NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

PROMOTING INTER-AGENCY READINESS THROUGH STANDARDIZED TRAINING AND EDUCATION OF FRONT LINE RESPONDERS

by

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September 2011

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The creation of this system will ensure that every first responder and emergency manager in New Jersey understands his or her mission as it relates to preventing, responding to and recovering from terrorist attacks. By focusing on the front-line individual, the state can effectively enhance its overall preparedness.

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LIST OF ACRONYMS AND ABBREVIATIONS

AHJ	Authority Having Jurisdiction
ARTP	Accredited Regional Training Program
BFST	Bureau of Fire Standards and Training
BP	Basic Police
CALEA	Commission on Accreditation for Law Enforcement Agencies
Cal EMA	California Emergency Management Agency
CCC	Clackamas Community College
CEMP	Comprehensive Emergency Management Program
CFLEA	Commission for Florida Law Enforcement Accreditation
CFPC	Connecticut Fire Prevention and Control
CISAC	Center for International Security and Cooperation
CLEE	Continuing Law Enforcement Education
CLEET	Council of Law Enforcement Education and Training
CJSTC	Criminal Justice Standards and Training Commission
CJAD	Criminal Justice Academy Division
COFT	Council on Fire Training
CPOSTC	Connecticut Police Officers Standard and Training Council
CPR	Cardio Pulmonary Resuscitation
CPT	Continuing Professional Training
CRLEAA	Chesapeake Region Law Enforcement Accreditation Alliance
CSTI	California Specialized Training Institute
CTS	Certification Training Standards
DCJS	Division of Criminal Justice Services
DEM	Florida Division of Emergency Management
DEMHS	Connecticut Department of Emergency Management and Homeland Security
DHS	Department of Homeland Security
DHSES	Division of Homeland Security and Emergency Services

DPSCS	Department of Public Safety and Correctional Services
DPSST	Department of Public Safety Standards and Training
EMAC	Emergency Management Assistance Compact
EMAP	Emergency Management Accreditation Program
EMI	Emergency Management Institute
FCDICE	Florida College Department of Insurance and Continuing Education
FEMA	Federal Emergency Management Agency
FDLE	Florida Department of Law Enforcement
FIDO	Firefighter Individuals and Departments On-line
FSFC	Florida State Fire College
FSTB	Fire Service Training Bureau - Iowa
GAO	Government Accountability Office
HSEMD	Iowa Homeland Security and Emergency Management
ICS	Incident Command Systems
IEMA	Iowa Emergency Management Association
IFSAC	International Fire Service Accreditation Congress
ILEA	Iowa Law Enforcement Academy
LERP	Law Enforcement Recognition Program
LMS	Learning Management System
MEMA	Maryland Emergency Management Agency
MFRETC	Maryland Fire Rescue Education and Training Commission
MFRI	Maryland Fire and Rescue Institute
MFSPQB	Maryland Fire Service Personnel Qualification Standards Board
MPTC	Municipal Police Training Council
MPTC	Maryland Police Training Commission
NFPA	National Fire Protection Association
NIC	National Information Center
NIMS	National Incident Management System
NPS	Naval Postgraduate School
NPQB	National Personnel Qualification Board

NYPD	New York Police Department
OACP	Oklahoma Association of Chiefs of Police
ODP	Office of Domestic Preparedness
OEM	Office of Emergency Management
OEM	Oklahoma Department of Emergency Management
OEMA	Oregon Emergency Management Association
OFPC	Office of Fire Prevention and Control
OFSM	Office of the State Fire Marshal
OFST	Oklahoma Fire Service Training
OLEAC	Oklahoma Law Enforcement Accreditation Commission
ORCEMS	Oregon Certified Emergency Management Specialist
ORE	Oregon Emergency Management
OSHA	Occupational Safety and Health Standards
POST	Peace Officer Standards and Training
PPD-8	Presidential Policy Directive 8
QHSR	Quadrennial Homeland Security Review Report
RBC	Regular Basic Course
RFT	Recruit Firefighter Training
RTA	Regional Training Advisors
REM	Regional Emergency Management
REPTS	Regional Emergency Planning Teams
RLO	Regional Liaison Officers
SCEMD	South Carolina Emergency Management Division
SCLEA	South Carolina Law Enforcement Accreditation
SCCJA	South Carolina Criminal Justice Academy
SPTC	State Preparedness Training Center
SCFA	South Carolina Fire Academy
TCFP	Texas Commission on Fire Protection
TCLEOSE	Texas Commission on Law Enforcement Officers Standards and Education

TCLEDDS	Texas Commission on Law Enforcement Data Distribution System
TEP	Multiyear Training and Exercise Plan
TDEM	Texas Division of Emergency Management
UASI	Urban Area Security Initiative
WMD	Weapons of Mass Destruction

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I.   INTRODUCTION

A.   PROBLEM STATEMENT

In response to the attacks of 9/11, President George W. Bush signed a bill on November 19, 2002, that created the Department of Homeland Security (DHS). Among other duties, DHS is charged with providing federal homeland security funds to states in support of securing the homeland. In New Jersey, one way in which this funding is utilized is by training and educating state, county, local government and volunteer personnel on such elements as prevention, response, and recovery. Training and education of this nature provides for an effective grassroots preparedness approach that strengthens the state and the nation. Voids in the New Jersey homeland security training and education of first responders and emergency managers have been created due to the absence of state oversight to ensure that there is a measurable level of standardization that can guarantee interoperability, uniformity, and the capability to make personnel interchangeable. Standardized training enhances the state's overall preparedness level and effectively allows the first responder and emergency management communities a greater flexibility and adaptability in an all-hazards environment.

In June of 2005, there was a joint hearing before the Subcommittee on Emergency Preparedness, Science, and Technology with the subcommittee on Management, Integration, and Oversight of the Committee on Homeland Security House of Representatives that asked the question: The national training program: is anti- terrorism training for first responders efficient and effective (National Training Program, 2005)? In a response to this question, New York Police Department Commissioner Raymond Kelly gave testimony that identified the need for the states to make the determination as to who gets the training, what type and how (National Training Program, 2005). More importantly, Kelly commented further that he believed that states should be coordinating the certification and recertification of responders and managers (National Training Program, 2005). Kelly went on to comment that DHS should provide the training oversight (National Training Program, 2005). Kelly acknowledged that national training

standards are needed to address this issue of over-arching coordination and control (National Training Program, 2005). Analysis of the information produced at this joint hearing leads to the conclusion that the lack of standardized homeland security training and education for first responders and emergency managers is not just a New Jersey problem, but rather it is a more systemic, national issue (National Training Program, 2005).

However, the homeland security training and education that is occurring in New Jersey is specifically tailored to the wants and needs of state, county, and local governments. These government entities are primarily concerned with addressing their own immediate infrastructure risks. This individual approach to training and educating personnel is fraught with problems. Because there is an absence of collaboration, much of what is happening can be defined as having a silo effect. The silo effect occurs when there is a lack of communication and shared goals among various agencies. This silo effect has the potential to adversely impact the implementation of statewide standards for homeland security training and education in New Jersey.

At all levels of government, there has been a failure to adequately share information and a failure to more consistently initiate inter-agency homeland security training and education. This increases the risk that compartmentalized skill sets are not adequately shared across all levels of government. This, in turn, results in fragmented forms of statewide homeland security training and education. In part, this can be attributed to what is known as home rule, a contributing factor to the lack of homeland security training standards. Home rule in New Jersey is the exercise of power by county and local governments and the marginalization of state influence (Trafford, 1995). As a result, the state government cedes a measure of its power to county and local governments, which can give rise to these entities acquiring greater autonomy in relation to their governance. Even in the case of homeland security preparedness, this concept has the potential of creating disjointed efforts in the area of training and education. The state has not instituted a policy strategy that would provide direction through establishing training and education standards and guidelines for the first responder and emergency manager.

In the Congressional report, *A Failure of Initiative*, the Select Committee identified significant institutional and individual failures at all levels of government in responding to the Hurricane Katrina disaster and found that Katrina "was primarily a failure of initiative" (Congressional Select Committee, 2006, p. 1). This report explains that the biggest failure was not effectively anticipating the consequences of the storm (Congressional Select Committee, 2006). In a similar way, in New Jersey, all levels of government are failing to anticipate the consequences of not coordinating and controlling all homeland security training and education for first responders and emergency managers at a state level. This is due in large part to the non-standard training that first responders and emergency managers have received. This makes them unable to work together effectively as a team. The leadership of this state has failed to recognize this problem, and there is now a lack of a cohesive, uniformed training and education model.

B.   RESEARCH QUESTIONS

How can those in the state government, who are charged with the responsibility of ensuring that all first responders and emergency managers are adequately and properly trained for all-hazards response, ensure that this training is delivered on a large scale in a cost effective, timely and thorough manner, without redundancy and duplication of effort?

In order to respond to this primary research question, this thesis will also seek to answer the following second tier of questions:

1.   How can the state quantify and then implement homeland security training and education standards?

2.   What obstacles might hinder statewide integration of homeland security training and education?

3.   What role should DHS play in the state's attempt to consolidate, integrate, and design standards for homeland security training and education?

C.   LITERATURE REVIEW

An examination of what is known about consolidation and standardization of training and education for first responders and emergency managers was conducted. In

addition, there has been very little research on this topic. All of the research materials reviewed focus on the strong need for training and education, without consideration of the mechanism for the delivery of this training in a broad, standardized manner. The reports tend to chronicle the efforts of administrators and United States policymakers addressing the importance of producing "prepared" first responders and emergency managers without providing the means to accomplish this goal. The literature review revealed that there is clearly a dearth of literature on the efficacy of standardized training and the protocols for implementing same. The limited amount of literature that was found on standardizing homeland security training and education can be separated into three categories:

1.   documents written by federal government entities;
2.   independent studies;
3.   education documents.

These three categories were used because these categories revealed the most relevant research material for this literature review.

While not all of this literature is specific to this topic, the research presents valid points for discussion. What is known about consolidated standardized homeland security preparedness training and education for emergency managers and first responders has led to a number of conclusions. This review included the examination of local, state, and federal documentation and information, incorporating publications ranging from 2003 up to the present day.

1.   Federal

The federal Government Accountability Office (GAO) has conducted numerous studies related to the subject of standardized training and education. These studies are not necessarily specific to this topic; however, an examination of these documents reveals that they support the conclusions discussed in this paper.

- 2010 (GAO-10–822T). *Key Challenges and Solutions to Strengthen Interagency Collaboration.* The GAO (2010) recommends that agencies involved in national security will need to make concerted efforts to forge

strong and collaborative partnerships, and seek coordinated solutions that leverage expertise and capabilities. According to this report, today the challenges exist in four key areas:

1.   Developing and implementing overarching strategies

2.   Creating collaborative organizations

3.   Developing a well-trained workforce

4.   Sharing and integrating national security information across agencies. (General Accountability Office [GAO], 2010, p. 2)

- 2009 (GAO-09–651). *FEMA Lacks Measures to Assess How Regional Collaboration Efforts Build Preparedness Capabilities*. From fiscal year 2003 through fiscal year 2009, DHS has allocated about five billion dollars for the Urban Area Security Initiative (UASI) grant program to enhance regional preparedness capabilities in the nation's highest risk urban areas. The GAO recommended that the Federal Emergency Management Agency (FEMA) develop performance measures to assess how regional collaboration efforts funded by UASI grants build preparedness (GAO, 2009).

- 2004 (GAO-04–1009). *Effective Regional Coordination Can Enhance Emergency Preparedness*. Regional coordination efforts are enhanced by the presence of a collaborative regional organization that includes representation from many different jurisdictions and different disciplines. The federal government can provide support for regional coordination (GAO, 2004).

These studies all suggest courses of action that should be taken at both the federal and state levels in order to overcome deficiencies relative to homeland security efforts. They place a high value on collaboration, coordination, integration, regionalization, and preparedness. The major points in these studies suggest that there is a need for the federal government to provide greater leadership and direction to states and local governments. By providing standards that states can accurately measure and build strategies around, the federal government could increase the value of its partnership with the states.

The March 2011 *Presidential Policy Directive* (PPD-8) is designed to strengthen and coordinate efforts by the federal government. It is also intended to create what is called an "all-of-nation" approach (Department of Homeland Security, 2011). This strategy focuses on preparing the country's capabilities in a way that promotes the

integration of resources (Department of Homeland Security, 2011). A common theme throughout the document is preparedness. It speaks to shared responsibility involving federal, state, local, tribal and private and nonprofit sector stakeholders (Department of Homeland Security, 2011, p. 3).

Under the sub-heading National Preparedness System in the PPD-8, it identifies the need for guidance from the federal level specific to planning, organization, equipment, training and exercising in order to maintain domestic preparedness capabilities (Department of Homeland Security, 2011). This strategy will require effective collaboration amongst federal governmental agencies. Nationwide interoperability is recognized in PPD-8 as being an important piece to providing guidance for training and exercising. PPD-8 is valuable in that it acknowledges the need for the federal government to provide additional guidance to the states in the form of training and education standards (Department of Homeland Security, 2011).

In PPD-8, there is no specific reference to the consolidation of currently fragmented homeland security training and education at the state and local level of government. PPD-8 provides direction for the federal government to plan, provide organization, equipment, training and exercising (Department of Homeland Security, 2011). This PPD provides justification for the creation of similar initiatives at the state and local level. The creation of a state and local training and education system could receive valuable direction and guidance from its federal partners.

In June of 2005, there was a joint hearing before the Subcommittee on Emergency Preparedness, Science, and Technology with the subcommittee on Management, Integration and Oversight of the Committee on Homeland Security House of Representatives which asked the question: *the national training program: is anti-terrorism training for first responders efficient and effective* (National Training Program, 2005). The joint hearing was held to examine the effectiveness of the Department of Homeland Security's terrorism preparedness and training for first responders. Furthermore, this joint hearing was conducted out of concern for the overall preparedness

of the public sector and from the private sector. The questions addressed the ability of the nation's first responders' to mesh the skills necessary to prevent, to prepare for, and respond to and recover from acts of terrorism.

The fact is that the first responder community is estimated at over three million strong and growing (National Training Program, 2005). In the 10 years since 9/11, the field of emergency management has been reinvigorated and imbued with a new sense of urgency to accomplish its mission. The value of the first responder as an integral component to this mission is more fully appreciated, and the need to properly train and educate this huge number of both professionals and volunteers has arguably never been greater. Standards based training, implemented nationally, will provide a level of readiness within the first responder community that will prepare them to meet any challenges.

In 2004, the National Incident Management System, NIMS as it is commonly referred to, established standardized processes and procedures that first responders at all levels of government must use during emergencies involving multiple jurisdictions (Department of Homeland Security, 2004). This initiative required that every first responder learn generic terminology and set of standard operating procedures. This standardization approach can be applied to homeland security training and education at the federal level. States could then be empowered to create processes and procedures based upon federal criteria that would allow the state to leverage the training and education of first responders and emergency managers in a way that is organized around a core set of standards. The intent was to leverage the nation's first responder organizations to universally recognize a standard that would promote a seamless force multiplier that could have a level of interoperability acceptable to perform life safety duties at a disaster.

For New Jersey, becoming interoperable at the emergency manager and first responders level is important. It is imperative that the state's multitude of first responder operating systems become better at working together. The NIMS is designed to promote the successful integration of multiagency personnel at a large incident. It follows logically that the more first responders have in common as to terminology, policies, and

procedures, the better they will be able to work together in large scale disasters. Training and education that is standards driven and consistent with NIMS can ensure a measurable degree of sameness among personnel.

These federal documents place a high value on collaboration, coordination, integration, regionalization, and preparedness. Even more importantly, this literature recognizes the importance of cooperation between federal and state government. Cooperation at a high level would allow for states to more effectively synchronize and coordinate the planning effort involving them and county and local government agencies. While this literature is not specific to standardized homeland security training and education at the state level, it provides valuable information that act as stepping off points for further discussion on the subject of standardization. This literature does focus on the first responder and emergency manager who for purposes of this literature review will be referred to as front line managers. PPD-8 identifies the need to promote interoperability, provide guidance for training and education and evaluate progress to meeting these goals (Department of Homeland Security, 2011). Also, the all-of-nation approach supports the expansion of training and education opportunities for the federal and state level (Department of Homeland Security, 2011). This supports further research and analysis on creating and implementing training and education standards.

2. Independent Studies

Homeland Security after the Bush Administration: Next Steps in Building Unity of Efforts highlights the fact that homeland security remains a house divided because of the absence of consistent cooperation between the 22 governmental agencies under the DHS umbrella (Stockton & Roberts, 2008). The report summarizes recommendations and proposes changes within DHS to provide for better integration across lines to help to overcome the "stove piping" (Stockton & Roberts, 2008, p. 1) that has plagued DHS since its inception.

According to Stockton and Roberts, "Stanford University Center for International Security and Cooperation (CISAC) convened a forum of government and private sector leaders in homeland security to propose specific, practiced steps that need to be taken to

strengthen collaboration in homeland security" (2008, p. 1). This study accurately identified how state and local administrators view the officials in DHS and elsewhere.

The forum participants in this study noted that any such effective unity of effort will emerge when "stakeholders" in homeland security federal, state, local, and private sector help formulate the goals that the stakeholders will jointly pursue and reach consensus on the means to achieve them (Stockton & Roberts, 2008, p. 2). Conversely, the forum participants did recognize the fact that any such inclusive system will inevitably be more cumbersome and difficult to manage in comparison to a top-down system (Stockton & Roberts, 2008). By integrating states, localities, and the private sector more fully than is the case will multiply the problems of policy coordination. However, the forum participants argued that for sustainability of homeland security programs and capabilities over the long haul, a more inclusive policymaking system must be developed with a clear and distinct federal hierarchy (Stockton & Roberts, 2008). The benefit of a more inclusive system is that the objectives that do emerge from the process will have buy-in from those responsible for implementing the goals (Stockton & Roberts, 2008).

While this literature is not specific to homeland security training and education standards, it provides room for further discussion of the topic. This research material accurately identifies collaborative partnerships as playing a vital role in accomplishing homeland security strategies that are dependent on collective (state, county, and local levels) buy-in. Increased collaboration between the federal, state, and local level can improve working partnerships. Leadership needs to take the initiative for this to happen. When setting goals for the nation, leadership at the federal level must be cognizant that state, county and local governments are critical stakeholders. If leadership at the federal level initiates core standards for homeland security training and education then it becomes possible for states to implement processes and procedures that would ensure that the local communities meet these requirements.

3.   Education

After the terrorist attacks of September 11, 2001, the United States academic community responded with an outpouring of course offerings, concentrations, certificates and degree programs for students wishing to further their knowledge in the field of homeland security (Educational Paradigms for Homeland Security, 2005). During this time, there was a great urgency to learn as much as possible about the threats to our nation.

In an article written by Chris Bellavita and Ellen Gordon, *Changing Homeland Security: Teaching the Core*, they describe how the Naval Postgraduate School's (NPS) Center for Homeland Defense and Security selected particular elements within the uncertainty that is homeland security (2006). They then constructed a teaching narrative around those elements and used that understanding to fashion our continuously evolving homeland security curriculum and the Introduction to Homeland Security course (2006). This article identifies one way to approach teaching homeland security.

The article by Bellavita and Gordon discusses the importance of understanding homeland security as being in a pre-paradigm phase (2006). This is because there is no conceptual agreement about the range of topics that constitute homeland security as a field of study. According to the article, homeland security education is still evolving. The article goes on to argue that it is too early in the development of homeland security to be concerned about gaps (Bellavita & Gordon, 2006). Gaps, in this case, imply a standard against which to compare a current position.

The NPS Center for Homeland Defense and Security program is sponsored by the Department of Homeland Security with the primary intent to expand the capability of local and state governments, by first preventing terrorism and, second, reducing vulnerabilities and improve response and recovery. Homeland security is a profession that needs people who will contribute new ideas. The course curricula framework begins with an introduction class that allows the student to explore the multiple dimensions that make up homeland security. The course's intent is to make the student view themselves as a homeland security leader.

What might a homeland security university curriculum look like? The Homeland Security Management Institute of Long Island University is a private institution for graduate-level education in the field of homeland security management. In the *Implementing the Recommendations of the 9/11 Commission Act of 2007*, Congress designated the Homeland Security Management Institute as a DHS National Transportation Security Center of Excellence, making it the only DHS Center of Excellence to offer a graduate degree in the homeland security field (Homeland Security Management Institute, 2008). Both the 15-credit graduate-level Advanced Certificate in Homeland Security Management and the 36-credit Master of Science in Homeland Security Management degree are academically rigorous and professionally relevant, and both are delivered entirely in an asynchronous online format designed to accommodate the busy schedules of active professionals (Homeland Security Management Institute, 2008).

