region.** Overall means were reported by the 10 geographical regions defined by FEMA. Region 1 reported the highest level of preparedness ($M = 3.83$, $SD = 0.63$). Region six reported an average overall level of preparedness ($M = 3.17$, $SD = 1.13$). The variance for this region was the highest reported, indicating a wider range of variability between respondents in that region. Only region 7 had a mean less than 3.00 ($M = 2.89$, $SD = 0.74$). All other regions reported levels of preparedness ranging from 3.37 to 3.76. Region 10 was not
represented in the study because there were no respondents from that region. A One-Way Analysis of Variance was conducted on H1 to determine if geographical location makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the ANOVA results yielded non-significant findings, $F(8, 81) = 1.013, p = .433$.

*Conference Membership.* Overall means were reported by conference membership. There were seven conferences represented in this study because other conferences had a low number of respondents. To be included in the analysis, a conference had to have at least 6 respondents. The conferences represented are Atlantic Coast, Big East, Missouri Valley, Patriot League, Southeastern, Southern, and the Sun Belt. The conference with the highest reported level of preparedness was Sun Belt Conference ($M = 3.63, SD = 0.93$). Three conferences had means under 3.00. These were Missouri Valley ($M = 2.65, SD = 0.23$), Southern ($M = 2.60, SD = 0.78$), and Southeastern ($M = 2.78, SD = 0.78$). A One-Way Analysis of Variance was conducted on H2 to determine if conference affiliation makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the ANOVA results yielded non-significant findings, $F(6, 22) = 1.310, p = .294$.

*Number of Students.* Overall level of preparedness was calculated based on the institution’s student body size. The institutional sizes included less than 5,000 students, 5,001 to 10,000 students, 10,001 to 15,000, and over 15,000 students. Institutions with 5,001 to 10,000 students reported the lowest level of preparedness ($M = 3.35, SD = 0.82$). Institutions with 10,001 to 15,000 students
reported the highest level of preparedness (M = 3.66, SD = 0.96). A One-Way Analysis of Variance was conducted on H3 to determine if number of students makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the ANOVA results in yielded non-significant findings, $F(3, 86) = .574, p = .633$.

**Disaster Declared.** Level of preparedness was examined based on whether the institution has experienced a presidential declared disaster. Institutions that had experienced a presidential declared disaster reported lower levels of preparedness (M = 3.28, SD = 1.27) than institutions that had not experienced a presidential declared disaster (M = 3.43, SD = 0.78). A One-Way Analysis of Variance was conducted on H4 to determine if a presidential declared disaster makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the ANOVA results yielded non-significant findings, $F(2, 88) = .168, p = .846$.

**Athletic Budget.** Level of preparedness based on total athletic budget was examined. There were four categories: under 9.5 million, 9.5 million – 14.5 million, 14.5 million – 27 million, and over 27 million. Levels of preparedness for these categories were all above 3.00, with institutions with 14.5 million – 27 million budgets reporting the highest level of preparedness (M = 3.66, SD = 0.69). Institutions with 9.5 million to 14.5 million budgets reported the lowest levels of preparedness (M = 3.02, SD = 0.72). A One-Way Analysis of Variance was conducted on H5 to determine if athletic budget makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the
ANOVA results yielded significant findings, \( F (3, 85) = 3.135, p = .030 \). A post hoc test was completed using Tukey’s HSD test to find where the differences occurred. Statistically significant differences were found between the 9.5-14.5 million and the 14.5 -27 million groups. The researcher cannot explain why these differences occurred other than to speculate that the sample size may have had a factor in the findings.

*Type of Institution.* Finally, overall level of preparedness was analyzed based on whether the institutions were public or private. Private institutions reported higher levels of preparedness (\( M = 3.51, SD = 0.72 \)) than public institutions (\( M = 3.41, SD = 0.84 \)). A One-Way Analysis of Variance was conducted on \( H_6 \) to determine if type of institution makes a difference in the level of preparedness among athletic programs. With an alpha level of .05, the ANOVA results yielded non-significant findings, \( F (1, 88) = .345, p = .559 \).

**Discussion**

In summary, six hypotheses were tested in this study. One hypothesis indicated statistically significant results. This hypothesis indicated that there was a statistically significant difference for overall level of preparedness between schools with budgets of 9.5 million – 14.5 million and schools with budgets of 14.5 – 27 million. There were no statistically significant differences in overall level of preparedness based on geographical region, conference membership, student body size, previous presidential disaster declaration, and type of institution.
Every category listed in the six hypotheses was represented with the exception of region 10 from FEMA’s ten regions. Region 10 includes the states of Alaska, Idaho, Oregon, and Washington (FEMA, 2010d). Failure of representation from this region may be due to the low number of NCAA Division 1 athletic departments within this region (n=12). Over 37 percent (N=130) started the survey; however, only 27 percent (n=91) completed it.

A closer view of the data reveals that schools are better prepared in areas of identifying delegations of authority and essential functions, but need more improvement in the areas of tests, training and exercises. These findings support the studies of Beckman (2006) and Baker et.al. (2007).