The Homeland Security Management Institute's academic programs are fully accredited by the Commission of Higher Education of the Middle States Association of Colleges and Secondary Schools, and it is fully registered with the New York State Education Department (Homeland Security Management Institute, 2008).

The literature research specific to education has revealed dozens of ways that colleges, universities, agencies, and government have viewed homeland security. This literature review focused on homeland security education specific to a governmental academic institution and a private academic institution. The research conducted on the NPS Center for Homeland Defense and Security and the Long Island University Homeland Security Management Institute revealed that education on this topic is still in its infancy (Long Island University Homeland Security Management Institute – Master of Science in Homeland Security Management, 2008). The literature research has also revealed that homeland security is a growing field within the education community. The NPS Center for Homeland Defense and Security and the Long Island University Homeland Security Management Institute educational strategies appear to place a high importance on the discipline of preparedness. Also, the elements of prevention, response and recovery are prevalent throughout their course offerings.

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D.   CONCLUSION

In response to the attacks of 9/11, President George W. Bush signed a bill on November 19, 2002, that created the Department of Homeland Security. Among other duties, DHS is charged with providing federal homeland security funds to states in support of securing the homeland. In New Jersey, one way in which this funding is utilized is through training and education of state, county, local government, and volunteer personnel on such elements as prevention, response and recovery. Clear lines of research need to be developed on the topic of homeland security training and education with attention given to standardization through consolidation. Alternative sources addressing voids in state and local procedural training exist and provide support for the need for well-educated and trained (prepared) personnel. These resources lend credence and validation to establishing statewide training and education standards in order to promote interoperability, uniformity, and the capability of having personnel being interchangeable.

As this literature review has shown, there is a lack of research on the establishment of standardized training and education standards for first responders and emergency managers at the state or federal level and on the most effective methodology or plan for doing so. Based upon the interpretation of the evidence in the literature review, the creation of national training standards will provide guidance to states and will enable them to promote standards based training and education designed to enhance overall preparedness. Applying these principles will afford New Jersey the ability to meet and overcome challenges to change that are set forth later in this paper and address areas such as cultural perspectives, leadership style and resistance to efforts to consolidate municipal services.

After the 9/11 attacks, the United States academic community responded with an outpouring of course offerings at the collegiate level, review of relevant literature in this area is limited because there is a scarcity of literature specific to the standardization of training and education for the first responder or emergency manager. Additionally, the literature examined in this review falls short in areas of future development. PPD-8

provides a sound foundation as a stepping-off point for arguing that there is a need to train and develop planning professionals in a standardized and coordinated way (Department of Homeland Security, 2008).

E. HYPOTHESES

The central assumption is that in order for New Jersey first responders and emergency managers to be successful in their homeland security missions, it is necessary that they receive the proper training and education. To accomplish this, standards for course content and delivery must be implemented. By establishing standardized training/education programs, the state would effectively enhance the capabilities of first responders and emergency managers with respect to statewide uniformity, interoperability, and the capacity to train personnel to a high level of interchangeability.

"Interchangeability" as used in this context is the concept of having personnel who are similarly and consistently trained to a degree where they can seamlessly accomplish any NIMS-defined job function or skill set at any level and across organizational boundaries. NIMS standardization approach has promoted integration at the organizational and personnel levels within the state, county and local governments. Furthermore, NIMS is evolving among New Jersey first responders in a way that has allowed it to be a workable mechanism for ensuring consistency and uniformity in the approach to disaster response. If a statewide set of training/education standards existed, this would make any appropriately trained individual an asset that could perform a given function in any state, county, or local organization in the same way that individual would discharge their duties in their current position with their primary organization.

The conventional wisdom about the standardization of training is that it can deliver measurable benefits when applied within the framework of a system or an organization. Financial costs and risks can be minimized and communication improved. Standards are the "what" of education while curriculum and instruction are the "how." Evidence suggests that the existence of basic, challenging standards also leads to more students reaching higher levels of achievement (A Call, n.d.).

Currently, there are 50 states and numerous federal agencies that have ongoing emergency response training/education programs that cannot be accurately assessed as to their efficacy, due in part to the absence of standards against which these programs can be measured (A Call, n.d.). DHS has failed to provide critical oversight and guidance in this area. Examination of New Jersey's homeland security training/education programs has revealed that, like everywhere else, there are no statewide standards in place (A Call, n.d.).

To make progress in this area, an analysis of why New Jersey and even DHS are without homeland security training/education standards for first responders and emergency mangers must take place, and solutions must be studied and proposed. This will lead to the creation of the blueprint for a pilot project for a statewide, multidisciplinetraining and education system to take the first steps toward correcting this deficiency. If DHS and the state intend to be an effective component in the homeland security effort, then a revamping of the existing patchwork of fragmented training must occur. At both the national and state levels, a hallmark of successful training/education will be the establishment of clear, concise, and measurable performance standards.

The multi-disciplined training and education system will need to have an academic framework that can properly support the creation of educational standards. This training and education system must be designed on the discipline of preparedness. Prevention, response, and recovery will become supporting elements of the discipline of preparedness, which recognizes training and education of first responders as a continuous cycle. It will need to be a dynamic, flexible, and continuous process of education and training.

F.   SIGNIFICANCE OF RESEARCH

This thesis will add to the national discussion on homeland security training and education standards. The customers of this research will be the citizens of New Jersey, state administrators, other states, and the Department of Homeland Security. Additionally, other academic institutions will find value in the research in ways that will assist them in the design and creation processes of continuing education curricula. The

case studies examine existing police, fire, and emergency management best practices from states throughout the country. These case studies will provide innovative smart practices that will be utilized for the creation of homeland security training and education standards. Homeland security practitioners and leaders will be afforded the opportunity to design creative initiatives in support of the first responder's and emergency manager's mission.

G.   METHODOLGY

This thesis will explore the feasibility of consolidating statewide homeland security training and education through the establishment of rigorous standards as an unparalleled way to deliver accurately targeted training and educational preparedness programs to the state's first responders and emergency managers. The document will examine how uniformity and consistency in preparedness training and education standards can be effectively leveraged into New Jersey's homeland security missions of prevention, response and recovery.

1.   Research Design

This paper will utilize a multiple case study analysis that will examine existing education and training standards that other states have implemented specifically for law enforcement, firefighting, and emergency management. Subsequent to conducting an exhaustive examination of documents and supporting material from other states, the data collected will be organized into a framework for reporting results. Ten states will be examined specific to the disciplines of law enforcement, firefighting and emergency management. The states which have been chosen for the case study are: Connecticut, New York, Maryland, South Carolina, Florida, Iowa, Oklahoma, Texas, California, and Oregon.

2.   Deciding Factors

These states were chosen because of their geographical locations within the United States. The country was divided in to thirds (regions) from east to west. States

were subsequently selected based on where they were located in these regions. The purpose of this was to select states within these regions in order to gather balanced data with relevance to the respective states' demographics and develop a nationwide viewpoint. One aspect of the research is to analyze data to determine whether it may have been influenced by the environments in which the training programs exist. A benefit of this approach is that it provides multiple law enforcement, firefighting, and emergency management perspectives from differing geographical areas for analysis.

3.   Data Search

This multiple case study is designed around a narrowly focused sample group for researching law enforcement, firefighting, and emergency management training and education standards, with the aim of identifying and collecting the most useful procedures. For the purposes of this research, the most effective methods will be referred to as "best practices." These best practices are systems that have worked well or have exceeded baseline organizational standards and expectations. The best practices that are identified will be analyzed and appraised for applicability for integration into a comprehensive framework of homeland security training and education standards for the state of New Jersey. There is the understanding that if a best practice is identified, it does not necessarily mean that its application in a geographically or demographically disparate area will produce the same desirable results.

As Eugene Bardach describes in *Smart Practices Research*, smart practices are things that take advantage of something (n.d.). In order to accurately determine the merit of a perceived smart practice, analysis of the basic causal structure will require examination of the practice and a determination of whether it maximizes the potential opportunity for adding value to existing processes or replacing these processes with more effective ones (Bardach, n.d.). This discussion by Bardach provides a useful foundation for framing out this documents concept of smart practices. New Jersey is in search of new innovative approaches that can be added to a framework of standards for statewide homeland security training and education.

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From those state programs in which best practices are identified, "smart practices" will be analyzed for their worth, as these smart practices will be incorporated into New Jersey's homeland security polices and operations. The following variables will be utilized to determine which best practices will qualify as smart practices for New Jersey's model: cost-effectiveness, state of the art curriculum, broad applicability, and the degree to which policies are consistent with federal guidelines. Sound fiscal budget management requires that the practices must be cost-effective for the state. State of the art curriculum must require that practices be reviewed to see if they are at the highest degree of advancement, curriculum and policy must be, by definition, cutting edge. Practices that are recognized for having broad applicability will add value because of the fact that they can be easily adapted and applied in a new framework of standards. Practices that are examined should be in compliance with such federal guidelines, such as the National Incident Management Systems (NIMS).

4.   Data Collection

Relevant data is deemed to be that which reveals information about the following topics in relation to the various states' training and education standards: applicability to homeland security, uniformity, interoperability, and interchangeability. An analysis of advantages and challenges relative to these standards and their implementation will be included in order to provide perspective for the way forward.

The data will be collected and assessed qualitatively, using an approach that will examine why and how the homeland security mission has been integrated into law enforcement, firefighting, and emergency management standards. Uniformity or sameness will be evaluated with the intention of examining training and education standards with respect to organizational conformance. The concept of interoperability was selected to examine state standards for how diverse systems can effectively work together. Lastly, interchangeability, as used in this context, is the concept of having personnel, who are similarly and consistently trained to a degree where they can

seamlessly accomplish any NIMS-defined job function or skill set at any level and across organizational boundaries. State standards will be examined to see if they promote a level of interchangeability.

5.   Data Analysis

A matrix will be created in order to catalogue the researched material. The information will be categorized and aligned according to each of the topical outcomes. The research material will then be distilled and determinations will be made of what is a best practice using consistent protocols, and then another determination will be made as to what best practices should receive consideration as a smart practice for the purpose of creating homeland security training and education standards.

6.   Organization

Chapter I will define the problem. Chapters II, III, and IV include specific case studies that will be examined. Chapter II will discuss the case study involving law enforcement training and education standards from states. Chapter III discusses firefighter training and education standards from states. Chapter IV discusses emergency managers training and education standards from states. Because this is a multiple case study, all of these chapters will be organized in a similar fashion. Each chapter will begin with an introduction of the state, followed then by the above mentioned research topics: homeland security perspective, uniformity, interoperability, interchangeability, and advantages and challenges. Finally, Chapter V presents the research findings of each of the case studies. It includes analysis and discussion of the study, conclusions reached from the analysis conducted, and a recommendation of smart practices for New Jersey's homeland security missions of prevention, response, and recovery.

II. RESARCH ANALYSIS: POLICE TRAINING/EDUCATION

A. INTRODUCTION

This chapter examines law enforcement training/education standards and directives in ten states. The preliminary research identified best practices with a proven record of success. These best practices were validated as shown by the matrix in Figure 1. Those practices that were validated were then analyzed through a framework of variables to determine if these best practices should further be recognized as smart practices. The goal for this analysis is to identify smart practices being used by law enforcement that could support a new innovative approach in New Jersey. Law enforcement subject areas such as basic police officer training, mandated refresher training, certification, and accreditation were examined with the intent to model smart practices into a framework that will further advance a statewide set of standards for homeland security training/education.

At the core of the efforts to provide the citizens of the state an efficient homeland security resource, it is necessary to apply elements that support standardization. These elements are uniformity, interoperability, and interchangeability. Yet, even as state leadership acknowledges the need for an approach of this nature to address a complex problem, county, local, and city governments resist any challenges to the current power they hold through home rule. This chapter examines how uniformity in law enforcement training and education standards can be leveraged to enhance New Jersey's homeland security preparedness missions relative to prevention, response, and recovery. Organizational accreditation standards and broad reaching statewide standards were also studied to determine to what extent there is uniformity in these areas. The data is organized into a framework for reporting results.

B. HISTORICAL PERSPECTIVE

In 1751, the first city police service was established in Philadelphia. From that time forward, the development and growth of law enforcement organizations at the

federal, state, and local government levels expanded nationwide. At each level, law enforcement organizations have established their own guidelines and standards of internal governance. Guidelines and standards such as formal management procedures, service-delivery, interagency cooperation and coordination, and improvement of performance to increase the trust factor in the community are valuable examples of how law enforcement organizations designed an approach to policing. Historically, law enforcement agencies have operated relatively autonomously and, for the most part, governed themselves without outside interference. As a result, there has never been a perceived need to standardize law enforcement training and standards at either the federal, state, or local level. Specific to New Jersey's homeland security mission, there needs to be a standardized training/education system that will properly prepare the emergency manger and first responder.

C.   ANALYTICAL CRITERIA

The matrix found in Figure 1 shows the degree of evidence in support of the existence of law enforcement best practices that support training/education for each state that is included in this study. Uniformity, interoperability, and interchangeability are used as the primary criteria for evaluation. The primary criteria have supporting elements that further examine a given standard for additional evidence that would support the conclusion that said policy or procedure is actually a best practice. The criteria are as follows:

1.   Uniformity: programs were evaluated for sameness with the intention of examining training and education standards as to determine how they relate to organizational conformance.

- *Accreditation*: it is recognition of standards specific to law enforcement which have been met, as verified by an independent outside evaluator(s).

- *Statewide*: law enforcement standards that are extending throughout the state.

2.   Interoperability: examine state standards for how diverse systems can effectively work together.

- *Communication*: involves the continuous output and feedback of information specific to standards impacting training/education of organizational personnel.

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- *Data Exchange:* organizational sharing of information vertically but more importantly horizontally.

3.   Interchangeability: the concept of having personnel who are similarly and consistently trained to a degree where they can seamlessly accomplish any NIMS-defined job function or skill set at any level, and across organizational boundaries.

- *Adaptive*: the ability to make internal behavioral changes which enhance development.

- *Resilience*: the capability to rapidly self-adjust to the changing environment.

	Uniformity		Interoperability		Interchangeability	
	Accredited	**Statewide**	**Communication**	**Data Exchange**	**Adaptive**	**Resilience**
S1 Connecticut	+	+	+	+	+	+
S2 New York	+	+	+	+	+ +	+ +
S3 Maryland	-	-	+	+	+ +	+ +
S4 South Carolina	+	-	+ +	+ +	+	+
S5 Florida	+ +	+ +	+ +	+ +	+ +	+ +
S6 Iowa	- -	- -	+	-	+	+
S7 Oklahoma	+	-	+	+	+	+
S8 Texas	+	+	+ +	+ +	+ +	+ +
S9 California	+ +	+ +	+ +	+ +	+ +	+ +
S10 Oregon	-	-	+ +	+ +	+	+

Figure 1.   Law Enforcement Best Practices Matrix

Assessment format:

1.   "+"   signifies that evidence exists.
2.   "++"   signifies that strong evidence exists.
3.   "-"   signifies that marginal evidence exists.
4.   "--"   signifies that evidence does not exist

1. Analysis

The Figure 1 matrix identifies evidence that reveals a best practice existing in law enforcement. Research for evidence relative to the primary element of uniformity revealed that 80 percent of the states have a system in place that provides law enforcement accreditation and certification statewide. Of the 10 states researched for evidence of interoperability standards, all 100 percent showed evidence that some form of refresher, recertification, or continuing education training exists. Seven out of the 10 states examined (70 percent) showed evidence of having statewide law enforcement personnel certification tracking databases. Finally, all 10 states maintain some form of a standards based law enforcement recruit training program that supports the primary element of interchangeability. The supporting evidence used to fill out this matrix is listed in Appendix A.

D. ADVANTAGES

Law enforcement organizations have the duty of serving and protecting the citizens of their community. Behind the scenes, there are numerous elements that support the completion of this broad mission. In conducting research on law enforcement in the 10 states identified above, it was found that the standards establishing written directives received continual emphasis. An advantage of a standard that requires the establishment and maintenance of written directive document is that it places accountability on the organization and its sworn officers. This process then creates a state of standardization that helps shape consistency in the application of the directive.

Because there is a high degree of diversity among law enforcement, fire, and emergency management personnel in New Jersey, a uniform homeland security training/education system would benefit from the consistent use of written directives across all three disciplines. This amounts to nothing more than establishing clear guidelines mandating that all policies, procedures, and standards are memorialized and communicated in writing. This type of standard would help to codify the procedures and framework of all protocols and curriculum in a way that is not confusing for the first

responders and emergency managers who are the stakeholders. Written directives promote awareness in recognizing that sameness of training/education is a force multiplier in a routine response. It can also promote a more seamless integration of resources during an emergency response.

E.   CHALLENGES

There are several barriers within state, county, and local government that impact the ability to effectively prepare for what we cannot see or for what has not yet happened. Because of home rule and other issues discussed elsewhere in this paper, New Jersey administrators are often less than willing to collaborate on terrorism preparedness. At every level of state government, administrators need to transition from being stereotypical managers to becoming leaders. In an article in the *Bloomberg Business Week* entitled "The Challenge of Innovation," Irving Wladawsky-Berger writes, "Management is about business results and processes. Leadership is about people. The key quality you need in good leadership is passion and the urgency to attack and resolve complex problems that organizations face" (2008, p. 1). Government administrators must have the passion necessary to encourage their workers to buy into their vision for the future. Complacency and home rule negatively influence administrators. There needs to be a transition to a proactive leadership style that will encourage innovation. It should be noted that the challenges that originate from home rule are not unique to law enforcement but apply equally to the fire service and emergency management.

F.   SUMMARY

Figure 2 illustrates the nature of the analysis conducted in this section. Analysis of the best practices requires careful examination and a determination of whether the practice maximizes the potential opportunity for adding value to a process. Best practices are evaluated using this table to determine if they have value as a smart practice, per the following measurement variables:

- Cost Effectiveness: Sound fiscal budget management requires that practices be cost effective for a state. It does not always mean that the least costly way is the best way.

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- State of the Art Curriculum: Require that the practice must be reviewed to see if it is at the highest degree of advancement. Curriculum and policy must be by definition, cutting edge.

- Broad Applicability: Practices that are recognized for having broad applicability will add value because of the fact that they can be easily adapted and applied in a framework of standards.

- Consistency with Federal Guidelines: Practices that are examined should ideally be in compliance with federal guidelines, such as the National Incident Management systems (NIMS).

1. Analysis

Figure 2 identifies best practices specific to law enforcement as culled from the ten states. Those best practices were then analyzed by the criteria established within the matrix. The criteria were designed to evaluate best practices to determine whether they satisfactorily meet the necessary requirements for them to be identified as a smart practice. The matrix is designed to identify smart practices for the State of New Jersey homeland security policies and operations.

	Cost Effective	State of the Art Curriculum	Broad Applicability	Consistent with Federal Guidelines
S1 Connecticut	+ +	+	+ +	+ +
S2 New York	+ +	+	+ +	+ +
S3 Maryland	-	-	-	-
S4 South Carolina	+	+	+	-
S5 Florida	+ +	+ +	+ +	+ +
S6 Iowa	+	+	+	+
S7 Oklahoma	+	+	+	+
S8 Texas	+	+	+	+
S9 California	+ +	+ +	+ +	+ +
S10 Oregon	-	-	-	-

Figure 2.   Law Enforcement Smart Practices Matrix

Assessment format:

1.   "+"   signifies a smart practice exists.
2.   "++"   signifies more than one smart practice exists.
3.   "-"   signifies that marginal evidence exists.
4.   "--"   signifies a smart practice is non-existent.

Of the 10 states examined, eight were recognized for having smart practice standards and/or procedures. Subject headings for all states are listed below, and all smart practices are organized under the state headings. The analysis findings of the identified smart practices are provided under the state subject heading. The findings take into consideration the four sub-headings. The phrase "research is negative for a smart practice" is where no best practices were deemed to qualify as smart practice.

a. *Connecticut*

The State of Connecticut Police Officers Standard and Training Council (CPOSTC) *State Accreditation Standards Manual* in Chapter 2, Training Section, Standard, 3.2.14 identifies specialized training (Connecticut Police Officers Standard and Training Council, 2006). The standard requires law enforcement agencies to comply with pre- and post-specialized training (State of Connecticut Police Officer Standards and Training Council, 2006). Specifically, the focus is to develop and enhance the knowledge, skills, and abilities particular to specialization. This standard fits within the states existing training/education framework. The standard and its framework can be readily applied to an existing training/education system in another state or local jurisdiction for a minimal cost. The curriculum is continuously reviewed for necessary updates and revisions. This ensures that the most accurate information is updated within the curriculum. The measurement variable of broad applicability is strongly supported due in large part because Connecticut requires statewide compliance to this standard. The National Integration Center (NIC) establishes minimum qualification standards with the intent of promoting enhanced professionalism nationwide. Connecticut's CPOSTC has achieved a similar goal through the institution of their specialized training standard (Department of Homeland Security, 2009). The CPOSTC *State Accreditation Standards Manual* based upon the evaluation criteria is considered a smart practice (2006).

In the *Standards Manual*, Training Section, Standard 3.2.5, it systematically outlines organizational design (State of Connecticut Police Officer Standards and Training Council, 2006). This is a standard that organizes personnel on a statewide scale that relieves the burden from the local jurisdiction. This strategy provides

the state with accurate information that promotes overall business efficiency within the training/education fields. Personnel are dependent upon receiving and maintaining training/education that is current. This practice will require changing the way many think about job classifications. This standard leverages state, county, and local professionals to participate in this framework of job classifications. It provides guidance for career advancement through the way in which the standard establishes benchmark standards for job positions. The measurement variable of broad applicability is strongly supported due in large part because Connecticut requires statewide compliance to this standard. This is an inexpensive way of organizing position qualification in the state. These qualifications, in turn, allow for the categorization of job duties. Standard 3.2.5 is a smart practice because it provides a savings to the individual who is seeking additional education and training in pursuit of career advancement. They now know where to focus their efforts and avoid spending unnecessary monies. This standard does not have curriculum directly tied to it. Therefore, this standard is deficient of the state of the art curriculum measurement variable. Just as the NIC establishes job titles, qualifications, and training on a national scale, the CPOSTC standard is completing this on a state level (Department of Homeland Security, n.d. b).

b. New York

It was observed that the Administration Section of the Standards and Compliance Verification Manual places a strong emphasis on agencies having established, written directives (New York State Law Enforcement Accreditation Program, 2009). Of the 70 standards in this section, two-thirds of the standards emphasize the creation of directives. Directives provide the personnel in an organization with the necessary guidance to ensure that policies, responsibilities, and procedures are followed. The strategy of establishing directives helps to promote sound policies and procedures that govern operational and administrative duties for law enforcement. State of the art curriculum measurement is supported by the generally recognized fact directives are designed to have revisions completed on them periodically for currency purposes. They have the capability to influence commonality of law enforcement

behavior statewide. Additionally, directives decrease the susceptibility of litigation, which makes them inexpensive. Written directives lay a solid foundation for the design and implementation of state of the art training/education for basic and refresher training.

Law enforcement written directives provide a framework in which to operate. They can be designed so that they are narrow in scope but broad in their application. They can be designed to be flexible and accommodating to operational and administrative strategies. The application of directives is in alignment with federal mandated guidelines such as NIMS Incident Command Systems training. Written directives are a smart practice.

The New York accreditation document, Administration Standard 2.2 describes how each job classification or assignment should have a comparable description (New York State Law Enforcement Accreditation Program, 2009). This is important due in large part because this standard and the accreditation document are linked to the training and education standards of the state's basic recruit training course. A standard requiring defined job functions and skill level allow an organization to potentially share personnel across organizational boundaries. An organized set of standards for basic recruit training/education provides local jurisdictional law enforcement agencies in New York with the ability to prepare financially for the level of training necessary for a new hire. This standard because it is state based has broad applicability and is smart practice that could be applied in other states. This classification of job descriptions efficiently designs a road map to guide the training/education of incoming law enforcement trainees. Curriculum revisions are influenced by this standard. This state level standard is comparable to the Department of Homeland Security's (DHS) First Responder Authentication Credentialing Initiative (DHS, 2011a).

c.   Maryland

Research was negative for a smart practice.

d. **South Carolina**

The Criminal Justice Academy Division of the Department of Public safety is authorized to certify, track and renew law enforcement certifications in compliance with Article 9, Chapter 6 of Title 23, Code of Laws of South Carolina, 1976 (South Carolina Legislature, 2010). The South Carolina Criminal Justice Academy (SCCJA) provides overall recertification guidance for law enforcement personnel in the state. Continuing Law Enforcement Education (CLEE) hours vary based upon the level of certification of the law enforcement officer. This is a cost that the state assumes and it lessens the financial burden on the local law enforcement agencies. Standards based certification, refresher training and database management allows the state to track certified personnel accurately based upon the training/education that they receive. Recertification curriculum remains current and updated to state statutes. In South Carolina, law enforcement is managed through top-down state support. The standard can be adopted anywhere a state is willing to enact it. The core standards under which South Carolina law enforcement operates are in alignment with the *NIMS Five-Year Training Plan* that identifies core competencies, training, and personnel qualifications for a national program (DHS, n.d. b). The SCCJA authority to administer certifications to law enforcement personnel in South Carolina is considered a smart practice.

e. **Florida**

In Florida, the Criminal Justice Standards and Training Commission (CJSTC) is empowered through §943.12 to maintain records for all certified criminal justice officers in the state. The Florida Department of Law Enforcement (FDLE) accreditation process and the statewide coverage of standards successfully promote interoperability among law enforcement agencies in Florida. The establishment of a centralized record keeping database facilitates the sharing of information. The user-friendly database is helpful for identifying law enforcement agency capabilities, and is useful in connecting the whole state. Its upkeep of records for state, county, and local law enforcement personnel makes it a worthwhile system for statewide participation and utilization. The state level data management strategy promotes collective participation.

This system provides documentation of the degree to which law enforcement personnel are certified. Standards like §943.12 are reliant upon up-to-date and accredited training/education that awards certification to law enforcement personnel upon successful completion of a course. The state maintains and assumes all costs of the system. Just as the National Information Center (NIC) is working to establish job titles, qualifications, and training on a national scale, the CJSTC standard is achieving this at a state level (Department of Homeland Security, n.d. b). Comparatively speaking, the state level centralized record keeping system effectively catalogues personnel and their degree of training and education. The record keeping system mandated by §943.12 is viewed as a smart practice.

The Florida CJSTC ensures that law enforcement recruit training standards are intended to provide sameness of training and education for law enforcement in Florida. Statute 943.12 discusses the importance of establishing and revising uniform standards for the employment and training of full-time law enforcement (Florida Department of Law Enforcement, 2010). This standard places an emphasis on law enforcement certification. Statewide this collectively provides a high degree of law enforcement sameness that can accurately be measured with the assistance of the record keeping system. The Criminal Justice Standards and Training Commission manage the revision and updating of the training curricula as set by law. Florida has 41 FDLE certified training facilities which all utilize the same state law enforcement training and education methodology. This is a broad based cost effective approach by Florida to ensuring uniformed training/education for law enforcement. This smart practice is focused on law enforcement in Florida but could be readily applied to any response service in the state or in another state. Statewide law enforcement training/education is a smart practice that is consistent with the first broad objective of the *NIMS Five-Year Training Plan* that places importance on designing uniformed education and training for all stakeholder emergency managers and response personnel for a multi-jurisdictional incident (Department of Homeland Security, n.d. b).

f.   Iowa

Chapter 8.1(80B) Mandatory In-Service Training Requirements of the Law Enforcement Academy outlines the mandatory requirements. Chapter 80B established the Iowa Law Enforcement Academy (ILEA). One of the many goals in the creation of the ILEA was for this institution to coordinate training and to set standards for law enforcement officers (501 Law Enforcement Academy Iowa General Assembly, 2010). The benefit of in-service training in Iowa is that because it is state centralized, it provides training cost savings onto local jurisdictions law enforcement agencies. Instead, local government can focus their finances towards enhancing the safety of the public. The ILEA standard involving in-service training/education ensures currency with changing technology and case law. This in-service standard can be easily adapted and applied to another state's standards. The ILEA provides a certificate in basic law enforcement as supported through a set of standards that are required to be followed statewide. Similar to Florida's statute 943.12, the ILEA in-service smart practice standard is similar in comparison to the topics covered in the *NIMS Five-Year Training Plan* that was designed to increase the amount of uniformly trained and qualified emergency managers and first responders (Department of Homeland Security, n.d. b).

g.   Oklahoma

In § Section 3311.4, the provision created the standard that requires that all full-time certified law enforcement officers complete a minimum of 25 hours of Council of Law Enforcement and Education Training (CLEET) accredited continuing law enforcement training annually (Council of Law Enforcement and Education Training Rev. 2008, 2011). Sound policies, procedures, and directives with regard to continuing training/education of law enforcement can decrease the potential for litigation and this translates into a fiscal savings for law enforcement agencies in Oklahoma. This standard is a valuable smart practice that has broad applicability. Continuing education helps to maintain a high level of professionalism for the certified peace officer in Oklahoma. CLEET is the state's primary training and continuing education system for law enforcement. CLEET requires that all of its curriculum remain current with state and

federal case law. In most cases law enforcement officers are seen as stakeholders in the emergency management response role and law enforcement personnel are required to receive NIMS and Incident Command Systems (ICS) training (Department of Homeland, n.d. b). Therefore, training/education on a continued basis for the state level mission is in alignment with required federal NIMS and ICS standards. The CLEET standard for mandatory refresher training is a smart practice.

h.   Texas

The Texas Commission on Law Enforcement Officers Standards and Education (TCLEOSE) established standard for record keeping of law enforcement personnel has broad applicability statewide. Texas manages a statewide Web-based data management system known as the Texas Commission on Law Enforcement Data Distribution System (TCLEDDS), which maintains law enforcement personnel training level, employment, and certification status. Additionally, this secure system provides information sharing programs specific to local and state law enforcement organizations. This state of the art data management system is maintained by the Productivity Center, Inc., which continuously provides updates to the system. This data management system is an example of a cooperative shared asset that has statewide reach. The participating agencies pay a user fee to the state. In a cost effective way, this database management system relieves the burden from local jurisdictions for having to maintain agency training records. The system currently services 300 law enforcement agencies with 60,000 law enforcement personnel (Productivity Center, Inc. Nationwide Law Enforcement Solutions, n.d.). This standard is consistent with the NIMS Preparedness Overview. This state level standard of centralizing information is in support of the Department of Homeland Security's First Responder Authentication Credentialing Initiative and is considered a smart practice (Department of Homeland Security, 2011a).

i.   California

The Continuing Professional Training (CPT) is a program standard that continuously provides an output of information that is in the form of education. The

purpose of the CPT is to "maintain, update, expand, and/or enhance an individual's knowledge and/or skills" (POST Administrative Manual, n.d., p. B-11). The CPT refresher program is designed on a two-year cycle having broad statewide applicability. The California Peace Officer Standards and Training (CPOST) program is the state's primary coordinator and manager of POST qualifying training. This refresher standard helps to lessen the fiscal and administrative burden on the local law enforcement jurisdiction. For a nominal cost to the local jurisdiction the duties and responsibilities of recertification is assumed by the CPOST. The CPOST continuously updates their statewide refresher training/education curriculum in order to remain current with legal statutes. This training standard is coordinated and managed throughout the state of California. This smart practice of recertification and overall upkeep of certifications is linked to the refresher training and is critical to the success of the CPOST for interoperability reasons. The POST refresher training/education standard is a smart practice that is comparable to the development of NIMS but on a state level. Coordination and interoperability are critical to DHS's NIC success in standards and interoperability work (Department of Homeland Security, n.d. b).

In California's Regional Basic Training Course, learning domain number forty-three is a researched smart practice that addresses Emergency Management (Regular Basic Course Training Specifications, 2010). It synthesizes the knowledge, skills, and abilities necessary to interdict a terrorist threat and respond to an incident involving weapons of mass destruction. It is a cost-effective training and education tool because it is built into the recruit training program in California and does not financially burden a local jurisdiction as a training need. This standard is built into the Regular Basic Training (RBC) curriculum that effectively prepares a police recruit to serve a local jurisdiction. This curriculum is periodically updated. The curriculum is taught throughout California. This standard is viewed as a smart practice that has broad statewide application and is consistent with the NIMS Preparedness Overview.

j.   *Oregon*

Research was negative for a smart practice.

III. RESEARCH ANALYSIS: FIRE SERVICE TRAINING/EDUCATION

A. INTRODUCTION

This chapter examines firefighting training/education standards and directives in ten states. The goal, as in the previous chapter, is to identify best practices that have been successfully implemented by the subject jurisdictions. These best practices are to be validated by the analysis depicted in Figure 3. The validated best practices were then analyzed through a framework of variables to determine if these practices should further be recognized as smart practices. The goal of this analysis is to identify smart practices in use by the firefighting community that can support innovative approaches. These approaches can then be modeled into a framework that will provide for a statewide set of standards for homeland security training/education. The research included a survey of state statutes, other legislation, fire accreditation organizations, and state managed fire agencies.

B. HISTORICAL PERSPECTIVE

Firefighters work in metropolitan areas, rural areas, airports, chemical plants, and in industrial settings. In addition to fighting fires, their duties in some departments include providing emergency medical services to victims. Personnel specializing in fighting forest fires require additional, rigorous training. Fighting forest fires requires the employment of techniques that are vastly different than that of metropolitan firefighters. There are also firefighters that are specifically trained to work in a hazardous material environment. In many cases, when firefighters are not responding to calls for assistance, they spend their time training and educating themselves on the developing technologies and practices in the fire science field (Occupational Outlook Handbook, 2009).

C.   ANALYTICAL CRITERIA

The matrix found in Figure 3 shows the degree of evidence in support of the existence of fire policy and procedural best practices for each state that is included in this study.   Uniformity, interoperability, and interchangeability are used as the primary criteria for evaluation.   The primary criteria have supporting elements that further examine a given standard for additional evidence that would support the conclusion that said policy or procedure is actually a best practice. The criteria are as follows:

1.   Uniformity: Programs were evaluated for sameness with the intention of examining training and education standards as to determine how they relate to organizational conformance.

    •   *Accreditation*: it is recognition of standards specific to law enforcement which have been met, as verified by an independent outside evaluator(s).

    •   *Statewide*: law enforcement standards that are extending throughout the state.

2.   Interoperability: Examine state standards for how diverse systems can effectively work together.

    •   *Communication*: involves the continuous output and feedback of information specific to standards impacting training/education of organizational personnel.

    •   *Data Exchange*: organizational sharing of information vertically but more importantly horizontally.

3.   Interchangeability: The concept of having personnel who are similarly and consistently trained to a degree where they can seamlessly accomplish any NIMS-defined job function or skill set at any level, and across organizational boundaries.

    •   *Adaptive*: the ability to make internal behavioral changes which enhance development.

    •   *Resilience*: the capability to rapidly self-adjust to the changing environment.

		Uniformity		Interoperability		Interchangeability	
					Data		
		Accredited	Statewide	Communication	Exchange	Adaptive	Resilience
S1	Connecticut	+	+	+	+	+	+
S2	New York	+ +	+ +	+ +	+ +	+	+
S3	Maryland	+ +	+ +	+	+	+ +	+ +
S4	South Carolina	+	+	- -	+	+ +	+ +
S5	Florida	+ +	+ +	+ +	+ +	+ +	+ +
S6	Iowa	-	-	+	+	+	+
S7	Oklahoma	+	+	- -	+	+	+ +
S8	Texas	+ +	+ +	+ +	+ +	+	+
S9	California	- -	- -	-	-	+ +	+ +
S10	Oregon	- -	- -	-	-	+	+

Figure 3.   Fire Service Best Practices Matrix

Assessment format:

1.   "+"   signifies that supporting evidence exists.
2.   "++"   signifies that strong evidence exists.
3.   "-"   signifies marginal evidence exists.
4.   "--"   signifies that evidence does not exist.

1. Analysis

The Figure 3 provides data from within the fire service that reveals the existence of a best practice standard. Eighty percent of the states examined have attained accreditation and provide state level firefighter certifications that support the element of uniformity. The accredited states received their accreditation from either the International Fire Service Accreditation Congress (IFSAC) or National Board on Fire Service Professional Qualifications, which is known as the ProBoard. The states of New York, Florida, Iowa, and Texas are the only four states that have established refresher training requirements. Eight out of the 10 states have implemented a fire personnel certification tracking database. These databases are primarily managed at the state level. Refresher training and fire personnel certification tracking databases are in alignment with the element of interoperability. All 10 states have shown evidence of standards based fire recruit training/education occurring statewide. The supporting evidence used to fill out this matrix is listed in Appendix B.

D. ADVANTAGES

Of the 10 states surveyed for evidence of to the primary element of uniformity, it was found that 80 percent were accredited. To achieve accreditation these states were required to show competency in their course offerings, institutional support and qualified faculty. Accreditation occurs through establishment of training and education standards that closely mirror the NFPA Qualification Standards. The NFPA is not designed to be a "standards" enforcement agency, but nonetheless, NFPA standards have been adopted by all levels of government. This government wide recognition gives the standards a force of law effect. NFPA standards are revised every five years to promote a level of currency with new fire protection knowledge and technologies (Globe, 2011). Verification of state and local fire agency NFPA standards can be performed by independent third-party organizations such as the IFSAC or ProBoard Fire Service Professional Qualifications System.

The NFPA standards for firefighters act as a foundation upon which state agencies in the fire community can build sameness through training and education. The benefits of sameness are recognizable in situations where local, county, and state government resources are overwhelmed by an incident and mutual aid assistance is needed. Mutual aid assistance would essentially come with the guarantee that the personnel are interchangeable and that responding assets will have a high degree of interoperability.

In June of 2005, there was a Joint Hearing before the Subcommittee on Emergency Preparedness, Science, and Technology with the subcommittee on Management, Integration, and Oversight of the Committee on Homeland Security House of Representatives that asked the question: *The national training program: is anti-terrorism training for first responders efficient and effective*? This memorandum cites two excerpts from the testimony of the New York City Police Commissioner Raymond Kelly and the Director of Maryland's Fire and Rescue Institute Steven Edwards (National Training Program, 2005).

Director Steven Edwards was quoted in a response to a question asked by a congressional member at the Joint Hearing:

> QUESTION: "You can be trained and then you need to be re-trained and you need to be updated in training. How do you manage that within your organization? You have to manage the training records of your employees."

> EDWARDS: The ability to train - that is why I believe there needs to be a national strategy developed. There needs to be national standard training objectives that we can work toward. And then that system needs to be put out in the state and local departments for the training to take place in thousands of points throughout this country, with the results reported back in a way of not only having the initial training but recertification training with that so we know we are training to a certain standard and we are not just developing our own standard or each state having their own separate standard. We need national standards (National Training Program, 2005, p. 72).

Similar to the way that the NFPA guides the nation's fire community, there needs to be national standards for homeland security training and education. The NFPA

Qualifications and Standards provide a good example of how to begin to organize statewide homeland security standards for first responders and emergency managers.

E.   CHALLENGES

The process requires changing the status quo and creating prevention and recovery based programs in addition to the existing response based programs, which are the norm. The leadership in New Jersey has to provide an inspired shared vision of homeland security preparedness, specifically with the creation of a standardized training and education system for the first responder and the emergency manager. David Butler was quoted in "The Leadership Challenge" as stating, "You need to give people on the front lines proper vision and proper training, and then follow that up with responsibility so they can act on decisions" (Kouzes & Posner, 1995, p. 12). This quote perfectly isolates three critical components that state leadership must consider.

First, provide a clear vision to personnel on the homeland security frontline to inspire them. Second, introduce measured standardized education and training that will confidently empower first responders and emergency managers (line personnel). By standardizing statewide training and education for line personnel the state can guarantee preparedness. As a result, front line personnel would be more capable of interdicting those threats that are in the planning stages, responding to disasters of any size, scale, and providing assistance with the recovery process. Third, leaders should empower the first responder and emergency manager workforce to get involved with this new mission. In *Strategic Planning for Public and Nonprofit Organizations,* John Bryson wrote: "Mission, in other words, clarifies an organization's purpose; vision clarifies what it should look like and how it should behave as it fulfills its mission" (2004, p. 102). A standardized homeland security multidisciplinepreparedness training and education system can succeed in New Jersey if the leadership takes the lead by providing support for the creation of this program.

F.   SUMMARY

Figure 4 illustrates the nature of the analysis conducted in this section. Analysis of the best practices requires careful examination and a determination of whether the practice maximizes the potential opportunity for adding value to a process. Best practices are evaluated using this table to determine if they have value as a smart practice, per the following measurement variables:

- Cost Effectiveness: Sound fiscal budget management requires that practices be cost effective for the state. It does not always mean that the least costly way is the best way.

- State of the Art Curriculum: Require that the practice must be reviewed to see if they are at the highest degree of advancement. Curriculum and policy must be by definition, cutting edge.

- Broad Applicability: Practices that are recognized for having broad applicability will add value because of the fact that they can be easily adapted and applied in a framework of standards.