It is interesting to note that region one, which had the highest preparedness level, had the fewest presidential disaster declarations from January 2000 to March 2003 with a total of 19. During this same time frame, region 4 had nearly double the average of the other regions regarding presidential disaster declarations with a total of 79; however, their level of preparedness fell below the average mean of all the regions. According to the current study, this statistic is validated by the lower number mean presented by number of schools that have experienced a presidential declared disaster on campus as opposed to those that have not experienced such a disaster. Therefore, the data suggests that the occurrence of disasters in a region does not influence level of preparedness in COOP. This finding opposes the geographic proximity factor and the temporal proximity factor that Dunaway (2010) mentions as influential factors for COOP in organizations.
Dunaway (2010) and Woodman (2007) mentioned that size of an organization may influence the implementation of COOP. The theory supports that COOP planning is more likely to be part of a large organization than a small or medium organization. Demographics regarding size of the athletic department were assessed by using size of the student body and total athletic budget. Both of these factors failed to support the previous research. There was a significant factor regarding athletic budget, but it was contrary to previous findings. The differences found was between the two middle categories of total athletic budget with the lower monetary group of athletic departments being more prepared than the other group of athletic departments. The researcher believes that this significant factor may diminish with a greater number of participants from the population.

Another factor that Woodman (2007) mentioned as influential in determining COOP in organizations is if the organization is publically or privately owned. Woodman says that COOP in public sector organizations are more common than in private or non-for-profit organizations. Again, the current study failed to support this conclusion by revealing no significant finding in these two factors.

The data also revealed nearly 40 participants failed to answer any of the questions regarding COOP. One explanation for the failure to complete the survey was explained from experts from the National Center for Spectator Sports Safety and Security (NCS4). Cooper (2011) suggests some athletic departments may not have completed the survey because they do not view security issues as
part of their responsibilities. Such athletic departments assume COOP responsibilities are being taken care of by another organization such as campus police or local law enforcement. Even though continuity of operation planning may be in place, the lack of collaboration and communication is nonexistent between these two organizations. Therefore, the participants may have looked at the questionnaire, and determined that COOP was not part of their duties.

Athletic departments should be concerned with their perceived lack of preparedness in COOP. Fried (2010) says that the primary responsibility of facility managers is to ensure the safety of all employees and guests. The best way to ensure the safety of your human capital with the extra benefits of maintaining essential functions of the organization is to have a detailed COOP plan. This plan should be continually tested, evaluated, and updated in order to remain effective and efficient and provide vital services to those in need.

Future studies should focus on determining if the athletic department has delegated COOP planning to multiple staff members or an outside agency. Qualitative case studies, which interviews athletic staff and reviews written job descriptions, could be conducted to determine if COOP responsibilities are actually in place. Case studies should also be conducted on those athletic departments which have experienced a disruption of normal operations. Questions derived from FEMA’s guidelines for COOP should be examined for relevancy within the athletic department. A list of primary essential functions and categorical rankings of COOP elements would be useful to provide a foundation
for creating guidelines, procedures, and checklists for implementing COOP in athletic departments.

Conclusion

Regardless the reason of mediocre planning in athletic departments, the fact remains that NCAA Division 1 athletic departments are not prepared when it comes to COOP. Multiple NCAA studies along with examples of NCAA athletic disruptions conclude that athletic departments are gambling when it comes to disasters. They are gambling with hopes that a major disaster does not visit their campus. However, with the rise of natural disasters and the prevalent risk of terrorism, the odds seem to be against them. Athletic departments need to take ownership of their organization and provide the safest measures possible to increase their long-term survival. Fans, athletes, and employees, are some of the stakeholders relying on athletic departments to be prepared during a disruption of normal operations. After all, isn’t COOP considered a basic entitlement to our nation’s citizens?
CHAPTER V
STUDY TWO

INCORPORATING FEMA’S GUIDELINES FOR CONTINUITY OF OPERATIONS PLANNING IN NCAA DIVISION 1 ATHLETIC DEPARTMENTS

Introduction

The National Collegiate Association of Athletics dictates that NCAA Athletic Departments have the responsibility to provide a safe environment for all student athletes (NCAA, 2010). Providing a safe environment includes planning and preparing for potential events such as inclement weather, biological hazards, human hazards, technological hazards, and/or a combination of these events.

Athletic departments can provide a safe environment by creating and implementing an all hazard approach to disruptions of normal operations referred to as continuity of operations planning (COOP). This comprehensive planning process provides the best safety measures for all involved personnel and benefits the athletic department by ensuring that essential functions are maintained continually or shortly after a disruption of normal operations.

Rationalization for the need for COOP planning may be understood by examining the athletic department at Tulane University during and after Hurricane Katrina. Athletes were temporarily stranded in Birmingham, Alabama, Jackson, MS, and Houston, Texas. They finally settled in at four different universities: Southern Methodist University, Louisiana Tech University, Texas A & M, and Texas Tech (Wolverton, 2005). Housing was not the only problem that the athletic department faced. Many of the athletes had to rely on handouts from
other organizations to provide them with uniforms and equipment in order to compete against other teams. Fortunately, many organizations provided assistance in the forms of housing, transportation, food, and cash as an effort to support the athletic department (Wolverton, 2005).