- Consistency with Federal Guidelines: Practices that are examined should ideally be in compliance with federal guidelines, such as the National Incident Management Systems (NIMS).

1.   Analysis

The Fire Service Smart Practices Matrix in Figure 4 identifies best practices specific to the fire service researched from the 10 states. Those best practices were then analyzed by the criteria established within the Figure 4 matrix. The matrix criteria were designed to evaluate a best practice to determine whether it satisfactorily meets the necessary conditions for it to be identified as a smart practice. The Figure 4 matrix is designed to identify smart practices for the state of New Jersey's homeland security policies and operations.

		Cost Effective	State of the Art Curriculum	Broad Applicability	Consistent with Federal Guidelines
S1	Connecticut	+	+	+	+
S2	New York	+ +	+ +	+ +	+ +
S3	Maryland	-	+	+	+
S4	South Carolina	+	+	+	+
S5	Florida	+ +	+ +	+ +	+ +
S6	Iowa	-	-	-	-
S7	Oklahoma	+ +	-	+ +	-
S8	Texas	+	+	+	-
S9	California	+	+	+	-
S10	Oregon	-	--	--	-

Figure 4.   Fire Service Smart Practices Matrix

Assessment format:

1.   "+"   signifies a smart practice exists.
2.   "++" signifies more than one smart practice exists.
3.   "-"   signifies marginal evidence exists.
4.   "--"   signifies a smart practice is non-existent

The Figure 4 matrix provided the necessary organizational support required for the analysis and identification of firefighter smart practices. Of the 10 states examined, eight out of the 10 were recognized for having smart practice standards and/or procedures. Subject headings for all states are listed below and all smart practices are organized under their state. The analysis findings of the identified smart practices are provided under the state subject heading. The analysis findings take into consideration the four variable sub-headings. For states that lacked a smart practice, "Research is negative for smart practice" is indicated.

a. Connecticut

The National Fire Protection Association NFPA 1000: Standard for Fire Service Professional Qualifications Accreditation and Certification Systems allows for third party organizations to verify that an agency's certification system comports to the NFPA 1001 Qualification Standards. The Connecticut Commission on Fire Prevention and Control (CPFC) accreditation by IFSAC empowers it to certify on a statewide level volunteer, part-time and full-time firefighters that successfully meet NFPA 1001: Standards for Fire Fighter Professional Qualifications. The accreditation process is a cost effective in order to achieve statewide standards recognition. For the CPFC, part of the accreditation requirements involves staying current with any and all NFPA 1001 firefighter professional qualification updates. By remaining current on updates, this standard is state of the art. Certifying and management of certifications at the state level makes it more cost effective for local jurisdictions because this is one less burden that has to be assumed by them. The accreditation and certification methodology can be incorporated as a measurement tool for those seeking to become a certified firefighter or for those firefighters seeking recertification. NFPA standards that are federally recognized have effectively been adopted by all levels of government. This government wide recognition gives the standards a force of law effect. The CPFC's certification program is seen as a smart practice for the reasons mentioned above and should also be viewed having broad applicability for other states.

b. *New York*

New York §426.7 In Service Fire Training requires firefighters to maintain their certification. Command company operation firefighters are mandated to receive 100 hours of in-service training/education annually. This is training that keeps the certified firefighter up-to-date with technological and operational revisions and changes. This training promotes operational safety and drives down the risk of litigation. New York's in-service training/education is designed with the intention of providing the most up-to-date course curriculum relative to NFPA 1001 Qualification Standards. This standard is designed to meet the needs of firefighters statewide. Statewide standards compliance is a critical capability when mutual aid and resource typing is performed by New York State Fire. NFPA standards have effectively been adopted by all levels of government in New York. New York's firefighter in-service training is considered a smart practice standard. This standard is consistent the first broad objective of the *NIMS Five-Year NIMS Training Plan*, which places importance on designing uniformed education and training for all stakeholder emergency managers and response personnel for a multi-jurisdictional incident (Department of Homeland, n.d. b).

New York § 426.2 makes another provision for the creation of a record keeping system. This is a system that will add value to another state that is looking to track the training and education of their fire service personnel. The State Fire Administrator office manages the Web-based Information Management System. This Web-based system effectively tracks the state's certified firefighters. This is a cost effective due to its Web-based design and Internet application. This standard actively supports the state's training/education courses by tracking their course completions, education, and recertification status. Record keeping that is Web-based allows it to have statewide reach and is technologically progressive. Record keeping is a vital supporting element of recertification training. Well-developed training/education programs require accurate records management programs that can accurately track NFPA accredited courses which provide state and national certifications. For the reasons mentioned above § 426.2 record keeping provision is a smart practice standard.

### c.	Maryland

Maryland Legislation mandated the establishment of the Maryland Fire Rescue Education and Training Commission (MFRETC) to act as the state coordinating agency for education and training for the state's fire and emergency services (Maryland Fire Rescue Education and Training Commission, 2007). For Maryland this strategy allows for operational and administrative consolidation into a centralized clearinghouse for training/education that incorporates the state and its fire personnel. The blending of multiple training/education initiatives can reduce the overall operating budget expenses. By eliminating course redundancy and logistical support duplication a measurable cost saving can be recognized. The legislated educational committee is required to maintain firefighter curriculum that is consistent with NFPA 1001 Qualification Standards. This committee has a primary focus of staying current on technology and procedural changes. The state level training/education in Maryland is smart practice that organizes and coordinates one focused mission that involves preparing the firefighter. A coordinating agency can provide proper direction and course guidance intrinsic to firefighter training/education. The MFRETC closely adheres to guidelines established within the NFPA 1000 & 1001 Qualification Standards.

### d.	South Carolina

The South Carolina Fire Academy (SCFA) has a course catalogue with over 100 certified and non-certified courses that are available to the firefighters in the state. Certified courses at the SCFA require continuous updating to remain current. Regional training is the preferred choice for delivering academy courses. The SCFA has seven regions that are served by six regional officers. With the exception of the Firefighter Candidate School, the academy relies on regionalized course delivery. The organizational design of the SCFA allows the delivery of needed training/education to reach the firefighters more easily through the regionalization approach. This approach should be considered a cost savings due to the regional consolidation approach of course offerings that require minimal logistical support. The accredited courses are required to be continuously updated to stay consistent with NFPA 1001 revisions. Professionalized

course teachings guarantee the state and local departments of a certified firefighter product. This is an educational/training approach that is state coordinated and recognized regionally throughout the state. The state coordination of the SCFA is considered a smart practice standard. The SCFA has NFPA accredited training/education. NFPA standards have effectively been adopted by all levels of government. This government wide recognition gives the standards a force of law effect.

e. Florida

In the Florida legislature, Chapter, 633.352 *Retention of Firefighter Certification* it is mandated that any firefighter, "for a period of three years shall be required to retake the practical portion of the minimum standards examination" (Florida Legislature, 2000). The Florida State Fire College (FSFC) course is a three-day refresher that prepares firefighters for a retest. This statute recognizes the importance of maintaining a satisfactory level of readiness in relation to the certified Florida firefighter. This statewide standard enables the state to be better prepared to respond to large scale disasters that exhaust local resources. The use of mutual aid (firefighter) assistance comes with a standards certified professional. The refresher curriculum is designed around current NFPA 1001 Qualification Standards. These standards continuously receive revisions. This curriculum can be easily integrated into other state agencies which have been accredited through IFSAC.

The Florida training/education curriculum must be in compliance with NFPA 1001. Florida's Firefighter I and II courses are IFSAC accredited, and, subsequently, they are certified upon completion of them. Course attendance, test scores, certification records, and transcripts for all firefighters in the state are maintained by the Standards Section of the BFST. Certifications and records are accessible on the FDICE Website. This system acts as the central data exchange point for things such as on-line certification status and credentialing updates (Fire Standards, 2011). Recertification training is an inexpensive way to maintain the initial investment of training and certification of firefighters to maintain the minimum NFPA preparedness level standards. But just as important is database tracking. This systems approach is directly connected to

this strategy and is vital to the continuation and validation of the recertification process. The FDICE database is the corner piece to identifying state firefighters who are in need of recertification training. There is no curriculum for this resource. This information collection system can be implemented to support an existing training/education system. Florida, like Texas and California, has a great challenge due to the geographic size of the state. This centrally managed on-line certification and administrative database ties information from local jurisdictions together from all over the state, and, because of that, it qualifies as a smart practice standard. Well-developed training/education programs require accurate records management programs which can accurately track NFPA accredited courses that provide state and national certifications.

f. Iowa

Research is negative for a smart practice.

g. Oklahoma

The Office of State Fire Marshal's (OFSM) *State Fire Procedures Manual* 2009 frames out the educational requirements for various state accredited courses. First, the establishment of tasks must be successfully completed to achieve certification. Second, it is necessary to establish standardized courses. Third, provide for the upkeep of records relative to training accomplishments. Last, establish a minimum statewide firefighter certification level (Office of State Fire Marshal, 2009). This set of standards is supportive of the strategy that produces a statewide level of readiness that will not have redundant costs associated with the state managed training/education. Re-accreditation is done on a regular basis as well. The OFSM is home to the IFSAC. This ensures that Oklahoma fire training/education is consistent and current statewide and closely follows the training/education guidelines established by NFPA 1001 Qualification Standards. The curriculum can be integrated into other state agencies providing that it meets the minimum requirements of the accrediting agency within the state for fire training/education. The standardization of training/education of fire personnel in Oklahoma is a smart practice.

The Oklahoma State Legislature House Bill 2374 created the Council on Firefighter Training (COFT). The COFT's strategy of providing accredited training/education made it necessary for it to create Regional Training Advisors. This strategy makes it possible to accurately identify the upcoming training/education needs of their region in Oklahoma. The mission of the Regional Training Advisor (RTA) is to provide time sensitive updates specific to their regions training/education needs. The regional representatives can accurately forecast training for the future. This helps to protect against offering unnecessary training/education. The RTA's are closely linked to the training/education process in Oklahoma. The COFT's application of RTAs is an effective strategy for staying connected with local and county firefighters statewide and for this reason and more this is a smart practice. A strategy such as this can easily be implemented other states. This strategy directly supports training/education that is accredited based upon NFPA 1001 Qualification Standards. Because of the geographical size of Oklahoma the COFT RTA's meet with local fire departments and, if needed, organize and deliver OSFM training/education just as the U.S. Fire Administration is designed to do (United States Fire Academy, 2011). The OFSM training/education documents are kept at a current and up-to-date level.

h.   *Texas*

Texas §419.012 created the statewide Firefighters Individuals and Departments On-line (FIDO) program which acts as a statewide data exchange for participating fire departments in Texas. This program incorporates state of the art technology to promote user-friendly Web-based applications. This on-line service allows for time accurate tracking and updating of individual firefighter certifications, transcripts, test scores, and general information. The on-line data exchange system has statewide reach, which is a clearinghouse of up-to-date information. This program allows the Texas Commission on Fire Protection (TCFP) to budget with more accuracy state funding to support training and continued education for firefighters. This information collection system can be implemented to support an existing training/education system located in another state. Texas, like Florida and California, has a great challenge due to

the geographic size of the state. A centrally managed state Website for firefighters effectively shares information with the firefighter and local department administration. Well-developed training/education programs require accurate records management programs that can accurately track NFPA accredited courses which provide state and national certifications. This smart practice is in alignment with the *NIMS Five-Year Training Plan* which identifies core competencies, training, and personnel qualifications for a national program (Department of Homeland, n.d. b).

i.   California

Listed below are the California training/education standards what support the primary element of interchangeability (State Fire Training, 2009):

1. Set minimum performance standard for firefighters.
2. Set tasks which must be successfully completed to achieve certification.
3. Establish a standardized curriculum for basic courses.
4. Provide a way for upkeep of records of training accomplishments.
5. Establish a minimum statewide firefighter certification level (State Fire Training, 2009).

The standardized certification training enhances a firefighter's value statewide. Because the Office of State Fire Marshal (OSFM) has statewide certifications, a properly certified firefighter is a licensed individual that can be hired anywhere in the state providing that his or her certifications are current and up-to-date. The OSFM oversees the currency of the standardized training/education curriculum. This is a cost-effective approach for local jurisdictions in that they do not have to pay for a person to be trained and certified, but rather they only need to hire a certified firefighter. These standards are mandated throughout the state. California's standards driven training/education creates a high degree of sameness in the state and is considered a smart practice. This allows state administrators to accurately forecast training/education costs for the upcoming budget fiscal year. Similar to OFSM's *State Fire Procedures Manual 2009*, the OSFM's training/education standards are similar in comparison to the topics

covered in the *NIMS Five-Year Training Plan*, which was designed to increase the amount of uniformly trained and qualified emergency managers and first responders (Department of Homeland, n.d. b).

j. Oregon

Research is negative for a smart practice.

IV. RESEARCH ANALYSIS: EMERGENCY MANAGEMENT TRAINING/EDUCATION

A. INTRODUCTION

This chapter examines emergency manager training/education standards and directives for emergency managers. The research identified best practices that have a proven record of success. These best practices are validated through the matrix in Figure 5. Those practices that are validated through research were then analyzed through a framework of variables to determine if these best practices should further be recognized as smart practices. The objective of this analysis is to identify the smart practices in use by state emergency management that can support a new innovative approach to standardized homeland security training/education. Emergency management areas of specialization fall within the four categories of response, recovery, mitigation, and preparedness. In these areas of specialization, policy, procedures, and training/education are examined.

B. HISTORICAL PERSPECTIVE

Natural and man-made hazards threaten lives, property and infrastructure. These are risks against which we need to know how to take sensible precautions, in order to become more resilient (Federal Emergency Association, 2010). It is important to know how to better protect ourselves, our families and our communities from all hazards. The National Emergency Management Association's document *Principles of Emergency Management Supplement* emergency management is identified as providing protection of communities (National Emergency Management Association, 2007). This is done through "coordination and integration of activities needed to build, sustain, and improve the capability to mitigate against, prepare for, respond to, and recover from threatened or actual natural disaster, acts of terrorism, or other man-made disasters" (National

Emergency Management Association, 2007, p. 5). Overall emergency management consists of four related components: all hazards, all phases, all impacts, and all stakeholders.

C.   ANALYTICAL CRITERIA

The matrix found in Figure 5 reveals the evidence in support of an emergency management best practice for each state, which is included in the study. Uniformity, interoperability, and interchangeability are used as the primary criteria for evaluation. The primary criteria have supporting elements that further evaluate a given standard for additional evidence which would support the conclusion that said policy or procedure is actually a best practice. The criteria used are as follows:

1.   Uniformity: Programs were evaluated for sameness with the intention of examining training and education standards to determine how they relate to organizational conformance.
   - *Accreditation*: it is recognition of standards specific to emergency management accreditation which have been met, as verified by an independent outside evaluator(s).

   - *Statewide*: emergency management standards that are extending throughout the state.

2.   Interoperability: Examined state standards for how diverse systems can effectively work together.
   - *Communication*: involves the continuous output and feedback of information specific to standards impacting training/education of organizational personnel.

   - *Data Exchange*: organizational sharing of information vertically but more importantly horizontally.

3.   Interchangeability: the concept of having personnel who are similarly and consistently trained to a degree where they can seamlessly accomplish any NIMS-defined job function or skill set at any level, and across organizational boundaries.
   - *Adaptive*: the ability to make internal behavioral changes which enhance development.

   - *Resilience*: the capability to rapidly self-adjust to the changing environment.

		Uniformity		Interoperability		Interchangeability	
					Data		
		Accredited	Statewide	Communication	Exchange	Adaptive	Resilience
S1	Connecticut	- -	- -	-	-	+	+
S2	New York	+ +	+ +	- -	- -	-	-
S3	Maryland	+ +	+ +	-	-	-	-
S4	South Carolina	+ +	+ +	-	-	-	-
S5	Florida	+ +	+ +	-	-	+ +	+ +
S6	Iowa	+ +	+ +	-	-	+	+
S7	Oklahoma	+	+	-	-	+ +	+ +
S8	Texas	- -	- -	- -	- -	+ +	+ +
S9	California	+	+	-	-	+	+
S10	Oregon	- -	- -	- -	- -	+	+

Figure 5.   Emergency Management Best Practices Matrix

Assessment format:

1.   "+"   signifies that evidence exists.
2.   "++"   signifies that strong evidence exists.
3.   "-"   signifies marginal evidence exists.
4.   "--"   signifies that evidence does not exist.

1. Analysis

Figure 5 matrix sets forth evidence of emergency management best practices. Currently, 50 percent of the states researched were found to have received the Emergency Management Accreditation Program (EMAP) accreditation. Oklahoma and California were not considered in the 50 percent accreditation ranking because they are conditionally accredited by EMAP for having almost met the 63 nationally recognized standards. Just as accreditation supports the element of uniformity, refresher training and certification database management support the element of interoperability as it is referenced within the EMAP manual. None of the states researched revealed any evidence to indicate a measurable degree of emergency management refresher training or certification database management. Sixty percent of the states showed evidence of having standards based training for emergency managers statewide. Standards based training is a supporting component of the element of interchangeability. The supporting evidence used to qualify the scoring in this matrix is listed in Appendix C.

D. ADVANTAGES

The Emergency Management Accreditation Program (EMAP) is an independent non-profit organization which fosters accountability in emergency management and homeland security programs by establishing credible standards that are applied in a peer review accreditation process (Emergency Management Accreditation, 2010). EMAP accreditation verifies that a program meets or exceeds program standards for emergency management. Overall, 50 percent of the states are fully accredited, 20 percent are conditionally accredited and 30 percent are not accredited through EMAP. Accreditation provides the opportunity to establish certification processes based upon the 63 nationally recognized standards provided by EMAP. Initiatives like the Oregon Certified Emergency Management Specialist (ORCEMS) and the International Association of Emergency Managers (IAEM) have comprehensive certification programs for emergency managers. By achieving EMAP accreditation, states can begin to design and implement standards that will be used to evaluate and certify personnel as emergency managers.

The Texas Department of Emergency Management (TDEM) preparedness evaluation process for emergency management programs could readily provide preparedness standards that would be used as a tool to evaluate and certify personnel to a level of basic, intermediate, or advanced emergency manager level. Accreditation of a state emergency management program is progressive and necessary. Through accreditation states are increasing their degree of uniformity, interoperability, and interchangeability at a national level.

E. CHALLENGES

It will be necessary to organize all fragmented forms of homeland security training throughout a state into one training and education system. This system will make the necessary revisions and corrections and design a standardized system that will promote interoperability and uniformity of training. It will efficiently address the issue of certification and re-certification of first responders and emergency managers. A problem arises when the concept of consolidation of government services is viewed in a negative context and the perception is that the state is looking to make cutbacks. The county and local governments view this as a threat to home rule. Home rule involves the counties and local agencies managing their own affairs with limited state influence. Local governmental entities in New Jersey have enjoyed this autonomy for many years, and the culture that this has fostered is evident in even the most casual observation of governmental operation in the state.

There is much that can be done to drive efficiency at the state, county, and local level without reducing the public's access to important homeland security resources. A consolidation of the process by which homeland security and emergency management training and education is provided would require the centralization of all existing training and education programs under one organization. This will enable accurate measurement of the success of the training process. These principles and policies can be applied with the same degree of utility and effectiveness to both law enforcement and the fire service. The cost of negotiating collective-bargaining agreements, developing and adopting common standards, and restructuring and realigning public services is routinely

underestimated by advocates of the consolidation of government services. By utilizing the extensive facilities already available at the state level, none of these costs will be incurred with the consolidation of training facilities and programs. The taxpayers will be the direct beneficiaries of good government. This initiative to streamline and consolidate services in all three disciplines (law enforcement, fire, and emergency management) will be met with challenges and resistance from the same groups that are staunch home rule proponents.

F. SUMMARY

Figure 6 summarizes the process by which smart practices are identified through review and evaluation of respective best practices. Analysis of the basic causal structure of the best practices will require careful examination and determination of whether the practice maximizes the potential opportunity for adding value to a process. Best practices are evaluated using this table to determine if they are a smart practice. The measurement variables are listed below:

- Cost Effectiveness: Sound fiscal budget management requires that practices be cost effective for the state. It does not always mean that the least costly way is the best way.

- State of the Art Curriculum: Requires that the practices must be reviewed to see if they are at the highest degree of advancement. Curriculum and policy must be by definition, cutting edge.

- Broad Applicability: Practices that are recognized for having broad applicability will add value because they can be easily adapted and applied in a framework of standards.

- Consistency with Federal Guidelines: Practices that are examined should ideally be in compliance with federal guidelines, such as the National Incident Management systems (NIMS).

1. Analysis

Figure 6 identifies best practices specific to emergency management as culled from the 10 states. Those best practices were then analyzed by the criteria established within the matrix. The matrix was designed to evaluate best practices to determine

whether they satisfactorily meet the necessary requirements for them to be identified as a smart practice for the state of New Jersey's homeland security policies and operations.

	Cost Effective	State of the Art Curriculum	Broad Applicability	Consistent with Federal Guidelines
S1 Connecticut	-	-	-	-
S2 New York	+	-	+	+
S3 Maryland	+	-	+	+
S4 South Carolina	+	-	+	+
S5 Florida	+ +	-	+ +	+ +
S6 Iowa	+	-	+	+
S7 Oklahoma	+	-	+	+
S8 Texas	+	-	+	+
S9 California	-	-	-	-
S10 Oregon	-	+	+	+

Figure 6.   Emergency Management Smart Practices Matrix

Assessment format:

1.   "+"   signifies a smart practice exists.
2.   "++"   signifies more than one smart practice exists.
3.   "-"   signifies marginal evidence exists.
4.   "--"   signifies a smart practice is non-existent

The Figure 6 matrix provided the necessary organizational support required for the analysis and identification of emergency management smart practices. Of the 10 states examined, eight out of the 10 were recognized for having smart practice standards and/or procedures. Subject headings for all states are listed below and all smart practices are organized under their state. The analysis used to identify smart practices are provided under the state subject heading. For states that lacked a smart practice, "research is negative for smart practice(s)" is placed under the states subject heading.

a.   *Connecticut*

Research is negative for smart practice(s).

b.   *New York, Maryland, South Carolina, Florida, Iowa*

EMAP accreditation is a smart practice because it provides verification that an organization is in compliance with national standards (Emergency Management Accreditation, 2010). It is a starting point for developing a core set of standards for the emergency manager along with providing written policy direction to the agency. In addition, the accreditation verifies that the organization demonstrates accountability and maintains a continuous readiness level (Emergency Management Accreditation, 2010). Receiving this stamp of approval from a third party agency is an example of the reinforcement of nationally recognized standards. Accreditation confirms that the organization is achieving statewide influence of the standards implemented. As a result, statewide uniformity is occurring within the field of emergency management. Five out of 10 states researched are fully accredited through EMAP. These states are New York, Maryland, South Carolina, Florida, and Iowa.

EMAP accreditation costs are established by the accreditation commission. They range from $2,000 to $7,500 (Emergency Management Accreditation, 2010). This can be a worthwhile expense if it enhances the degree of sameness within the municipality, jurisdiction or state. In looking the future, EMAP accreditation could be linked to additional federal funding opportunities for the state, city, or district. EMAP does not provide an education/training curriculum for emergency managers nor does it evaluate existing training/education of organizations. Accreditation certifies that an agency has state of the art policies in place which create effective standards. The standard of accreditation requires that the organization provide evidence that they: 1) have implemented nationally recognized emergency management standards 2) have ensured that these standards have statewide influence.

With the support of an EMAP accreditation, the Maryland Comprehensive Emergency Management Plan (CEMP) program is better designed to promote

collaborative partnerships that are built around the four phases of emergency management. South Carolina Regional Emergency Management (REM) is organized into six regions statewide that are governed by state directives. These directives are influenced by core standards that were accredited by EMAP. In South Carolina, regionalized emergency management strategy effectively ensures community outreach from the state to its stakeholders. In Florida, accreditation has provided a road map for which the Department of Emergency Management (DEM) has been able to established policies and directives that reach throughout the state. For Iowa, the EMAP accreditation supports the HSEMD strategy of building collaborative partnerships with organizational entities throughout the state.

c.   *Florida*

Goal 10 of the Florida Division of Emergency Management 2008–2013 Strategic Plan identifies the need to professionalize the profession of emergency management in the state of Florida (Florida Division, 2008). Is it going to be a cost effective training/education standard? This is still unknown. This standard would effectively consolidate the current non-mandated emergency management training throughout the state. Consolidation often directly correlates to a cost savings. Subsection (d) of Goal 10 identifies the need to establish an emergency management academy along the lines of a traditional paramilitary academy environment (Florida Division, 2008). Research has not revealed any evidence in the form of a set curriculum but Goal 10 is considered a cutting edge policy initiative. The goal mentions the need to professionalize emergency management in the state of Florida. This should be considered a standard that has statewide application. Subsection (e) of Goal 10 emphasizes the need to establish specific guidelines and standards for emergency managers statewide into law (Florida Division, 2008). This law would need to be in support of and not contradict federal emergency management law and/or guidance.

d.   Oklahoma

In Oklahoma legislation, Title 63, Section 683.11 addresses the need to create training/education standards that advance statewide interchangeability of its emergency managers (Oklahoma Department, n.d.). Section 683.11 is a standard that requires that within one year of hire emergency management directors shall complete emergency management training (Oklahoma Department, n.d.). These courses prepare directors to be more resilient as emergency managers. The training/education standard places an emphasis on adherence to the National Incident Management Systems (NIMS) framework and program management (Oklahoma Department, n.d.).

State legislation requires training/education of Oklahoma emergency managers. This allows for emergency management directors to efficiently plan their time and allocation of training funds because the state has provided a roadmap for training/education. This statewide application is designed to reach the grassroots communities in Oklahoma. All courses are FEMA built and produced. The evolution of the FEMA built courses support the supposition that curriculum will have currency and be cutting edge. The legislation is from the state level down. This promotes statewide emergency manager uniformity and interchangeability.   Analysis of the Oklahoma emergency management training/education standard has revealed that it is a smart practice.

e.   Texas

The Texas Department of Emergency Management (TDEM) established through Texas Code § 418.043(3) standards for emergency management planning (Texas Department, 2000). A supporting Texas Code § 418.010(b) provides standards for local emergency management (Texas Department, 2000). The TDEM has established standards for evaluating local emergency management agencies for basic, intermediate, and advanced levels of preparedness (Texas Department, 2000). The state manages and coordinates the application of this set of policy and evaluation standards on a statewide basis. The evaluation criteria for emergency management programs are structured upon local and regional emergency planning, training, and exercising actions (Texas

Department, 2000). These two Texas codes promote standards driven operational and administrative emergency management proficiency. This makes the emergency managers in the state much more interchangeable and that is an added value to the communities in Texas. The TDEM supports a state mandated training/education curriculum designed to further professionalize the emergency manager. The policy and evaluation standards effectively challenge local emergency management at a minimal cost to their agency. The Texas legislation instituted these interdependent smart practice policy standards in order to promote uniformity of administration and operations statewide. This legislation gives the standards a force of law effect. The TDEM policy and evaluation standards support the NIMS Preparedness Overview.

f.   *California*

Research is negative for smart practice(s).

g.   *Oregon*

The Oregon Emergency Management Association (OEMA) manages the ORCEMS program. This is a cooperative effort between Oregon Emergency Management (OEM) and OEMA that mandates extensive documentation of the applicant's qualifications. This program is designed out of the need for having standards in emergency management and the need to certify accomplishments of this standard within OEM (Oregon Emergency Management, 2008). The ORCEMS application packet requires completion of four areas of criteria: credentials, training, contributions to the emergency management profession, and a management essay (Oregon Emergency Management, 2008). This program can be adopted by other states under the premise of professionalizing emergency management to the next level. It provides a cost effective way of recognizing emergency managers for the work that they do and it certifies them for their knowledge, skills, and abilities. This certification does not provide training, but, rather through its requirements guide, the emergency manager in a direction that outlines the way forward for achieving the necessary core competencies. The training requirements place a 50 percent emphasis on FEMA emergency management training.

The "contributions to the emergency management profession" criteria challenge the emergency manager to become universally proficient and actively engaged in the state run emergency management administration and operations (Oregon Emergency Management, 2008). Currently, this is a voluntary program within the state. The ORCEMS standard of emergency manager certification is considered a smart practice. The ORCEMS complies with federal guidelines by requiring training in FEMA independent study courses for certification.

V.   SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A.   SUMMARY

New Jersey is a home rule state as are eight of the 10 states researched. For New Jersey, the degree to which first responders and emergency managers are trained and educated to homeland security multidisciplinepreparedness response levels is less than sufficient. This is because the state leadership has failed to established core set of training and education standards that would effectively create state homeland security core competencies. The Department of Homeland Security has failed to provide solid and clear guidance in the form of core competency standards that would act as a solid foundation for states. The guidance that the federal government must provide would not be for the purpose of controlling the actions of the states nor should it be considered a mandate for compliance. Rather, it should be a roadmap that will lead to the enhanced readiness of the first responder and emergency manager. This guidance is a fundamental building block within a complicated and ever-changing state based homeland security landscape. DHS provides guidance on how it will financially support state or area investment justifications specific to the UASI areas. DHS needs to do more. By providing broad-based homeland security training/education oversight for states, the way forward for first responders and emergency managers would have greater clarity.

A good example of a collaborative training/education initiative is in New York City. The New York Police Department (NYPD) in a proactive manner has enhanced their overall degree of readiness within the city by establishing a core set of homeland security training/education courses. The NYPD regional training center is a facility that has been able to provide timely training and education geared toward achieving the level of preparedness necessary to deal with terrorist threats. In a report prepared by Richard Falkenrath, the former Deputy Commissioner for Counterterrorism, New York Police Department, written for testimony before the Committee on Homeland Security and Government Affairs United States Senate, September 12, 2006, he states:

In the aftermath of 9/11, the NYPD developed a broad counterterrorism training curriculum for all ranks within the Department. This curriculum includes instructional courses based upon existing and developing trends in target selection and attack methodologies, using our broad experiences as a law enforcement agency in intelligence collection and analysis; force protection; target hardening; counter surveillance; and terrorist tradecraft. Recognizing the critical need to share information with all those engaged in the war on terror, the NYPD established a regional counter terrorism training center in 2002. The center provides training to both NYPD and local law enforcement and public safety partners in recognition of the fact that terrorists do not recognize jurisdictional and geographical boundaries. (NYPD, 2006, pp. 8–9)

Falkenrath further comments:

That NYPD needs the ability to be able to self-certify courses we regularly run and expertly deliver. Overall, the result of our significant training is that New York City has never been better prepared to defend itself from a terrorist threat. (NYPD, 2006, p. 9)

The question researched in this study is: How can those in state government charged with the responsibility of ensuring that all first responders and emergency managers are adequately and properly trained for all-hazards response ensure that this training is delivered on a large scale in a cost effective, timely, and thorough manner, without redundancy and duplication of effort? The hypothesis of the study is that in order for New Jersey first responders and emergency managers to be successful in their homeland security missions, it is necessary that they receive standards based training/education. To achieve this, standards for course content and delivery must be implemented. The conventional wisdom about standardization is that it can provide measurable benefits when applied within the framework of a system or organization.

After categorizing training and education best practice standards based upon uniformity, interoperability, and interchangeability in the case study, the standards were then distilled further in more detail with the application of specific criteria in order to determine if the standard is of a high enough quality for being considered a smart practice standard. Smart practices from state level policing, fire and emergency management

from 10 states were analyzed in this multiple case study. The results from the three matrices which identify smart practices were catalogued and organized by state within Chapters II, III and IV.

B.   CONCLUSIONS

The ascertain of this thesis is that by establishing a multidisciplinestandards infused homeland security training and education system, the state will enhance the capabilities of first responders and emergency managers with relation to the elements of uniformity, interoperability, and the capacity to train personnel to a high level of interchangeability. Research like this must continue to progress because of an ever changing homeland security landscape. At the very minimum federal, state, and local governments must continue to anticipate barriers and research new and innovative ways to better collaborate with states to build a well-trained workforce. The problem has been approached in the broadest sense and discussed in the same manner. The research indicates that the problem can be addressed through the design of a system that incorporates a multidisciplineacademic framework. The following are conclusions derived from this study:

1.   In Chapter II the examination of law enforcement smart practices in the 10 states revealed that refresher training/education, standardized training/education, records management of certifications, written directives, and accreditation/certification were recognized for having great value. Voluntary compliance to standards and mandatory compliance to standards was a constant that had influence on whether a best practice became a smart practice. Mandatory compliance is a factor that gave the smart practice standard the effect of law statewide. Mandatory compliance allows for the measurement of individual preparedness within the law enforcement field, and, ultimately, the statewide law enforcement preparedness can be evaluated against sets of criteria.

2.   Firefighting smart practices were looked at in Chapter III. It was found that smart practices self-organized into refresher training/education, standards based training/education, accreditation/certification, and records management of certifications. Just as with law enforcement in Chapter II, mandatory compliance strongly influenced the determination of smart a practice here in Chapter III. The firefighting community is nationally organized around accreditation with the assistance of independent

accreditation organizations that base their accreditation upon compliance with National Fire Protection Association consensus qualification standards.

3. Chapter IV provided similar research results to that of Chapters II and III. Chapter IV revealed that standards based training and accreditation/certification were found to be the areas of emphasis based upon the smart practices results. The evidence in Chapter IV has identified that 70 percent of the states researched are either accredited by EMAP or are actively involved in the EMAP accreditation process. EMAP, as part of accreditation, places a great emphasis on standards driven administration, operations, and training/education. Based upon the research, EMAP appears to be creating a trend that involves the increased importance on emergency management standards based training and education.

C.   RECOMMENDATIONS

Considering the conclusions outlined above, it is evident that one of the principals in forming and maintaining an effective multidisciplinetraining and education system for first responders and emergency managers is to establish a curriculum framework that is standards driven. The establishment of core standards that support law enforcement, fire, and emergency management is what seems to be what allows productive state managed programs accomplish goals that are in direct alignment with promoting uniformity, interoperability, and interchangeability of its personnel. The following are recommendations that stem from the research:

1.   Recommendation for State Administrators

Consider consolidating a core set of emergency manager and first responder homeland security training/education into a statewide system that is standards driven in support of preparedness. The smart practices found and identified in Chapters II, III and IV support the creation of a system involving core competency training and education standards relative to homeland security that promote uniformity, interoperability, and interchangeability in the first responder and emergency manager. The success of training/education is dependent upon four critical building blocks:

1.   the need to mandate compliance in the training/education program

2.   the establishment of cutting edge standards based training/education

3.   the accreditation of the system in order to be able to certify individuals

4.   the requirement of follow-up training to maintain certifications.

Research indicates that this system can implement the core homeland security smart practices with the strategy of promoting the cycle of preparedness.

Traditionally structured state, county, and local government has had a difficult time meeting the continuously changing landscape of homeland security. State administrators need to investigate the feasibility of creating a consolidated homeland security training/education system that would lessen the burden on county and local jurisdictions on having to sustain training/education readiness levels for their personnel. This can only be accomplished if there is a willingness to change and for leadership to exhibit the necessary confidence to create a statewide collaborative culture.

2.   Recommendation for Statewide Core Curriculum

There needs to be a development of a standards driven training curriculum that exposes first responders and emergency managers to homeland security subjects offered in the form of collegiate style courses in criminal justice, fire science, fire academies, police academies, and emergency management education. Implement any and all researched smart practice standards as foundational building blocks. It is recognized that in certain places in state, county, and local government that consolidation is not possible for a number of reasons. In the case of consolidated homeland security training/education, it is in direct support of a regional approach to response.

3.   Recommendation for Collaboration with a Four-Year State Educational Institution

Establish a collaborative partnership with a state supported institution of higher learning with the intent of providing academic accreditation to the homeland security core curriculum. A partnership such as this will add legitimacy to a statewide homeland security multidisciplinetraining/education system for first responders and emergency

managers. This partnership will allow for the curriculum to receive precise refining on a regular basis in order to stay at the cutting edge of preparedness.

This training/educational collaboration is supported by the GAO report *Key Challenges and Solutions to Strengthen Interagency Collaboration*, which recommends that agencies involved in homeland security need to make concerted efforts to forge strong and collaborative partnerships, and seek coordinated solutions that leverage expertise and capabilities (General Accountability Office [GAO], 2010).

4.   Recommendation for the DHS

The DHS should continue to support homeland security training/education through the creation and implementation of national training standards. Standards need to be established in order to provide over-arching coordination and control. It is at the state level that training/education needs to be coordinated and managed. This will effectively insure that the product reaches the grass roots agencies that need it. The state also needs the capability to self-certify the curriculum in order to provide certification to the first responder and emergency manager. DHS needs to provide a documentation capability to the states where they can report results on certifications and re-certification. Also, re-certifications allow the state to measure what personnel are up-to-date, and, also, it allows the state to know if they are continuing to train to a specified standard.

The findings of this research highlight the value of standards driven training/education, the importance of being able to achieve accreditation and in turn issue certification.

5.   Recommendation for the State to Identify a Lead Agency for Coordination of Collaboration

Utilize existing infrastructure and support from the New Jersey State Police. New Jersey State Police should be tasked to establish a collaborative partnership with a set of state agencies that will provide sound input on the design and implementation of the multidisciplinetraining and education system. Consideration would need to be given to

an organizational framework design. This provides the necessary framework for detailed cost estimating and control along with providing guidance for schedule development and control.

D.   FUTURE RESEARCH

This thesis suggests that the analysis conducted on the ten state's law enforcement, fire, and emergency manager policies and procedures revealed smart practice standards that advanced statewide uniformity, interoperability, and interchangeability for those states that placed an emphasis on training/education standards. The research suggests that standardized training/education that is standards driven needs to be considered a smart practice for homeland security.

The idea that all first responder and emergency manager homeland security training needs to be standardized based upon standards driven training/education is not a realistic proposal. The need is for a core set of homeland security training/education curriculum to be established that provides an appropriate foundation for state personnel, while at the same time promoting uniformity, interoperability, and interchangeability. The evidence that supports the standardization of training and education will need to be followed up by identifying the core curriculum of the system. Because the homeland security landscape is continuously changing the system will need to have an academic framework that can properly support standards. The purpose of further research on this topic would provide for how this academic framework can be designed in away that makes it dynamic, flexible, and continuous.

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APPENDIX A. POLICE TRAINING AND EDUCATION

A. INTRODUCTION

Chapter II of this study involved the examination of 10 states for evidence that supports law enforcement best practices. In this chapter, Figure 1 applies as the primary evaluation criteria uniformity, interoperability, and interchangeability. The matrix in Figure 1 analyzed the evidence researched for the degree to which standards can be seen as best practices.

B. UNIFORMITY

1. Connecticut

In the state of Connecticut the Police Officers Standard and Training Council (CPOSTC) establishes training and education standards for law enforcement. There are three tiers in the organizational framework:

1. The first tier involves the continuous updating of liability standards and is designed to reduce the liability exposure of police agencies.

2. The second tier involves the creation of professional standards that address officer training and education.

3. The third expands upon tier two and addresses legal requirements for management and operations. (State of Connecticut, 2006)

The CPOSTC is very focused in its mission, and this is evident in the way that the organization was designed. It is a cooperative that effectively promotes uniform law enforcement professionalism statewide. The standards are established with the intent of helping an agency to come into statewide alignment on critical issues and to provide an overall template for the way forward.

The CPOSTC accreditation program is designed to enhance uniformity through voluntary compliance with standards of excellence. Connecticut's accreditation process identifies standards that are national and internationally recognized and applies them to a state process (State of Connecticut, 2006). Assessments are conducted statewide on law

enforcement agencies and compliance with standards results in accreditation. This process helps to enhance and maintain law enforcement uniformity.

Standard 3.2.14, found in the *CPOSTC State Accreditation Standards Manual* in Chapter 2, Training Section, emphasizes the importance of specialized training (State of Connecticut, 2006). The standard requires law enforcement agencies to comply with pre- and post- specialized training requirements (State of Connecticut, 2006). The focus is to develop and enhance the knowledge, skills, and abilities particular to a given area of specialization. By emphasizing the importance of training and education for law enforcement, the state of Connecticut demonstrates that it is committed to overall preparedness by establishing a degree of sameness. Research of Connecticut law enforcement revealed that evidence does exist of implementation of best practices in this area. Connecticut is rated a (+) in the matrix.

2. New York

In 1959, Chapter 446 of New York State Law was enacted in order to provide an established basic training program for newly appointed police officers (History of the Basic Course, n.d.). In support of Chapter 446, the Municipal Police Training Council (MPTC) was created to establish standards and requirements for the police officer basic training program. A person seeking permanent appointment as a police officer (including sheriff's deputies) must complete the MPTC approved Basic Course for Police Officers (History of the Basic Course, n.d.). The New York state accreditation program helps law enforcement agencies in the state improve their performance through accurate evaluations. The program has four core goals:

1. To increase the effectiveness and efficiency of law enforcement agencies.
2. To promote increased cooperation and coordination.
3. To ensure appropriate training of law enforcement personnel statewide.
4. To promote public confidence. (Accreditation Program, n.d.)