Multiple studies conducted at NCAA athletic departments reveal discrepancies and weakness in various elements of COOP (Baker, Connaughton, Zhang, & Spengler, 2007; Beckman, 2006; Cunningham, 2007; Gratz, Church, & Noble, 2004; Hall, 2006; Walsh, Hanley, Graner, Beam, & Bazluki, 1997). Areas of concerns in these studies included risk management, emergency preparedness, testing and training procedures, and emergency action policies. Historical examples such as: the tornado affecting the Southeastern Conference basketball championship game in Georgia (Dougherty, 2010), the measles outbreak on the Siena Saints campus causing the North Atlantic Conference basketball tournament to be quarantined (Siena Saints, 2011), and Hurricanes Katrina and Rita displacing athletes from over 12 colleges and universities (Wolverton, 2005), support these previous studies. According to the commissioner of the Sun Belt Conference, Wright Waters said most institutions do not know how to handle large disasters that displace athletes or cancel multiple athletic events (Wolverton, 2005). Even Britton Banowsky, commissioner of Conference USA, has encouraged more detailed planning for future disasters.

Evidence seems to support the lack of detailed emergency planning in athletic departments. However, strides are being made to mitigate this problem.
For example, FEMA has collaborated with six universities and created a document called *Building a Disaster Resistant University*. This resource primarily acts as a means for the identification of hazards and risk assessment, organizing and identifying resources, and developing and implementing a mitigation plan (FEMA, 2003). The National Association of College and University Business Officers (2008) have also released the National Campus Safety and Security Project which assists universities in their endeavors to become more resilient to hazards. These two tools specifically address the uniqueness of universities by encouraging an all hazard approach to emergency preparedness by preparing for, mitigating the effects of, and responding to a disaster. However, both tools fail to consider the recovery of the disaster. Therefore, the aim of this paper is to promote the Federal Emergency Management Agency's (FEMA) COOP framework as the standard for preparing, assessing, and conducting continuity of operations planning in collegiate athletic departments.

**Background**

*NCAA Athletic Department Preparedness*

Athletic departments with the United States have been effected by multiple hazards. The National Fire Protection Agency (2010) has identified three general categories of potential hazards that may impact people, property, or the environment. These categories are natural hazards, human-caused events, and technologically caused events. These categories are listed below with some events that have caused disruptions in normal operations in collegiate athletic departments.
Natural Hazards. Three subcategories fall under natural hazards; Geological, Meteorological, and Biological (NFPA, 2010). Geological hazards include earthquakes, volcanoes, landslides, tsunamis, and glaciers. An earthquake in at Yale University delayed the New Haven Open tennis tournament for more than two hours. The 5.8 magnitude earthquake caused the evacuation of over 4,000 people. The facility had to be inspected for damage before play could be resumed (“Quake forces evaluation at new haven open,” 2011). In 2010, a tsunami warning closed the University of Hawaii’s campus. All events were canceled including a men’s basketball game scheduled with Nevada (Gardner, 2010).

Hurricanes Katrina and Rita, potentially the worst meteorological hazard to hit athletic departments, impacted at least 12 athletic departments by scattering their athletes across the country. Tulane, one of the disrupted institutions, sent athletes to multiple sites for food and housing. The athletes were dependent on other institutions and organizations to provide equipment and uniforms in order to participate in competition. Some of other meteorological hazards include flooding, fires, snow, lightning strikes, tornados, hurricanes, and extreme temperatures. In 2010, the Iowa State Cyclones had to redirect traffic and closed multiple parking lots due to summer flooding (“Parking for First Iowa State Football Game Impacted by Flooding,” 2010). The flooding caused many fans to leave their recreation vehicles at home and forfeit tailgating spots because of saturated spaces. Concerning tornados, the Southeastern Conference men’s basketball tournament was moved in 2008 because a twister
ripped a hole in the Georgia Dome. The tournament resumed at a smaller stadium, but fans were limited to immediate family members of the teams along with the schools’ band and cheerleaders (Dougherty, 2010).

Biological fears regarding diseases and viruses such as the plague, smallpox, anthrax, West Nile, and mad cow disease have affected collegiate athletic events. In 2009, Stillman college canceled a football game due to fears created by the H1N1 virus (“Alabama College Forfeits Football Game Due to H1N1 Fears,” 2009). The head football coach said he felt compelled to cancel the first game after he found out that nearly 37 players were ill. Siena University suffered an outbreak of measles during the 1989 North Atlantic Conference basketball tournament caused several teams to be quarantined (Siena Saints, 2011).

*Human caused hazards.* Human caused events can be classified as accidental hazards and intentional hazards. Accidental hazards encompass things like hazardous material, explosion, transportation accident, resource shortage, air pollution (NFPA, 2010). In 2007, the University of La Verne limited the amount of time athletes could spend outside due to poor air quality. Dust, ash, and smoke coming from surrounding wildfires were causing health concerns for the athletic department. Therefore, the athletic department relocated a football game and postponed soccer games due to the air quality (Gobert, 2007).

Intentional hazards include terrorism, sabotage, war, harassment, university violence, and criminal activity (NFPA, 2010). Some examples of terrorism and human caused events have been displayed through publicized
shootings at major college campuses such as the University of Alabama, the University of Texas, and Virginia Tech University. Thirty-three people were killed during the shooting rampage at Virginia Tech. In 1966, Charles Whitman killed 14 people and injured 31 others in his deadly attacks on the University of Texas campus (“US university shooting kills 33,” 2007). An act of terrorism was reported at the University of Oklahoma when a student tried to detonate a three-pound bomb in Memorial Stadium (Faulk, 2005; Gardiner, 2006).