The accreditation program consists of 132 standards (New York State Law, 2009). The program is broken down into three sections: administrative, training, and operational and has an accreditation council (New York State Law, 2009). Accreditation

status is based upon a set of measurable standards (New York State Law, 2009). These standards are the requirements that law enforcement in New York must meet. Implementation of all standards within the *Standards and Compliance Verification Manual* constitutes full compliance and subsequent accreditation (New York State Law, 2009).

The administration section of the manual places a strong emphasis on agencies having established written directives. Of the 70 standards in this section, two-thirds emphasize the creation and consistent use of written directives. Directives provide personnel in an organization the necessary guidance to ensure that policies, responsibilities, and procedures are followed. At the local agency level, directives are an effective extension of state standards. Together, directives and standards continuously promote a cycle of uniformity within the state of New York. On this basis, New York law enforcement can be considered to have implemented best practices in this area. New York is rated a (+) in the matrix.

3.   Maryland

In Maryland, law enforcement organizations collaborated with the Maryland General Assembly to establish the Police Training Commission in 1966. The Maryland Police Training Commission (MPTC) duties are set forth in the Code of Maryland §3–201 (Maryland Police, n.d.). Analysis of the MPTC and the Department of Public Safety and Correctional Services (DPSCS) reveals that currently there is no state supported or recognized accreditation program. However, acting independently, local law enforcement agencies and sheriff's departments have opted for law enforcement accreditation through such organizations as Chesapeake Region Law Enforcement Accreditation Alliance (CRLEAA) or the Commission on Accreditation for Law Enforcement Agencies (CALEA).

These organizations have limited standards (best practices) that are incorporated into a system that operates as the process for verification. These organizations provide a marginal degree of uniformity that helps guide law enforcement organizations with

respect to administration, training, and operations. Overall, there is marginal evidence in Maryland relating to statewide uniformity in the law enforcement training/education. Maryland is rated a (-) in the matrix.

4. South Carolina

The South Carolina Law Enforcement Accreditation, Inc. (SCLEA) is a cooperative effort between the Police Chief's Association and the Sheriff's Association of South Carolina (South Carolina Law, 2009). There are no state statutes officially recognizing the SCLEA program. SCLEA establishes standards that are designed to reflect the best professional practices in South Carolina law enforcement: management, administration, operations, and support services (South Carolina Law, 2009). The standards place an emphasis on "what" should be done. The "how" is left up to the local agency (South Carolina Law, 2009).

The SCLEA accreditation program organizes its standards in such a way as to make compliance not necessary but rather essential to establishing high standards of professionalism. Any law enforcement agency in South Carolina that has received CALEA accreditation will automatically receive SCLEA accreditation. The SCLEA program should be considered a qualified starting point for promoting a level of measurable uniformity. However, this program's standards do not extend statewide. In part, this is because there is no state mandate for involvement or compliance. Nonetheless, there is adequate evidence of the existence and use of some best practices by South Carolina in this area. South Carolina is rated a (+) in the matrix.

5. Florida

The Florida Department of Law Enforcement (FDLE) provides public safety services in conjunction with local, state, and federal criminal justice agencies to prevent, investigate, and solve crimes while protecting Florida's citizens. The FDLE created the Criminal Justice Standards and Training Commission (CJSTC) to ensure that standards of conduct and training of officers are maintained (Florida Department of Law, 2010). As for accreditation, the FDLE created the Commission for Florida Law Enforcement

Accreditation (CFLEA) (Florida Department of Law, 2010). The CFLEA is focused on establishing uniform law enforcement standards throughout the state (Florida Department of Law, 2010). These standards are designed to be practical, easy to understand, and easily interpreted. It is intended that these standards will promote law enforcement accountability statewide (Florida Department of Law, 2010).

The Criminal Justice Standards and Training Commission ensure that the Florida Statutes, Chapter 943 are adhered to by all law enforcement personnel (Official Site of the Florida, 2009). The CJSTC is empowered to punish violations of the standards committed by law enforcement (Official Site of the Florida, 2009). There is ample evidence of uniformity throughout Florida. Statute 943.125 created the accreditation commission and all the subsequent standards that are used to measure and evaluate law enforcement agencies throughout the state (Official Site of the Florida, 2009). The accreditation process is an effective tool that allows for a credentialing process to evolve. This promotes an accurate awareness of the law enforcement resources in the state. The accreditation and credentialing processes enhance the function of resource allocation in the state during times of state crisis. Statute 943.1395 contains a standard which permits an officer to hold multiple certifications (See previous comment the Florida, 2009). This standard further explains that an officer may be assigned to any one of the disciplines he or she is certified in based upon operational needs.

In addition to setting technical standards, such as hours of training, course content, testing requirements, and passing scores, the Florida CJSTC ensures that law enforcement recruit training is standards driven. This is done to provide consistency in training and education for law enforcement personnel in Florida. Statute 943.12 takes into account the importance of establishing and revising uniform standards for the employment and training of full-time law enforcement (Florida Department of Law, 2010). Florida is rated a (+ +) in the matrix.

6. **Iowa**

The state of Iowa was evaluated for the existence of standards that would support the primary element of uniformity. It was learned that CALEA has been utilized by

various police departments in Iowa. Currently, Iowa has a total of seven law enforcement organizations fully accredited (CALEA Client Database, 2010). Other than CALEA, there are no accreditation commissions or groups established in Iowa that the Iowa Department of Public Safety formally recognizes. Research revealed no evidence in support of the primary element of uniformity. Iowa is rated a (- -) in the matrix.

7.   Oklahoma

Law enforcement accreditation began in the 1970s with the intent of refining all aspects of the law enforcement mission (Oklahoma Law Enforcement Accreditation Commission, n.d.). On a statewide level the Oklahoma Association of Chiefs of Police (OACP) manages and coordinates the Oklahoma Law Enforcement Accreditation Commission (OLEAC). Currently, the OACP has 169 standards (Oklahoma Law Enforcement Accreditation Commission, n.d.). The program was created to provide a low cost alternative to CALEA and also to provide standards that represent best practices (Oklahoma Law Enforcement Accreditation Commission, n.d.). To date, the OACP is not a mandatory compliance program nor is it supported by the state of Oklahoma through legislation.

Of the 169 standards, there are a number that emphasize the importance of written policies and procedures (Oklahoma Association of Chiefs of Police, 2009). Standards within the OLEAC worth noting are ADM.02.03 *Supervisor Accountability* and ADM.02.05 *Written Directives* (Oklahoma Association of Chiefs of Police, 2009). These standards are valuable for providing operational and administrative guidance to an agency's personnel. ADM.02.03 provides the accountability framework for measuring law enforcement management on how well the employees under their command perform. ADM.02.05 creates the administrative and operational structure for the law enforcement agency by requiring management to establish written directives and/or guidelines for policing. Sound policies, procedures, and written directives decrease the susceptibility to litigation. Any reduction in litigation can result in lower agency insurance premiums and, equally importantly, it signifies a commitment to personnel compliance to standards. Oklahoma is rated a (+) in the matrix.

8. Texas

The Law Enforcement Recognition Program (LERP) is the most widely recognized accreditation program in the state of Texas (Texas Police Chiefs, n.d.). This program involves a process where police agencies in Texas demonstrate their compliance with over 160 Texas law enforcement best practices (Texas Police Chiefs, n.d.). This program is designed as an alternative to CALEA and focuses more on specific matters deemed of importance to Texas law enforcement. Additionally, participation in this program has been found to be more cost effective than other, similar programs (Texas Police Chiefs, n.d.).

The Law Enforcement Agency Best Practices Recognition Program assists Texas law enforcement agencies with addressing critical issues that relate to policy and operations. This program is not mandated by state legislation, and it is voluntary in nature. It lacks statewide influence and as a result evidence of the primary element of uniformity is marginal in Texas. Overall, this program places a higher value on policy and procedure documents. Texas is rated a (+) in the matrix.

9. California

The California Penal Code, sections 13550 through 13553, gives the Commission on Peace Officer Standards and Training (POST) the authority to manage regulations and standards specific to law enforcement accreditation (California Penal Codes, n.d.). Through the POST accreditation program agencies are required to meet and maintain standards that make an agency qualified for certification (California Penal Codes, n.d.). Agency certification programs like the POST accept the proposition that consistently trained personnel are more versatile, which, in turn, makes the law enforcement agency organizationally stronger and more resilient.

Accreditation of a law enforcement agency in California requires compliance with state standards. In a state as large as California, accreditation must be viewed as a continuous cycle. One of the benefits of large-scale participation in this type of a program is that a level of uniformity in terms of polices, training, and operations is

established among all agencies. Establishing a level of uniformity in operations allows for the effective leveraging of surrounding local assets with the knowledge that these assets are imbued with a degree of consistency. It is apparent that the POST strategy in relation to accreditation promotes an increased degree of sameness in the peace officer statewide. California is rated a (+ +) in the matrix.

10. Oregon

Oregon is without law enforcement accreditation; however, it has valuable standards specific to law enforcement. The Department of Public Safety Standards and Training (DPSST), through the Board on Public Standards Safety Standards and Training, coordinates the compliance with statewide standards for law enforcement officers and their agencies (Oregon Legislative Information, 2009). Revisions to§ 181.620, 30, 37, 61, and 62 have provided the DPSST training committee with great clarity for interpreting the statewide standards for law enforcement (Oregon Legislative Information, 2009). Currently, the program provides oversight to ensure that officers meet the basic training requirements (Oregon Legislative Information, 2009). The standards Committee is empowered by state government to oversee the certification process of law enforcement personnel in Oregon. The committee has the power to certify, revoke, and/or suspend a police officer's certification (DPSST Standards and Certifications, n.d.). Even though Oregon has valuable policing standards, the element of uniformity is poorly supported due to the absence of accreditation and the ability to certify law enforcement personnel on a statewide basis. Oregon is rated a (–) in the matrix.

C. INTEROPERABILITY

1. Connecticut

Connecticut's Basic Recruit Training Curriculum 2009 was evaluated for its ability to further the goal of enhancing interoperability. The successful completion of basic recruit training is mandatory for any person aspiring to be a law enforcement officer

in the state (Basic Training Curriculum, 2007). The town of Meriden is the headquarters of the Public Safety Training Academy. There are numerous satellite facilities throughout the state. Any facility hosting a Basic Recruit Training course must first have had its site inspected, instructors approved, and must have received pre-approval to utilize the standard training curriculum (Basic Training Curriculum, 2007).

As a follow up to Basic Recruit Training, the CPOSTC coordinates and manages all necessary in-service training (Rainville, 2011). This in-service training is viewed as a standard of re-certification for law enforcement members within the state (Rainville, 2011). The CPOSTC Website acts as an information clearinghouse. It is an interactive data exchange site that is available to all Connecticut law enforcement personnel. Law enforcement officers are able to check on their certification status and sign up for the training that they are required to obtain by a stated deadline (Rainville, 2011). Effective data exchange and in-service training help to ensure that Connecticut law enforcement agencies are capable of integrating with one another to accomplish their mission. Connecticut is rated a (+) in the matrix.

2. New York

The State Division of Criminal Justice Services (DCJS) coordinates and manages New York's statewide in-service training program. The program promotes continued training and education in numerous fields of study (In-Service Training Guide, 2007). This standard supports information sharing, which in turn strengthens personnel interoperability. Whether the program is classified as an in-service, refresher, or recertification training, the intent is still the same to provide a foundation that supports continuous output and feedback specific to knowledge, skills, and procedures. New York DCJS manages statewide records and maintains all state mandated training and education records (In-Service Training Guide, 2007). This centralized bank of information acts as a data exchange where up-to-date information about personnel is easily shared among organizations. In cases where mutual aid is called for, law enforcement personnel are better equipped to integrate at an incident because their level of training and education is

same as that of their fellow officers. New York's in-service training provides marginal evidence to support the element of interoperability. New York is rated a (+) in the matrix.

3.   Maryland

The MPTC works with the Maryland Safety and Education Training Center, located in Carroll County, Maryland, to maintain the standards for entry level training of police and sheriff's officers in the state (Department of Public Safety, n.d.). Currently, the MPTC certifies and audits 18 police training academies (Department of Public Safety, n.d.). In addition to managing entry level training for law enforcement, the MPTC manages and coordinates refresher training statewide. Law enforcement officers are required to recertify annually on a baseline set of core certification standards (Department of Public Safety, n.d.). Recertification promotes a high degree of interoperability among police agencies. Small law enforcement agencies rely heavily on the element of interoperability. Smaller agencies are more often required out of necessity to work together to satisfy operational demands.

Title 12 of the Department of Public Safety and Correctional Services 12.04.01.07, Subtitle 04 Police Training Commission, Chapter 01 General Regulations, requires re-fresher training to be coordinated and managed by the MPTC for all law enforcement personnel in the state (Office of Secretary of State, n.d.). MPTC issues certification cards to law enforcement members who have successfully met all standards of refresher training (Office of Secretary of State, n.d.). Prior to expiration of certification cards, the MPTC requires the police officer's agency head to verify the police officer's refresher training (Office of Secretary of State, n.d.). Training records must be provided to the Commission prior to the issuance of a new certification card (Office of Secretary of State, n.d.). The Maryland refresher training program effectively incorporates communication and data exchange in support of interoperability. This program successfully connects numerous and diverse independent law enforcement agencies throughout Maryland for the purpose of tracking the resources and the

capabilities of law enforcement personnel. The program requires agencies to document personnel certifications and overall training readiness. Maryland is rated a (+) in the matrix.

4. South Carolina

The Criminal Justice Academy Division (CJAD) of the Department of Public safety is has been given the responsibility to certify, track, and renew law enforcement officer education and training in compliance with Article 9, Chapter 6 of Title 23, Code of Laws of South Carolina, 1976 (South Carolina Legislature, 2010). The South Carolina Criminal Justice Academy (SCCJA) provides overall guidance for law enforcement personnel with regard to all aspects of the recertification process. The SCCJA provides a data exchange service that tracks the expiration and renewal of all basic certifications (South Carolina Legislature, 2010). Statewide certification standards for law enforcement make it possible to accurately track and evaluate officer's certification status (South Carolina Criminal, 2010).

Statewide individual and organizational exchanging of information is made possible by the SCCJA, which maintains a central database. The database tracks, updates, and records officer training progress. In addition, the database provides information to officers about mandatory re-training requirements. Because this database is state managed and has statewide reach, information sharing occurs continuously, not just vertically within an organization, but also horizontally (state agency to individual and/or other organization). Smaller law enforcement agencies in large states, like South Carolina, are even more dependent upon each other for operational support. Aside from logistical differences, all police officers are trained/educated in the same manner, which ensures that local police agencies are interoperable. South Carolina is rated a (+ +) in the matrix.

5. Florida

In §943.12, the CJSTC is given the responsibility of maintaining records of all certified criminal justice officers in the state (Florida Department of Law, 2010). The

FDLE accreditation process and the statewide coverage of standards successfully promote interoperability among law enforcement agencies in Florida. The establishment of centrally located record keeping database facilitates the sharing of information that is useful for identifying law enforcement agency capabilities. The sharing of information vertically and horizontally is done in a more streamlined manner with the use of this centralized certification database.

The CFLEA carries out the missions of improving the capabilities of law enforcement agencies and delivering a quality product to the citizens (Commission for Law, 2011). In chapter 14 of the CFLEA, entitled *Training Standard*, (14.08) places the responsibility on the local law enforcement agency to maintain a field training program that either meets or exceeds current minimum training requirements established by the FDLE (Commission for Law, 2011). Additionally, the CFLEA stipulates that law enforcement agencies in the state must maintain current training records for each member. The *Training Standard* (2011) chapter promotes interoperability by providing accurate and current record keeping that can be readily accessed in cases where information must be shared, either between state organizations (vertically) or between local-to-local agencies or state-to-local agencies (horizontally).

The standards describe the training goals that must be met by the requesting agency. The agency then has the discretion to determine how to assure compliance (Commission for Law, 2011). The CFLEA program emphasizes currency through the implementation of a document revision protocol. The importance of continuously scrutinizing, improving, and updating established standards is deemed essential by the CFLEA. The CFLEA incorporates into the Standards Manual Edition 4.0.21 the reporting document entitled *Standards Revision Form* (Commission for Law, 2011). The purpose of this form is to help the CFLEA remain at the cutting edge of law enforcement standards, and it also helps to keep the state's law enforcement agencies actively involved with the accreditation process through the sharing of information by way of agency feedback. On a larger scale, this document has created a continuous cycle of agency

interoperability through timely information sharing. Research of Florida law enforcement has revealed that strong evidence does exist. Florida is rated a (+ +) in the matrix.

6. Iowa

The Iowa State Legislature approved an act in the General Assembly, which created Iowa Code Chapter 80B (501 Law, 2010). Chapter 80B established the Iowa Law Enforcement Academy (ILEA). One of the many goals in the creation of the ILEA was for this institution to coordinate training and set standards for law enforcement officers (501 Law, 2010). Iowa in-service training/education helps to strengthen the interoperability of law enforcement agencies, particularly those that are contiguous to one another. Chapter 8.1(80B), *Mandatory In-Service Training Requirements* of the Law Enforcement Academy outlines the mandatory requirements (Iowa Law Enforcement, n.d.).

At a minimum, the peace officers in Iowa are required to attend recertification for general training, firearms training, and cardio-pulmonary resuscitation (CPR) training (Iowa Law Enforcement, n.d.). The recertification training provides an opportunity for the sharing of up-to-date methods, tactics, and practices (Iowa Law Enforcement, n.d.). This includes updates to laws and training and education standards. Statewide, law enforcement agencies are required to keep accurate and timely in-service training records (Iowa Law Enforcement, n.d.). The ILEA is responsible for overseeing the inspection of law enforcement agency training records (Iowa Law Enforcement, n.d.). This mandatory in-service training is an example of organizational sharing; however, recordkeeping is not centrally controlled at the state level. This is problematic from the perspective of interoperability. The absence of a centralized database at the state level makes it more time consuming to access information. Delays and questions about the accuracy of records undermine the reliability of the information. Iowa is rated a (+) in the matrix.

7.   Oklahoma

The Council of Law Enforcement Education and Training (CLEET) was created through the enactment of Oklahoma § 70–3311 of Title 70, O.S (Council of Law, 2005). CLEET is tasked with providing professional training and continuing education to law enforcement officers in the state (Council of Law, 2005). In addition to basic recruit training duties, CLEET also directs and manages all continuing education (in-service) training for all full-time law enforcement.

In 2008, § 3311.4 codified the provision that all full-time certified law enforcement officers must complete a minimum of 25 hours of CLEET accredited continuing law enforcement training annually (Council of Law, 2011). This standard calls for the transmittal of bulletins and educational information and requires full-time law enforcement officers to provide feedback upon receipt and review of these bulletins (Council of Law, 2011). This feedback is in the form of registration and course participation during a calendar year, and it will fulfill the 25 hour training requirement (Council of Law, 2011). This training mandate creates a level of preparedness in law enforcement through a continuous education training cycle.

Annual training also helps law enforcement personnel stay current on changes and revisions to existing state and federal directives and laws. This directly supports law enforcement interagency cooperation and support. Police officers are more inclined to work together if they have a level of confidence in their counterparts. Continuing annual law enforcement training enhances this confidence level.

Data exchange is a secondary support element to the primary element of interoperability. By creating standards designed to support information sharing across organizational lines through the aggregation of Oklahoma's full-time law enforcement certifications effective communication is supported. CLEET maintains a database that tracks the education training certification records of individual law enforcement officers.

A data exchange standard that is supported through the use of a personnel database is important when promoting statewide agency interoperability. From a law enforcement agency leadership perspective, interagency partnerships, and initiatives can

be promoted based upon the sharing of each agencies personnel certification records and overall levels of readiness. This sharing of information and communication increases the possibility of future inter-agency collaboration. Reliable and accurate statewide database management and continuous readiness training ensures that the primary element of interoperability is present. Oklahoma is rated a (+) in the matrix.

8. Texas

In the Texas Occupation Codes specific to the Commission on Law Enforcement Officers Standards and Education (TCLEOSE), there is a section (Sub-Chapter H Continuing Education for Peace Officers Sec. 1701.351) where it states, "Each peace officer shall complete at least 40 hours of continuing education programs once every 24 months" (Texas Commission of Law, 2010). The Basic Peace Officer license is renewed based upon the completion of the mandatory cycle of training (Texas Commission of Law, 2010). The continuing education standards actively challenge the peace officer to remain current in his or her certification (Texas Commission of Law, 2010). TCLEOSE has created a Web-based information sharing system that allows for timely notifications and updates to be made available to the state's licensed officers. Additionally, the Web-based programs allow for information feedback to take place, which, in turn, makes the TCLEOSE Website truly interactive and supportive of the element of interoperability.