Technological Hazards. Technological hazards are those events that may be unrelated to natural or human-cause events (NFPA, 2010). These can include computer malfunctions, telecommunications, ancillary support equipment and utility hazards. In 2011, the UCLA Bruins canceled a baseball game between Cal State Fullerton because of an electrical malfunction. This malfunction occurred nearly 30 minutes before the start of the game. The game was not re-scheduled. (UCLA Bruins, 2011). As noted above, all of the categorical hazards listed by the NFPA (2010) have affected collegiate athletic departments. Historical data predicts that these events will continue to affect athletic departments. Therefore, athletic departments need to be prepared.

NCAA Studies

The NCAA (2010) reports that an institution’s responsibility is to provide a safe environment for its athletes; however, multiple studies concerning risk management, emergency preparedness, testing and training procedures, and emergency action policies reveal otherwise. Cunningham’s (2007) survey, consisting of 81 athletic administrators from division 1 A football departments,
reported sixty percent of athletic administrators in charge of game day security did not have training or education in event security management. Baker, Connaughton, Zhang, and Spengler (2007) reported 47% of football stadium managers have never received terrorism-related training. Beckham (2006) surveyed agencies responsible for emergency response at NCAA football games and stated that many of the participants were not familiar with the institution’s emergency action plan. Other weaknesses in the study revealed lack of testing and training programs in Division 1 athletic departments. Studies regarding lightning policies at Division 1 institutions have also revealed weaknesses (Walsh, Hanley, Graner, Beam, & Bazluki, 1997; Gratz, Church, & Noble, 2004). Walsh et al. (1997) stated that only 4 out of 48 Division 1 football institutions had a written lightning policy. All of these studies reveal the need for athletic departments to provide a safe environment for spectators, employees, and athletes. Fried (2010) suggests that customers, including fans and athletes, need to know that facilities are safe and are prepared to handle any type of emergency.

*Continuity of Operations Planning*

Multiple frameworks are used by business continuity professionals around the world (Gibb & Buchanan, 2006; Lam, 2002; Maheshwari, Rahul, Gaurav, & Singh, 2010; Shaw & Harrald, 2004; Smit, 2005; Smith, 2002). All of these frameworks are usually time-tested and refined and serve as bench marks for industries (Swaroop, 2011). Multiple frameworks are available for business continuity; however, FEMA’s framework should be selected as a means to
promote uniformity across similar organizations. FEMA’s framework of continuity should be used as the model for athletic department because “It establishes consistent performance metrics, prioritizes implementation plans, promulgates best practices, and facilitates consistent cross-agency continuity evaluations” (FEMA, 2009c, p. 5).

_Federal Emergency Management Agency (FEMA)_

FEMA is the governing body responsible for ensuring that federal agencies have a comprehensive and effective program in place which ensures essential federal functions are maintained under all hazards and circumstances (FEMA, 2001). FEMA was formed in 1979 when President Jimmy Carter passed Executive Order (EO) 12127 naming FEMA as the centralized agency responsible for disaster-related federal emergency functions (FEMA, 2010c). This executive order merged over 100 programs responsible for preparation and quick response to disasters (U.S. Department of Homeland Security, 2009). Multiple agencies, such as the Federal Insurance Administration, the Federal Disaster Assistance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, and the Federal Preparedness Agency of the General Services Administration were included in the merger (FEMA, 2010c). The purpose for the creation of FEMA was to merge these agencies into one centralized agency as a means to decrease the complexity of seeking federal disaster relief for states and local governments (FEMA, 2010c).
In May 2007, as an effort “to provide an updated, integrated approach to maintain a national continuity capability” (p.i) under all conditions, the president issued the National Security Presidential Directive-51/Homeland Security Presidential Directive-20 (NSPD-51/HSPD-20) (U.S. Department of Homeland Security, 2008). From this policy, the Federal Continuity Directive (FCD) 2 was created to provide additional guidance to governmental agencies in assisting with the identification and classification of essential functions (FCD), since the continuation of these essential functions is the primary goal of continuity (CGC1). In an effort to provide additional resources to non-federal entities, the Department of Homeland Security and the Federal Emergency Management Agency developed Continuity Guidance Circular 1 (CGC1), Continuity Guidance for Non-Federal Entities. Swaroop (2011) claims that this framework has universal applicability and can benefit organizations outside the federal arena.

FEMA’s responsibility includes coordinating “the federal government’s role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terrors” (FEMA, 2010c, para.1). With all the numerous activities that fall under FEMA’s responsibilities, the core of their existence is to build and support the nation’s emergency management system (FEMA, 2010h). However, many non-governmental organizations are not aware of FEMA’s guidelines for COOP (Swaroop, 2011).

FEMA’s continuity program management cycle (CPMC) ensures consistency across all continuity programs. The supporting structures for CPMC
lie within its leaders, staff, communications, and facilities (FEMA, 2009c). These four key areas, built upon the foundation of in-depth planning and program management, enable the organization to perform its essential functions and increase its continuity capacity. The cyclical process occurs through testing, training, and exercising the plan so that a proper evaluation may be made on the process and corrective actions taken if necessary. This process is common with all BCP models in that testing and training are utilized in order to determine discrepancies or weaknesses in the plan and corrective measures are implemented. The viable elements and supporting components for COOP are covered in this model under continuity capability and are used as the framework for this paper.

Elements of a Viable Continuity Capability

FEMA (2009a) has updated its components for viable continuity capability which include the following: (a) essential functions; (b) orders of succession; (c) delegation of authority; (d) continuity facilities; (e) continuity communications; (f) vital records management; (g) human capital; (h) test, training, and exercise programs; (i) devolution of control and direction; (j) reconstitution operations (FEMA, 2009a; FEMA, 2009c). These main categories are prevalent in the literature. For instance, the National Fire Protection Association (2010) compares its criteria for business continuity programs with the Disaster Recovery Institute International (DRII) Professional Practices for Business Continuity Practitioners and the Disaster Recovery Institute International as well as with the elements of the Department of Homeland Security and the Federal Emergency
Management Agency. Gibb and Buchanan (2006) also mentioned these elements.

_Essential Functions._ The foundation to any continuity plan is essential functions; therefore, these functions must be determined before considering any of the other continuity elements (FEMA, 2009c). Essential functions allow an organization to provide vital services, exercise civil authority, maintain the safety of the general public, and sustain the industrial and economic base (FEMA, 2009c). These critical functions vary depending on the organization because they are primarily determined by the organization’s customers and their needs. Many authors, including Cerullo and Cerullo (2004) and Tammineedi (2010), call the process of identifying these critical functions the Business Impact Analysis (BIA). Once risks are identified, it is critical to rank or prioritize them by probability of occurrence and level of impact on the business. When considering these risks for the BIA, a “worst case scenario” approach should be used (Tammineedi, 2010). BIA phase then reviews these scenarios and attempts to predict the impact caused by these events upon the organization’s operations (Lasecki, 2009).

As noted earlier, a comprehensive continuity plan cannot be adequate unless essential functions have been identified and prioritized, yet more than 40% of companies that have a so-called business continuity plan have never conducted a business impact analysis (Cerullo & Cerullo, 2004). This failure to include a BIA can be problematic and may contribute to businesses closing down after a disaster. For example, Gallagher (2003) noted that 40% of enterprises
that experience a disaster are closed down within five years. Another study cited by Cerullo and Cerullo (2004) found that 43% of companies never reopen after a major disaster and another 29% fail within two years. FEMA’s study on the effects of Hurricane Andrew reported that 80% of damaged businesses without a BCP failed within two years (Cerullo & Cerullo, 2004). Therefore, organizations would be wise to identify their essential functions and conduct a BIA so that crucial programs and services to the organization’s mission are not interrupted (Health and Human Services DRLN, 2007).

Delegations of Authorities. Another element needed for a viable continuity plan is called delegations of authorities. Pre-delegating key leaders ensures a rapid response to emergencies by training personnel to carry out specific duties when COOP is activated (FEMA, 2009c). FEMA recommends these delegations be at least three positions deep to ensure that Mission Essential Functions (MEFs) and PMEFS are carried out during an emergency. All employees should know who is responsible to make key decisions during a continuity situation by creating a predetermined chain of command (Momani, 2010). This plan will help clear any confusion if a key leader is incapacitated during a crisis. Delegation of authority should outline the authority of key decision makers in determining their power to re-delegate functions and activities as they deem appropriate (FEMA, 2009c). Delegations of authorities should be documented and kept with the other vital records.

Orders of Succession. Orders of succession are also an essential part of continuity planning. In the event key personnel become unavailable to perform
their duties, orders of succession would designate the critical roles and responsibilities to other employees of the organization (FEMA, 2009c). These employees would take on these roles and responsibilities if and when key leadership were unable to perform their jobs such as death or resignation. Orders of succession should be at least three positions deep and geographically dispersed (FEMA, 2009c). This plan of action allows the organization to facilitate survivability and availability of successors (Whitworth, 2006). NFPA (2010) lists order of succession under common plan requirements. It states that entities shall identify lines of succession and include them in continuity plans. These succession lines should be identified by position titles rather than individual names (Whitworth, 2006) and should be documented and kept with the other vital records (FEMA, 2009c).

**Continuity Facilities.** Continuity facilities are another critical element in the continuity planning process. The first requirement for an alternate facility is the capability to maintain essential functions in a threat-free environment (Whitworth, 2006). Safety considerations such as security measures must be taken into account for those employees who are being relocated to a new site (FEMA, 2009c). Before alternate facilities are determined, a risk assessment should be conducted in order to determine the likelihood of disruptions. Training on relocation procedures should be offered to all employees. Organizations should also determine alternate uses for their primary facility as well as considerations for virtual offices. Continuity facilities can be classified as a “hot site” or a “cold site” (Whitworth, 2006). The only difference between these two facilities is that
the hot site is fully functional to resume normal operations. The cold site may require installation of essential equipment before normal operations can be resumed. Another alternative option for organizations is establishment of agreements with other businesses to use their facilities in the event of an emergency. In any case, an inventory of equipment should be recorded with the minimum supplies consisting of essential equipment for continued operations, water supply, electricity, communication capabilities, and generators (Whitworth, 2006).

**Devolution of Control and Direction.** Devolution of control supports the organization when leadership or key staff personnel are incapable of performing essential functions (FEMA, 2009c). Devolution, also known as “fail over,” allows for the transfer of essential functions from the organization’s primary staff and facilities to other employees and facilities (Florida Atlantic University Coop Plan, n.d.). FEMA states that the devolution plan should address notice and no notice events. The planning should be developed as a means to identify and transfer essential functions to a safe and secure environment as well as sustain operational capability for an extended period (FEMA, 2009c). Universities should consider pursuing agreements with other universities or similar entities as a consideration in developing their devolution plan (Florida Atlantic University Coop Plan, n.d.).