The TCLEOSE has contracted with Productivity Center, Inc. to provide a central database to support the Texas law enforcement community. Productivity Center, Inc. is an information and technology company that provides database software and service solutions to law enforcement agencies in Texas. The Texas Commission on Law Enforcement Data Distribution System (TCLEDDS) is a "custom web based software application designed for users to enter or upload data, including an officer's employment status, education, and certifications" (Productivity Center, n.d.). This program facilitates organizational sharing of information. Currently, TCLEDDS supports around 60,000 officers and 3,000 agencies statewide (Productivity Center, n.d.). This program is not grant or state funded. The cost of this service must be paid for by the user agency. Membership in this program is voluntary. For interoperability, communication, and data

exchange are required and for TCLEOSE and continuing education training and the TCLEDDS fills that requirement. Texas is rated a (+ +) in the matrix.

9. California

The POST manages and coordinates the Continuing Professional Training Program (CPT) for personnel who are employed by departments that participate in POST (POST, n.d.). The CPT is a program that continuously provides an output of educational data. The purpose of the CPT is to "maintain, update, expand, and/or enhance an individual's knowledge and/or skills" (POST, n.d., p. B-11). The CPT requires that all law enforcement officers successfully complete the minimum required 24 hours of POST-qualifying training during every two-year cycle (Commission on Peace, 2011). By requiring law enforcement personnel to participate in the continuing education program, the POST is able to collect valuable feedback that, in turn, allows it to make improvements to the educational curriculum. The POST CPT program is only a requirement for law enforcement personnel whose agencies are participants in the Police Officers Standards and Training system. The POST is not state mandated. California is rated a (+ +) in the matrix.

10. Oregon

The DPSST is required by state law to facilitate and manage the statewide Police Maintenance Training program. This program is organized on a three-year cycle requiring 84 hours of recertification to be completed in that time frame (DPSST Police Maintenance and Standards, n.d.). The Police Maintenance Training program tracks, certifies, and de-certifies law enforcement personnel in Oregon (DPSST Police Maintenance and Standards, n.d.). The Skills Manager database, designed by Crowne Pointe Technologies, is used to track all of the individual personnel training records (Crowne Point Technologies, n.d.). The Skills Manager database monitors personnel training and certifications based upon specific categories. These categories consist of entry level training, in-service training, instructor training, and firearms training (Crowne Point Technologies, n.d.). The database is password protected. It allows management

level personnel in law enforcement agencies to go into the program and update and review documents. It is designed to be accessible and user friendly (Crowne Point Technologies, n.d.).

The Skills Manager database organizes individual certifications and training hours. This is a good example of statewide preparedness information sharing. The database accurately displays and communicates information. Feedback then occurs in the form of compliance by the sworn officer by the completion of his required recertification hours. Oregon is rated a (+ +) in the matrix.

D.   INTERCHANGEABILITY

1.   Connecticut

In the state of Connecticut the components of the element of interchangeability are found in the *State of Connecticut Police Officers Standards and Training and Council*, Standards Manual 2006. Section 3.2.5 systematically outlines organizational design. This standard sets forth:

1.   Categorization of every job on the basis of similarities,
2.   Responsibilities and qualifications,
3.   Class specification for every job within the class,
4.   Provisions for relating compensation to classes,
5.   Provisions for reclassifications (State of Connecticut, 2006).

This standard identifies and defines the different kinds of work performed in an agency and consolidates similar jobs into classes based upon similarity of job missions (State of Connecticut, 2006).

This standard promotes a sufficient level of interchangeability statewide for law enforcement. Furthermore, it identifies personnel who are considered similarly and consistently trained to a set of accepted benchmarks similar to NIMS-defined job functions. This categorization of personnel makes it possible for police officer resource sharing to occur across organizational boundaries. Connecticut is rated a (+) in the matrix.

2.   New York

In New York, the Municipal Police Training Council (MPTC) was created by executive order §839 and manages and coordinates the minimum training and education standards for police officers (Division of Criminal, 2009).   The MPTC supports the element of interchangeability. The basic training course for police officers in New York focuses on providing the necessary standardized foundation for performing public safety functions. Having a set of core standards for training and education, this enhances the capability of being able to self-adjust rapidly to the surrounding environment either during times of crisis or during routine operations. Because all New York police officers have been trained to a degree of law enforcement standards, they all have a higher probability of being more self-adaptive to situational challenges within the workforce environment.   This directly reinforces the notion of being interchangeable, from one agency to another yet performing the same duties.

In the New York, the accreditation document Administration Standard 2.2 describes how each job classification or assignment should have a comparable description (New York State Law, 2009). This is important because this standard and the accreditation document are linked to the training and education standards of the state's basic recruit training course. A standard requiring defined job functions and skill levels allow organizations to potentially share personnel across organizational boundaries. New York is rated a (+ +) in the matrix.

3.   Maryland

The state MPTC has the authority to set standards and make compliance necessary for training of law enforcement in Maryland (Police Entry Level Training Program, n.d.). The most essential standards or what MPTC refers to as "performance objectives" address law enforcement operations.   The objectives range from organizational principles and law to Police Officer Firearms and Qualifications (Police Entry Level Training Program, n.d.). Maryland's training program should be viewed as one primary core standard for the purposes of promoting interchangeability.

Overall, this training program reinforces the concept of interchangeability because it is designed to influence behavioral changes that ultimately enhance the officer's capability of be self-adaptive. Training/education of this nature properly prepares recruits to become adaptive and resilient to the unknown environments and challenges that they will encounter. Recruit training prepares everyone equally to enforce the law. MPTC's application of standards strengthens Maryland's law enforcement community. Maryland is rated a (+ +) in the matrix.

4. South Carolina

The South Carolina Legislation under Chapter 38, Department of Public Safety, Article 1, titled Criminal Justice Academy Sub-Article 1, authorized the SCCJA to establish, manage and coordinate standards specific to law enforcement officer's re-certification and basic law enforcement training (South Carolina Legislature, 2010). The recertification hours of Continuing Law Enforcement Education (CLEE) vary based on the level of certification of the law enforcement officer (South Carolina Legislature, 2010).

The SCCJA Basic Law Enforcement Program initially provides the graduating officers with a set of skills that give them the capacity to be adaptive and better problem solvers (South Carolina Criminal, 2010). The re-certification program and the state's mandate for retraining impart to the officer a degree of interchangeability throughout the state. There are limited public details of the program, and this, in turn, limited the degree of analysis conducted on SCCJA. Research of South Carolina law enforcement nonetheless revealed that evidence of the use of best practices does exist. South Carolina is rated (+) in the matrix.

5. Florida

Florida has 41 Florida Department of Law Enforcement certified training facilities that all utilize the Florida Basic Recruit Training Program (Florida Department of Law, 2010). On the whole this program is strong evidence of multi-organizational personnel interchangeability because it provides a set of core competencies specific to

training/education that imparts a high level of sameness in law enforcement personnel in Florida. The Criminal Justice Standards and Training commission oversees the revision and updating of the training curricula as set by guidelines as required by state law (Official Site of the Florida, 2009). To be a law enforcement officer in Florida, an individual must successfully complete the basic recruit training program (Official Site of the Florida, 2009).

The CJSTC establishes the standards for training that result in officer certification (Commission for Law, 2011). Statewide training standards allow for law enforcement officers to adapt easily to their surroundings. Due in large part to the statewide standard requiring a formatted training program, law enforcement graduates are equipped with execution flexibility, and this gives the officer the capability to ensure that the citizens in the state of Florida are properly served no matter what the situation or challenge. Based upon this statewide training program the law enforcement officer is self-adaptive and resilient in any given environment in Florida. Florida is rated a (+ +) in the matrix.

6.   Iowa

Law enforcement standards and requirements in Iowa have a measurable level of interchangeability relative to the standardized training and certification required for all law enforcement officers. Chapter 3 of the Law Enforcement Academy statute, (501) identifies the roles and responsibilities of the ILEA (501 Law Enforcement, 2010). Specifically, the ILEA is the primary agency in the state for setting standards for all law enforcement (501 Law Enforcement, 2010). The academy has established standards that enhance the police officers ability to adapt to any given environment in which they may find themselves (501 Law Enforcement, 2010).

This standards based training/education effectively prepares the Iowa police officer with a standardized core set of training and education competencies that prepares the officer to support other Iowa law enforcement agencies with supplemental assistance in cases where their resources have become exhausted due to a large-scale incident. Maintaining and enforcing reasonable core competency standards for the law enforcement service is done to better prepare the police officer in Iowa to have the

capacity to adjust to changing environments (Iowa Law Enforcement Academy, n.d.). The ILEA's procedural training and academics instill a level of sameness in all academy recruits through its training framework. During crisis situations, this allows for successful resource sharing to take place. Iowa is rated a (+) in the matrix.

7. Oklahoma

Title 70, Section 3311, of the Oklahoma statutes has established baseline standards for the training and certification of law enforcement (Council of Law Enforcement, 2011). The CLEET Basic Law Enforcement Training Academy was designed with the intention of promoting a high level of standardization (Basic Law Enforcement Academy Life, 2009). CLEET is the clearinghouse for all law enforcement training within the state. This promotes a high degree of law enforcement sameness throughout the state. The Basic Law Enforcement Training Academy, which is managed by CLEET, is mandatory for all law enforcement officers in Oklahoma (Council of Law Enforcement, 2011). The CLEET standardized training promotes resiliency through the application of group based scenario training. The training requires partnering students together in order to overcome a scenario challenge. CLEET training imparts a sufficient level of interchangeability to the students. The CLEET formatted training equips the officer with the ability to adjust to situational changes in the surrounding environment to better meet law enforcement challenges. Oklahoma is rated a (+) in the matrix.

8. Texas

TCLEOSE has an established minimum Basic Peace Officers Training curriculum. The curriculum consists of 618 hours of education and training (Texas Basic Peace, 2008). TCLEOSE has certified and authorized the use of their established curriculum at 106 academies throughout Texas (Texas Basic Peace, 2008). Additional training can be added to the curriculum, but the core 618 hours cannot be reduced. After successful completion of the academy, it is then incumbent upon the recent graduate to register for and take the State Licensing Exam (Texas Basic Peace, 2008).

Texas has built interchangeability into its law enforcement recruits through applying standards based education and training curriculum. This curriculum strategy builds a satisfactory level of resiliency and makes a Texas law enforcement person into more readily self-adaptive. The training and education has positively influenced behavioral change that provides for higher interchangeability of law enforcement in Texas. Standards based training/education enhances the resiliency of the Texas law enforcement officer, which ultimately increases his or her overall preparedness. Texas is rated a (+ +) in the matrix.

9. California

The POST Commission's Regular Basic Course (RBC) is an entry level training program for all law enforcement agencies that are part of POST. Throughout the state of California there are 39 POST-certified academies (Commission on Peace, 2011). By mandate, the program consists of a minimum of 664 hours of instruction and testing (Commission on Peace, 2011). The curriculum is organized into four separate educational sections that prepare the officer administratively and operationally. The degree of interchangeability of law enforcement agency personnel that participate in the POST RBC is high. This is based on the fact that there is an established set of learning domains (standards), which the student is required to complete successfully.

The RBC curriculum has many valuable guidelines. One that relates directly to this study is what the RBC calls "learning domain #43, *Emergency Management"* (Regular Basic Course, 2010). It synthesizes the requisite knowledge, skills, and abilities necessary to interdict a terrorist threat and respond to an incident involving weapons of mass destruction (WMD) (Regular Basic Course, 2010). If a large incident were to impact a POST agency, this agency could confidently request resources from other similarly trained POST law enforcement organizations with confidence that the responding personnel will seamlessly integrate with the requesting agency's personnel. California is rated a (+ +) in the matrix.

10. Oregon

The DPSST Training Academy is the centralized training center for all Basic Police (BP) recruit training and is located in Salem, Oregon. The Basic Police Academy is a 16-week program consisting of 640 hours of instruction and testing (DPSST Training Academy, n.d.). The goal of the BP academy is to improve the level of professionalism, skills and abilities of Oregon's law enforcement officers (DPSST Training Academy, n.d.). Because the BP course is mandatory for all law enforcement in the state, it ensures that everyone receives the identical standardized training. Oregon's law enforcement training guarantees that personnel are similarly and consistently trained and educated to a degree that allows agencies to integrate seamlessly their law enforcement personnel in times of crisis. This interchangeability is a direct result of the state level managed law enforcement training. Oregon is rated a (+) in the matrix.

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APPENDIX B. FIRE SERVICE TRAINING AND EDUCATION

A. INTRODUCTION

Chapter III of this study involved the examination of 10 states for of evidence in support of the existence of best practices in the fire services. In this chapter, Figure 3 applies as primary evaluation criteria uniformity, interoperability, and interchangeability. The matrix in Figure 3 analyzed the evidence for the degree to which standards can be seen as best practices.

B. UNIFORMITY

1. Connecticut

The Connecticut Commission on Fire Prevention and Control (CFPC) has been accredited by the International Fire Service Accreditation Congress (IFSAC) (International Fire Service, 2009). The CFPC maintains its current training and education standards based on the most current edition of the Standards for Certification based on the National Fire Protection Association (NFPA) professional qualifications. CFPC was required to show competency through its course offerings, institutional support, and qualified faculty to verify that the agency was managing and delivering a sound educational process (International Fire Service, 2009). Because the CFPC system promotes very specific criteria designed to provide professional and uniform standards, members of the Connecticut fire service are now eligible to be nationally certified.

The CFPC accreditation allows the fire academy to certify those who have successfully met and exceeded the NFPA 1001: Standard for Fire Fighter Professional Qualifications (Connecticut Fire Protection, 2009).

Connecticut firefighters are comprised of 70 percent volunteer and 30 percent full and part-time personnel (Connecticut Fire Protection, 2009). The CFPC issues firefighter certifications. Firefighter certifications in Connecticut by design promote statewide uniformity. This is accomplished by verifying that training and education systems are

used to certify fire and related emergency response personnel to professional qualification standards (National Fire Protection Association, 2011).

This process acts as a force multiplier in cases where mutual aid requests are made. Resources that are responding are equivalent in certification to the requesting agency's personnel. Additionally, the NFPA 1000: Standard for Fire Service Professional Qualifications Accreditation and Certification Systems requires the application of consistent standards with regards to operational, administrative, and procedural duties among the Connecticut fire community. Accreditation confirms that there is a high degree of uniformity within the state. Connecticut is rated a (+) in the matrix.

2. New York

The Office of Fire Protection and Control (OFPC) conducts annual training for full-time, part-time and volunteer firefighters at the New York State Academy of Fire Service. Also training occurs at satellite locations throughout the state (Office of Fire, n.d.). The OFPC oversees the administration of the New York State Training Standards for Firefighters (Office of Fire, n.d.). The OFPC uses the NFPA's professional qualifications standards as a guide for carrying out their basic firefighter training. The OFPC is accredited by the ProBoard Service Professional Qualifications System (ProBoard Fire Service, n.d.). As a result, the OFPC can certify firefighters that successfully complete the training/education programs. This provides the state with a measurable level of competence and uniformity in firefighter training. Fire accreditation enables the state to provide a training/education product that is based on national standards and this, in turn, results in firefighter uniformity.

In the *Minimum Standards for Firefighting Personnel* section § 426.2 Standards for Certification of Fire Training Programs (Office of Fire, 2008) is the standard that provides the OFPC with the authority to certify fire training programs statewide in four specific areas: basic fire training, advanced in-service fire training, promotional, and

supervisory training (Office of Fire, 2008). This state standard advances the concept of uniformity of training/education through certification. New York is rated a (+ +) in the matrix.

3.   Maryland

The Maryland Fire Rescue Education and Training Commission (MFRETC) recognized the need to have fire programs in Maryland conform to the requirements of the National Professional Qualifications Standards. To meet that need the MFRETC created the Maryland Fire Service Personnel Qualification Standards Board (MFSPQB), Inc. (Maryland Fire Service Personnel, 2009). The MFSPQB received accreditation from the IFSAC and ProBoard on a total of 24 courses (Maryland Fire Service Personnel, 2009). Firefighters in Maryland can be certified for course completion by the MFSPQB, IFSAC, and the National Personnel Qualification Board (NPQB) (Maryland Fire Service Personnel, 2009). As recently as 2009, Maryland has issued over 95,000 certifications to its personnel (Maryland Fire Service Personnel, 2009).

The ProBoard Fire Service Professional Qualifications System defines accreditation as: "a stamp of approval from a third party review on an agency's certification system" (ProBoard Fire Service, n.d.). This accreditation process is a good example of the reinforcement of national standards and this elevates the level of training among firefighters within the state. The incorporation of a standard for certification by the MFSPQB establishes a clear and measurable benchmark for sameness. The MFSPQB has achieved uniformity relative to courses of study and training that comport with national standards. Research of Maryland firefighting revealed that strong evidence in support of standards does exist. Maryland is rated a (+ +) in the matrix.

4.   South Carolina

South Carolina is an Occupational Safety and Health Standards (OSHA) state. OSHA standards apply directly to the firefighters. In South Carolina, the Codes of Laws section 71–1-1910.156 is one of the primary provisions addressing training and education for career, volunteer, and industrial firefighters (South Carolina Department, 2006). The

South Carolina Fire Academy (SCFA) conducts the core training required for the state's firefighter community. The IFSAC has accredited the SCFA firefighter certification program (South Carolina Department, 2006). As recently as 2009, the SCFA has had 15 accredited programs (South Carolina Annual 2008, 2009). The SCFA conducts resident training and coordinates regional training statewide. The SCFA designs and manages the delivery of the 15 accredited programs (South Carolina Annual 2008, 2009). The academy uses current and topical methods of instruction to create uniformity throughout the state. The basic firefighter certification course is hosted at the SCFA and requires that students live on site for the eight-week course (South Carolina Department, 2006).

In South Carolina, this certification process advances the degree of uniformity and sameness throughout the firefighter community. Certification is an efficient way to guarantee seamless operations in cases where mutual aid is necessary. Because personnel have been certified in the same courses their knowledge, skills, and abilities have a high degree of sameness. This consistency provides organizations with the capability of interchanging firefighters from various different departments, knowing that the personnel are all equally capable. South Carolina is rated a (+) in the matrix.

5.   Florida

The state of Florida recognized that a void existed in firefighter training and coordination. As a result, the state of Florida legislature enacted a law under chapter 633.43 the Florida State Fire College (FSFC) to address this void (Official Internet Site, 2000). The FSFC, the Standards Section and the Firefighter Safety and Health Section make up the Bureau of Fire Standards and Training (BFST). The Standards Section develops and administers an independent testing and certification program for firefighters under the direction of the State Fire Marshal (Division of State Fire Marshal. n.d.). The FSFC training system is ProBoard accredited (ProBoard Fire Service, n.d.). The BFST Standards Section provides certification for and manages over 30 certified training facilities statewide (Division of State Fire Marshal. n.d.). The Standards Section

inspects the facilities to determine whether course curriculums and the instructors are operating within state statute and Administrative Code (Division of State Fire Marshal. n.d.).

The together the training and certification processes are recognized as a best practice for Florida (Fire Standards Section, 2011). The Standards Section, located under the BFST in Florida, coordinates the issuance and administration of certification exams statewide and the BFST Training section is managed by the FSFC (Standards Section, n.d.). This section acts as the centralized clearinghouse of test scores, certification records, and transcripts for all firefighters in the state (Standards Section, n.d.). Additionally, the Standards Section manages the renewal process for numerous advanced level competency certifications that require license updates (Standards Section, n.d.). The management of written exams, individual certifications, site inspections, and certificate renewals is an efficient means by which to promote uniformity statewide. Accreditation has provided the opportunity for FSFC to reach out on a statewide basis and provide formatted training and education, which advances the element of uniformity. The creation of the FSFC and the organizational design of the fire testing section enhanced the sameness at the firefighter I and II levels in Florida. These points provide strong evidence that the element of uniformity exists. Florida is rated a (+ +) in the matrix.

6.   Iowa

The Fire Service Training Bureau (FSTB) training system is accredited through IFSAC and ProBoard (Fire Service, 2010). As recent as 2010, the FSTB has received accreditation in 12 levels of certifications. The accreditation of the FSTB certification system insures that the Iowa fire service standards are current with NFPA Qualification Standards (Fire Service, 2010). The two courses that are widely recognized as the core career firefighter certifications, firefighter I and II, are both certificate courses offered through the Iowa FSTB (Fire Service, 2010). It is important to have FSTB training/education standards recognized by third party certifying agencies. This provides for a measurable level of sameness throughout the Iowa firefighting community. The

training/education certification process ensures that a consistent set of fire standards are used throughout the state. Research of Iowa firefighting revealed that marginal evidence of the existence of a best practice exists. Iowa is rated (-) in the matrix.