**Continuity Communication.** The success of any continuity plan is dependent on effective communication internally and externally (FEMA, 2009c). All communication tools should be reliable, redundant, and interoperable until
normal operations can be continued (NFPA, 2010). These capabilities should be used as advisory and warning systems for employees, stakeholders, emergency responders, and other pertinent outside entities (NFPA, 2010). All communications should resemble those capabilities used during day-to-day operations. Secure and non-secure communications, such as voice systems, video conferencing, information technology systems, and other messaging systems, must be scrutinized on their resiliency under various threats and disruptions (FEMA, 2009c).

**Vital Records Management.** Vital records are simply those files and documents necessary for performing essential functions (Health and Human Services DRLN, 2007). FEMA places these vital records into two separate categories: emergency operating records and rights and interests records (FEMA, 2009c). Emergency operating records are simply those records needed to continue essential functions during an emergency. One of these records is the continuity of operation plan that includes delegations of authority, staffing assignments, orders of succession, and so forth. The other category is rights and interests records which include documents such as payroll, social security, insurance records, and inventory records. This category focuses on the protection of legal and financial rights of the organization and its personnel (FEMA, 2009c). All of these records and databases should be stored in electronic and paper form and be made accessible to those with responsibilities defined in the plans (Bjelmrot, 2007). Health and Human Services DRLN (2007) states that these records should be stored in a fireproof and waterproof
environment as well as in multiple locations. Policies should also be in place for review and updating these records on a routine basis.

*Human Capital.* People are one of the most important components in having a continuity plan. Businesses that fail to focus on the human aspect in creating their BCP have missed the mark (Ketterer et al., 2007). Saving lives and reducing the chance of further injuries or deaths during an emergency should be top priority. People need to know that their well-being is not compromised during an emergency. Communication is vital during an emergency. Organizations should have procedures in place that incorporate a process for accounting and contacting personnel during an emergency as well as a contact number or website for the employee to contact the organization during an emergency (FEMA, 2009c). Other important issues that concern employees are pay, leave, work scheduling, and staffing. BCPs that are created with the best interest for the employees have the greatest chance of working (Ketterer et al., 2007).

*Test, Training, and Exercise (TT&E) Programs.* Test, training, and exercise programs become the fruition of all the preparatory work put into creating the COOP. This essential element allows the continuity manager to see the pieces of the puzzle come together. It provides the organization immediate feedback on the effectiveness of the plan and its ability to perform essential functions during emergencies (FEMA, 2009c). Testing is used to ensure that “equipment and procedures are maintained in a constant state of readiness to
support continuity activation and operations” (FEMA, 2009c, p. K-1). Testing should be conducted at least once a year with results of the testing documented.

U.S. Department of Homeland Security (2007a) created a national standardized program called the Homeland Security Exercise and Evaluation Program (HSEEP) which enables exercise planners to create, design, conduct, and evaluate exercises to improve organizational preparedness. It should be noted that creating and implementing exercise policies is an evolving process that will constantly change (U.S. Department of Homeland Security, 2007b). Continual testing and training will assist in determining these changes.

Flin (1996) suggested multiple ways to evaluate training methods. These methods are as follows:

The most common training methods are exercises, simulations, case studies of major incidents, lectures (on leadership, principles of command, operational procedures), directed reading (the military favour biographies of famous commanders, accounts of battles and texts on command), and on-the-job learning. (p. 70).

These training methods could be divided into two types of categorical exercise drills: discussion-based and operational-based (Cerullo & Cerullo, 2004). Discussion-based exercises are exercises that utilize the human mind to process a course of action during various disasters. Beckman (2006) found that discussion-based exercises are cost-effective compared to operational exercises. Flin (1996) found that these exercises can range anywhere from directed readings to tabletop exercises. Some discussion-based exercises, such as
lectures, case studies, and background readings, are used for compilation of knowledge about a major incident. This knowledge usually comes from a specialist who has either experienced the incident firsthand or has received a detailed account of the particular incident (Flin, 1996). These exercise drills are very useful in formulating an emergency response plan and providing insight on successful and non-successful scenarios that occurred in the past.

Other training exercises, such as seminars, workshops, and tabletop drills, are also useful in evaluating the emergency response plan (Flin, 1996). The tabletop scenario is a specific simulation that usually consists of key personnel, in supervisory positions, that come together to discuss possible emergency situations (Lindell, Prater, & Perry, 2007). Any type of emergency is “fair game” during these scenarios. Once an emergency topic is chosen, the selected group will perform a “walk-through” analysis of the scenario. This analysis is to make certain that everyone knows his or her specific role in responding to the disaster. These informal discussions are usually a few hours in length and lead to a reduction of stress among participants (McIntire, 2007).

A drill is a hands-on exercise used for a single-function response (Beckman, 2006). This exercise is narrow and precise in nature and seeks to improve a certain function by reducing time and effort during the response and recovery phase. This small and limited exercise allows for immediate discussion and feedback. Another advantage of this operational exercise is it only takes a few hours from start to finish (McIntire, 2007). Another operational exercise is called a functional exercise. This exercise is sometimes called a control post-
exercise and consist of small exercises with different entities working together to accomplish the same task (Bechman, 2006). Unlike drills, functional exercises can incorporate other agencies in an attempt to control the situation; however, they are still limited in scope. These exercises also are good for testing of equipment used in an emergency. Full-scale exercises encompass all agencies and departments that are deemed necessary to control the situation (McIntire, 2007). These large simulations involve nearly every organization that normally would be involved in a disaster. It is treated as a real-life situation and involves multi-agency collaboration. Each participating department can learn numerous lessons through the use of full-scale exercises. Operational- and discussion-based exercises enable all participants to understand the key functions of ERP. During these exercises participants will assemble and discuss their roles in an emergency while becoming acquainted with policies and procedures set forth by the facility’s emergency response plan (McIntire, 2007). Test, training, and exercises are important for continuity planning. However, most sporting venues that use these exercises to practice emergency plans and procedures usually are found in the professional realm with collegiate venues lacking in overall security measures (Beckman, 2006).

Reconstitution. Reconstitution is simply returning back to normal operations and usually occurs immediately after an event (FEMA, 2009c). Reconstitution plans should be made regardless of the level of disruption caused by the event. It should include instructions for a safe and orderly return to the primary facility. It can coincide with recovery and restoration procedures. A
prioritized approach to returning to normal business operations and an examination of the facility to make sure it is safe and operable for employees should be included in the plan. Once the facility is determined safe and operable, a checklist of essential equipment or other essential items that allow the organization to function should be prioritized and completed with communication of completion directed to a central location or a specified individual (FEMA, 2009c). While this process is underway, essential functions should be maintained either from the alternate site or primary facility until the facility is ready for the transfer.

Supporting Components of COOP

There are four other components mentioned by FEMA that must be incorporated COOP. These supporting components consist of: program plans and procedures, risk management, budgeting and acquisition of resources, and continuity plan operational phases and implementation (FEMA, 2009c). Colleges and universities are promoting these components through FEMA’s document Building a Disaster Resistant University (FEMA, 2003). FEMA has even provided grant money for universities to become disaster resistant by using the Disaster Resistant University (DRU) planning model (USM, 2010). The University of Southern Mississippi (2010) mentions four universities in the state of Mississippi have received federal funding for the purpose of preparing campus-specific hazard mitigation plans. Many universities are using DRU model, which incorporates the four supporting components of COOP. An
overview of these four phases is included with the idea that these phases are already implemented at colleges and universities.

The first phase is organizing resources (FEMA, 2003). This phase includes formulating policies, programs, and practices in order to assess risk. A commitment from leadership is essential in order to develop a plan for acquiring resources needed to create and support the mitigation plan (Karakasidis, 1977). Once leadership is on board, an advisory committee should be put together to develop a mission statement and communication plan. This committee should also identify supporting infrastructures and important stakeholders in the community since the campus relies on these important resources for survival (FEMA, 2003).

Risk management and hazard identification are used to identify the level of vulnerability of potential hazards and mitigate the effects thereof (FEMA, 2003). A risk management plan must include a comprehensive assessment that identifies all potential hazards or threats with clarification on the magnitude and frequency of these events (Lasecki, 2009). Once all risks have been identified, the organization should categorize the risks by frequency and severity of the hazard. Potential impact and damage to people, property, operations, and the environment should be considered in the process.

Developing the mitigation plan is the next phase which examines the identified hazards and risk assessments and then formulates a written mitigation plan. Goals and objectives should be formulated based on problems that were revealed in the risk assessment process (FEMA, 2003). A
comprehensive study of mitigating strategies found in existing literature, expert advice, and success stories should be used to formulate the plan. Remember, this plan must align with the organization’s mission statement (Freestone & Lee, 2007).

Adoption and implementation occurs after the plan has been written and establishes procedures to maintain and update the plan. The athletic department must be capable of responding to a continuity incident or event at a given time (FEMA, 2009c). One way to achieve this readiness capability is by embedding the mitigation plan into the organization’s culture (Freestone & Lee, 2007).

Training and awareness programs for new and existing staff should be offered on a regular basis in order for staff to become familiar with all aspects of the plan. Plans and procedures for activating this plan should be well-defined and include instructions for moving to the alternate facility, moving vital records, acquiring necessary supplies, and notifying appropriate personnel (FEMA, 2009c). Fried (2010) mentioned one way an organization can assist in the implementation of the risk management plan is using the ECT approach. This approach uses seven words that end with the letters ect as an easy-to-remember guideline to follow. These seven elements consist of reflect, deflect, detect, inspect, correct, reinspect, and reflect. Again, this process should be cyclical in nature in order to assure best practices are being implemented.

Conclusion

Collegiate athletic departments face the same threats of private and public businesses. Multiple disruptive events have caused havoc at various athletic
events causing change of venues, loss of revenue, injuries, and deaths. Natural disasters and terrorism continue to pose serious threats on all types of organizations; therefore, athletic departments must become proactive in preparing for the unexpected (Wheatman, 2001). In order to combat against these disruptive events and provide a safe environment for everyone, athletic departments must be proactive in assuring that necessary steps are implemented to maintain normal operations. Creating, implementing, and practicing COOP reduces the chaos caused by disruptive events and expedites the process of returning to normal operations. This all-hazard approach prepares organizations for any disruptive event by identifying all potential threats that may disrupt normal operations (Whitworth, 2006).
HUMAN SUBJECTS REVIEW FORM

THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Institutional Review Board

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 28, 111). Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Event Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 11062204
PROJECT TITLE: Continuity of Operations Planning & Preparedness of NCAA Division I Athletic Departments
PROPOSED PROJECT DATES: 06/21/2011 to 06/21/2012
PROJECT TYPE: Dissertation
PRINCIPAL INVESTIGATORS: Brandon Lane Allen
COLLEGE/DIVISION: College of Health
DEPARTMENT: Human Performance & Recreation
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Exempt Approval
PERIOD OF APPROVAL: 07/12/2011 to 07/11/2012

Lawrence A. Hosman, Ph.D.
HSPRC Chair

7-16-2011
Date
APPENDIX B

SURVEY INSTRUMENT

1. Please specify the name of your College/University. If not listed, please type the name in the "other" field.

- Alabama A & M University
- Alabama State University
- A&M State University
- American University
- Appalachian State University
- Air Force Academy
- Arizona State University
- Arkansas State University
- Arkansas State University-Main Campus
- Auburn University
- Austin Peay State University
- Ball State University
- Baylor University
- Belmont University
- Bethune-Cookman University
- Boise State University
- Boston College
- Boston University
- Bowling Green State University-Main Campus
- Bradley University
- Brigham Young University
- Brown University
- Bryant University
- Bucknell University
- Butler University
- California Polytechnic State University-San Luis Obispo
- California State University-Beaverfield
- California State University-Fresno
- California State University-Fullerton
- California State University-Laguna

- Louisiana State University
- Louisiana Tech University
- Loyola College in Maryland
- Loyola Marymount University
- Loyola University Chicago
- Manhattan College
- Marquette University
- Marshall University
- Mercer University
- Miami University-Oxford
- Michigan State University
- Middle Tennessee State University
- Mississippi State University
- Mississippi Valley State University
- Missouri State University
- Monmouth University
- Montana State University
- Morehead State University
- Morgan State University
- Mount St Mary's University
- Murray State University
- New Mexico State University-Main Campus
- Niagara University
- Nicholls State University
- Norfolk State University
- North Carolina A & T State University
- North Carolina Central University
- North Carolina State University at Raleigh
- University of Arizona
- University of Arkansas at Little Rock
- University of Arkansas at Pine Bluff
- University of Arkansas Main Campus
- University of California-Berkeley
- University of California-Davis
- University of California- Irvine
- University of California-Los Angeles
- University of California-Riverside
- University of California-Santa Barbara
- University of Central Arkansas
- University of Central Florida
- University of Cincinnati-Main Campus
- University of Colorado at Boulder
- University of Connecticut
- University of Dayton
- University of Delaware
- University of Denver
- University of Detroit Mercy
- University of Evansville
- University of Florida
- University of Georgia
- University of Hartford
- University of Hawaii at Manoa
- University of Houston
- University of Idaho
- University of Illinois at Chicago
- University of Illinois at Urbana-Champaign
- University of Iowa
- University of Kansas
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<td>Villanova University</td>
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<td>Georgia Tech</td>
<td>Texas A &amp; M University-Corpus Christ</td>
<td>Virginia Commonwealth University</td>
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*2. Has the institution experienced a Presidential declared disaster (received federal funding for response and recovery of a disaster) within the last 10 years?

- Yes
- No
- Not Sure
**Definition of Scale**

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**3. Essential functions have been prioritized based on importance of the service.**

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**4. Essential functions have been identified to maintain the safety of the public, provide vital services, and sustain the economic base in case of a disruption of normal operations**

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**5. Employees are aware of who assumes authority of leadership if that leadership is unavailable during a continuity situation.**

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**6. A written in-depth delegation plan is available to manage essential functions throughout an emergency.**

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**7. Delegations of authority are predetermined to make policy decisions at leadership levels and locations as deemed appropriate.**

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**8. Delegations of authority are established to ensure a rapid response to any emergency requiring implementation of the continuity plan.**

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**9. A vulnerability assessment has been conducted on the location of the continuity facility.**

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**10. Access to a continuity facility can be achieved within 12 hours after the activation of the continuity of operations plan.**

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* 11. Communications can be maintained with leadership personnel while transitioning to continuity facilities.

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* 12. Communications can be maintained in the event of a catastrophic disaster.

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* 13. Plans that facilitate the immediate transfer of essential functions to other agencies are available in case of a catastrophe.

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* 14. Devolution plans are established which address emergencies that render key personnel unavailable to perform essential functions.

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### 15. Written plans for transitioning back to the original operating facility are in place.

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### 16. Written procedures for phasing down alternate facility operations and returning operations, personnel, records, and equipment to the primary facility are in place.

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### 17. Vital records are protected either by use of duplicate hardcopy or electronic files.

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### 18. An inventory of vital records is kept to ensure confidentiality of records during a disruption of normal operations.

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*19. Procedures are in place that address the needs of personnel during a continuity event (i.e. pay, communication, hiring).*

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*20. An action plan is in place for hiring of new personnel due to the unavailability of personnel during an emergency.*

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*21. Exercises are conducted regularly using the components of the continuity plan.*

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*22. A written document has been developed for conducting training and exercise programs regarding the continuity plan.*

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### 23. The likelihood of potential threats or hazards has been identified and assessed.

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### 24. Strategies have been created to minimize the likelihood of high-risk scenarios.

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### 25. Budgetary procedures that allow for the availability of resources before, during, and after a continuity event are in place.

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### 26. Procedures to acquire resources necessary for continuity operations are available on an emergency basis.

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### 27. Procedures are in place that reviews the best course of action based on the organization’s readiness posture.

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### 28. The organization is prepared to implement executive decisions based upon a review of emergencies.

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