7. Oklahoma

In Oklahoma, the Oklahoma State University Fire Service Training coordinates the Oklahoma Fire Service Training (OFST) Certification Program (Oklahoma State University, 2007). This program certifies individuals throughout all levels of training/education that IFSAC and National Board on Fire Service Professional Qualifications have accredited (Oklahoma State University, 2007). Competency based standards provide uniformity in firefighter training. A review of *Oklahoma Fire Service Training Certification System: Policy and Procedures* confirms that the element of uniformity is strongly supported by standards within accreditation systems.

Additionally, the Certification Program emphasizes the importance of constant revisions to insure currency (Oklahoma State University, 2007). Whenever a need for revision is identified, the program assures that the necessary changes are promptly made and implemented. By placing an emphasis on timely and accurate revisions, the certified firefighter in Oklahoma is better served with up-to-date NFPA 1001 Qualification Standards. Accreditation and being able to certify personnel is beneficial when building statewide uniformity. Oklahoma is rated a (+) in the matrix.

8. Texas

The state of Texas has created the Texas Commission on Fire Protection (TCFP) to address statewide fire related needs. The Fire Service Standards and Certification Division fulfill the enforcement of standards by developing course curriculum that meets NFPA Qualification Standards (Texas Commission on Fire, n.d.). As of 2009, the TCFP has been IFSAC accredited for 16 programs (Texas Commission Certification, n.d.). Fire certification in Texas is statewide. It is based upon successful completion of minimum standards. The TCFP Certification Program is a third party certifier of personnel who have successfully completed established training/education standards.

The Commission's Certification Program is an example of a statewide strategy for promoting firefighter uniformity. The TCFP Website helps to keep both the paid and volunteer firefighter informed of the certification requirements. The TCFP strategy of certification and accreditation is similar to that of Florida. The TCFP's certification program compares most closely to Florida's BFST, based upon state size and organizational framework. Both organizations have a separate certification program, a certification database system, and a certification refresher system. Statewide fire certification of firefighters and a data certification tracking system is strong evidence in support of the element of uniformity. Texas is rated a (+ +) in the matrix.

9. California

Under the Office of the State Fire Marshal (OFSM), California fire has established a policy requiring academic institutions and local fire agencies to receive state accreditation in order to be qualified to deliver fire training and education courses for firefighters (State Fire Training, 2009). The OFSM created the Accredited Regional Training Program (ARTP) (State Fire Training, 2009). This program involves partnerships between the state and accredited community colleges or universities, local fire agencies, and OFSM (State Fire Training, 2009). The Health and Safety Code, Section 13159 "tasks the OSFM with the responsibility to provide for the delivery of a voluntary statewide fire training and education system" (State Fire Training Procedures Manual, 2009, p. 32). Because California is such a large state, the OFSM has an accreditation team that reviews ARTP applications and travels to and conducts site reviews of facilities. Recommendations based upon the teams findings are then authorized to the OSFM. Once a facility and/or an agency receives a five-year accreditation, they are then empowered to certify firefighter course curriculum (State Fire Training, 2009). The ARTP approach and its supporting strategies are something that might be useful in another large state, for example in Texas.

This state is different from all of the others researched in that California has its own internal accreditation program which focuses on the facility and delivery of the state's course curriculum. There is no accreditation from any third party organization. A

third party accreditation would have supported the element of uniformity. This approach may well be the most effective way to insure consistency in such a large state. The OFSM has a state recognized training/education curriculum that produces firefighter uniformity. The Health and Safety Code, Section 13159 is a standard for enforcing sameness of training methods and curricula. Methods and curricula will program the individual to a level of sameness which in turn supports the element of personnel uniformity. Research of California firefighting revealed that evidence does not exist. California is rated a (- -) in the matrix.

10. Oregon

The Department of Public Safety Standards and Training (DPSST) Fire Service Professional's code 259–009–0062, entitled Fire Service Personnel Certification, details the recognition and certification standards for Oregon firefighters (Oregon State Archives, 2011). The accreditation and certification of fire training and personnel is voluntary. To be certified through the DPSST, a fire service professional must successfully complete a fire service agency training program (Department of Public Safety, n.d.). Additionally, Fire Service Professional's code 259–009–085 authorizes the DPSST to certify statewide course curriculums and code 259–009–087 empowers the DPSST to accredit fire service training programs (Oregon State Archives, 2011). The state requires that the program's training must comply with the NFPA Standard 1001.

Certification of personnel in firefighter training is not mandatory in the state of Oregon. Currently, the state of Oregon is has not received accreditation by a third party organization. All accreditation that occurs in Oregon is done through the DPSST Fire Certification Section. It is tasked with maintaining state fire certification standards that are in alignment with NFPA 1001 Qualification Standards (Department of Public Safety Standards and Training, n.d.). Since there is no provision for formal accreditation by a third party agency, Oregon fire agencies must establish their own set of standards. Local fire departments adopt their own sets of standards and guidelines. All state and local fire follow the NFPA Qualification Standards. The question then becomes to what degree do they follow NFPA? Research has reveals that there are no statewide, recognized

standards for fire. Research of Oregon firefighting revealed that evidence of the implementation of best practices does not exist. Oregon is rated a (- -) in the matrix.

C. INTEROPERABILITY

1. Connecticut

The CFPC has a Certification Division which maintains records at the state fire academy. This database acts as the central clearinghouse for certification information on full, part-time, and volunteer firefighters (CFPC Certification System, 2009). In addition to maintaining certification and training levels, the division stores testing results (CFPC Certification System, 2009). The Certification Division develops and maintains through structured procedures balanced assessments of the state fire services personnel that are certified in the state.

The Division distributes a well-organized message through Website communication, and this allows firefighters to stay informed about their certifications and test scores. Confidential information is maintained in a password protected, state maintained database. This permits individuals to become more interchangeable among fire departments throughout the state. Having a centralized database sets the standard for efficient personnel management and interoperability between agencies that have certified personnel. For example, during times of disaster, a mutual aid request might come from an authority having jurisdiction (AHJ). At that time, the Certification Division can evaluate the credentials of firefighters who will respond to the mutual aid request. The Certification Division can verify that the position criteria of the mutual aid request are being properly filled with qualified personnel. This comports with the NIMS Personnel Credentialing process (Emergency Management Institute, n.d.). Research of Connecticut firefighting revealed the evidence exists in support of the element of interoperability. Connecticut is rated a (+) in the matrix.

2. New York

New York State has over 17,000 certified career firefighters who are required by § 426.7 *In-service Fire Training* to maintain their fire certifications (Office of Fire 2008). This standard identifies the need to remain current with changing NFPA qualification standards. The standard mandates that personnel involved with Command Company operations receive 100 hours of in-service training annually (Office of Fire 2008). The in-service training covers 40 subject areas that range from apparatus driving, operations and maintenance to salvage and overhaul (Office of Fire, 2008). The requirement for in-service training guarantees the readiness of firefighters. It additionally encourages the continuous flow of up-to-date fire training/education regulations that effectively reinforce the supporting criteria of the primary element of interoperability.

Another aspect of the § 426.2 requires the creation and maintenance of a recordkeeping system that will track in-service training as well as other firefighter information and reporting (Office of Fire, 2008). The State Fire Administrator's office manages the information management system (Office of Fire Information, 2009). This system acts as the central data collection point for over 1,800 fire departments in New York (Office of Fire Administration, 2008). The data exchange that takes place allows the fire service to efficiently share information critical to the continued improvement of the state's overall fire protection system. Connecticut's system has similar user features. Both systems have statewide recognition and are managed at the state level. New York is rated a (+ +) in the matrix.

3. Maryland

The Maryland Fire and Rescue Institute (MFRI) works with MFSPQB to provide training and education of the fire service. The MFSPQB manages the certification database for firefighters in the state (Maryland Fire Service Board, 2009). Currently, the MFSPQB manages certifications on 24 accredited course programs (Maryland Fire Service Board, 2009). The Board is a voluntary certification system that has received state accreditation (Maryland Fire Service Board, 2009). This database acts as a "master databank" that provides current up-to-date information on certified personnel.

The database is accessed through a user-friendly Web-based system. This application allows for increased information sharing. This promotes communication across organizational boundaries. Fire administrators can collect feedback on certification requests specific to their personnel's training/education certification levels. From a readiness perspective, information like this assists an organization with evaluation of personnel and the design of the organization's operational table of organization chart. Maryland does not have a mandated refresher training program. Database systems support information sharing through the communication of certification information. Maryland provides certification training/education for firefighters and data base management of certifications. These supporting elements help to enhance statewide fire interoperability. Maryland is rated a (+) in the matrix.

4.   South Carolina

The SCFA administrative staff section manages the processing of information and updating of student test scores, training records and transcripts statewide (South Carolina Annual Report 2008, 2009). They are the certifying unit for students who successfully complete training or education (South Carolina Annual Report 2008, 2009). This unit also authorizes the release of student documents to a requesting student, the student's requesting chief or the department training officer.

South Carolina has approximately 450 fire departments with about 14,000 firefighters (South Carolina Annual Report 2008, 2009). The SCFA recognizes the many benefits of having a certification database for firefighters. The staff at the SCFA is responsible for accessing, uploading, and maintaining large amounts of data for various entities. The certification database allows for faster searches of information or relationships inside a larger data set. The benefit to the state of having a centralized database is that it provides for efficient and timely communication of information back to its customers; the chiefs, or training officers at the fire departments located throughout the seven regions in South Carolina. Data exchange is additionally enhanced because the state is organized into seven fire regions with a SCFA representative for all of them. These representatives interact with the fire departments in their region. This, together

with the database, provide for professional information sharing horizontally to customer fire departments. The Commission on Fire Training (COFT) program in Oklahoma, similarly, employs regional representatives known as RTAs to engage the fire community. The RTAs provide a continuous information flow from all jurisdictions to the state. The SCFA provides local jurisdictions in the state the option of having the training and certifications of their personnel tracked through a statewide database. This is evidence of information tracking and information sharing that supports interoperability. South Carolina is rated a (+) in the matrix.

5.   Florida

The FSFC manages the Firefighter Minimum Standards (Firefighter II) Course that is a requirement for being hired as a career firefighter in the state of Florida. In Florida there is a mandated refresher training course for firefighters (Official Internet Site, 2000). § 633.352 *Retention of Firefighter Certification* mandates that any firefighter "for a period of three years shall be required to retake the practical portion of the minimum standards state examination" (Official Internet Site, 2000). There is a skills refresher program for Firefighter Minimum Standards offered by the FSFC. The FSFC course is a three-day refresher which prepares the firefighter for a re-test (Division of State Standards, n.d). This is an example of continuous preparedness. Statewide, this standard supports certification standards involving training/education.

Course attendance, test scores, certification records, and transcripts for all firefighters in the state are maintained by the Standards Section of the BFST (Fire Standards, 2011). Florida's firefighters are authorized access to information relative to their certifications and records through the Florida College Department of Insurance and Continuing Education (FCDICE) Website system (Fire Standards, 2011). The Website acts as the central data exchange point, providing information about on-line fire service certification status and credentialing updates (Fire Standards, 2011). This is a best practice for efficient statewide interoperability and provides firefighters ease of access to their own records (information sharing), tracks their continuing education, enables them to register for classes at the FSFC, apply for certification renewals, and get test results.

This system was designed to act as a one-stop shop for firefighter readiness. The information that is offered online in Florida is evidence of efficient data sharing. The requirement of refresher training promotes firefighter interoperability in Florida. Florida is rated a (+ +) in the matrix.

6.   Iowa

The Iowa State Fire Service and Emergency Response Council established minimum training standards. In the Iowa Administrative Code Section 661–251.103 (100B) *Continuing Training* applies to firefighters who are certified through the FSTB (Minimum Training, 2010). As of July 1, 2010 this section of the code requires that fire department personnel participate in a minimum of 24 hours of continuing training/education annually (Minimum Training, 2010). The law provides for numerous subject areas in which a firefighter can accumulate credit hours of training. It is required that the training take place at the FSTB, community colleges, regional fire facilities, or at local fire departments (Minimum Training, 2010). Mandating refresher training ensures a level of currency with regard to new and changing NFPA 1001 Qualification Standards, which directly impacts personnel certifications. The standard of continuing training enhances interoperability of firefighters on a statewide scale.

The Iowa State Fire Service and Emergency Response Council promulgated Administrative Code section 661–251.104 (100B) titled *Record Keeping* (Minimum Training, 2010). This section of the code requires that fire departments maintain the training records for each individual member of the department. These training records must be kept current with regard to certifications (Minimum Training, 2010). This recordkeeping requirement for fire agencies in Iowa decentralizes information sharing of personnel certification levels because each agency is required to maintain its own personnel information records. Additionally, the absence of a statewide database hinders information sharing and the capability to analyze the preparedness levels of firefighters. This independent record keeping approach calls into the question the accuracy of personnel records. By instituting mandated refresher training, Iowa is continuously improving its firefighter interoperability. Iowa is rated a (+) in the matrix.

7. Oklahoma

OFST manages and coordinates a statewide recordkeeping program specific for the firefighters in Oklahoma (Oklahoma State University, 2007). OFST maintains computerized records of firefighters in the form of hard and electronic copies (Oklahoma State University, 2007). Personnel certifications are documented and kept on file. The Certification Coordinator sends IFSAC a current file for each certified firefighter annually (Oklahoma State University, 2007). OFST relies heavily on password protection in order to prevent against unauthorized access. A centralized database is dependent upon input and feedback in order for optimal use of the system. The security features of the database make it a credible system that provides the capability of having information shared in a secure manner. A centralized database actively supports proper communication of certification standards through accurate and current data exchange. Active and continuous information sharing advances the element of interoperability in Oklahoma. Statewide management of firefighter certifications increases the degree to which OFST is promoting interoperability. Oklahoma is rated a (+) in the matrix.

8. Texas

The primary element of interoperability is supported by good communication and effective data exchange. The TCFP is empowered by § 441.5 titled *Continuing Education* to establish the standard refresher training (Standards Manual for Fire, n.d.). The continuing education requirement must be met for the renewal of firefighter certification. The continuing education scheduled is designed so that a minimum of 20 hours of training must be conducted within a certification period (Standards Manual for Fire, n.d.).

The *Commission's Certification Manual* contains a course catalog. Curriculum revisions are driven by changes to NFPA standards. This places the burden on the fire department and the firefighter to stay current on the changes that can impact state certifications. Findings varied as to what individual states require by way of recertification training. Because Texas is such a large state geographically, it is critical that continuing education (recertification training) be strongly supported. Span and

control by the TCFP in Texas is geographically challenging and only through active communication of education information is TCFP's span and control maintained. TCFP's continuing education supports the element of interoperability.

Additionally, as a result of the creation § 419.012 *Firefighters: Individuals and Departments on Line* (FIDO) individuals are readily able to interact with the commission on the Internet (Texas Commission on Fire, n.d.). This is a useful tool in promoting information sharing through the application of data exchange. This system permits firefighters to generate individual accounts and allows departments to create organizational accounts (Texas Commission on Fire, n.d.). The FIDO system allows the individual or the department the means of organizing the data which is required by the commission (Texas Commission on Fire, n.d.). This interactive database system is a best practice for the ease in which information sharing takes place over a large state. Interoperability is advanced by a comprehensive information sharing system. Continuing education and data exchange information are strategies which directly support the element of interoperability. Texas is rated (+ +) in the matrix.

9. California

California's Certification Training Standards (CTS) Guide is designed for the various ranks in the fire service (Certification Training Standards, 2008). It primary mission is to provide guidance. The CTS Guide lists all responsibilities specific to a titled position that has assigned duty requirements. It provides measurable minimum performance standards (Certification Training Standards, 2008). The training specialist is responsible for managing the record keeping database (Certification Training Standards, 2008). The record keeping of personnel information and certificates is done through a statewide database titled CACD (Certification Training Standards, 2008). It differs from the Iowa record system in that the Iowa system is a vertically oriented information collection program, and the California program is designed to have the local fire department upload and coordinate its agency's personnel certification information into a

statewide database that can share information both vertically and horizontally. Marginal evidence of best practice does exist in the form of database management of firefighter personnel. California is rated a (–) in the matrix.

10.   Oregon

The DPSST operates under Fire Service Professional code 259–009–090, which requires that the DPSST maintain firefighter certification through a fire training records database (Oregon State Archives, 2011). The database is without state mandated compliance by fire departments and its personnel. Absent mandatory compliance the database is dependent upon the firefighter and fire departments participation. Effective participation results in the continuous sharing of information with firefighters and/or local department heads. Written documentation of training records can be provided upon request in order to better prepare the firefighter. It can also assist local fire department administrators in maintaining operational readiness of their personnel (Oregon State Archives, 2011). Similar to many of the other state managed fire databases, the Oregon DPSST effectively enhances information sharing and communication between the state and the local levels of fire. The accuracy of training record management could be improved if Oregon mandated compliance for statewide records training record management. Statistics show that Oregon is largely made up of volunteer firefighters. Oregon does not have a state based refresher training/education program. Therefore, the element of interoperability is marginally supported. Oregon is rated a (–) in the matrix.

D.   INTERCHANGEABILITY

1.   Connecticut

The Connecticut Fire Academy is located at the Bradley International Airport in Windsor Locks, Connecticut. Satellite training is offered throughout the state. The Connecticut fire Academy provides a Recruit Firefighter Training (RFT) in the state (Connecticut Fire Protection, 2011). The Academy has a standardized training curriculum which comports with NFPA 1001 Qualifications and Standards (Oregon State

Archives, 2011). The RFT program is the primary basic educational framework and it acts as a foundation upon which the recruits build their career. The recruit training is designed to challenge the individual both physically and mentally through a stringent course structure.

The standards created in the RFT curriculum place an importance on education/training through the emphasis of interdependence of team members. By placing a greater importance on the actions of the many, instead of on individual results, the firefighters in Connecticut are more confident to make adjustments without compromising safety at a changing fire scene. This curriculum is designed to effectively challenge the recruit firefighter to be more adaptive to the challenges placed before them. The standard of sameness is a recurring theme in the course curriculum. The emphasis of on teamwork resonates clearly. The RFT program is built upon standardized training that upgrades the degree to which personnel are interchangeable within the firefighter field. Research revealed that the element of interchangeability is supported by evidence of standards base curriculum and the standardization of recruit firefighter training in the state. Connecticut is rated a (+) in the matrix.

2.   New York

The New York State "Frederick L. Warder" Academy of Fire Science is managed by the Department of State's Office of Fire Prevention and Control. In addition to coordinating basic firefighting training, the academy coordinates numerous fire education courses on an annual basis (Office of Fire, 2008). The academy acts as the primary authority having jurisdiction and acts as the certifying agency for all state basic firefighter training (Office of Fire 2008). Minimum Standards for Firefighting Personnel: Administrative Procedures § 427.6 for basic fire training provides statewide guidance for probationary firefighter training (Office of Fire, 2008). This regulation clearly outlines the standardized format set forth by the state, which identifies the necessary training requirements needed before a probationary firefighter can become certified (Office of Fire, 2008).

The Academy of Fire Science provides the Basic Firefighter Training Course under § 159-d, Part 426.6 (Office of Fire, 2008). The training consists of 360 hours of instruction and focuses on the necessary knowledge, skills, and abilities needed for certification (Office of Fire, n.d.). The training is flexible enough in that it can be provided at a satellite facility with the provision that only the county fire facility is authorized and approved to conduct the course curriculum (Office of Fire, 2008). The basic firefighter training is designed in a way that challenges the firefighter to become more resilient. This training enhances the interchangeability of New York firefighters. The curriculum requires the firefighter, through group settings, to adapt to situational changes by applying trained practices and procedures. The design of the basic firefighter course material strengthens the individual resiliency to challenging environments. The course material prepares the firefighter to be capable of making good decisions. The element of interchangeability is supported in New York fire. New York is rated a (+) in the matrix.

3.   Maryland

The MFSPQB coordinates with the MFRI to conduct the testing for the 24 certified fire and emergency programs. Specifically, Firefighter I and Firefighter II are certified programs that support volunteer and career firefighters in Maryland (Maryland Fire and Rescue Institute, 2009). The MFRI at the University of Maryland coordinates the delivery of the training/education curricula (Maryland Fire and Rescue Institute, 2009). The MFRI is the central management point and primary training grounds location for statewide fire and rescue. From the facilities at the University of Maryland, the MFRI organizes additional training which is delivered throughout the state at six regional facilities (Maryland Fire and Rescue Institute, 2009).

Maryland legislation mandated the establishment of the MFRETC to act as the state coordinating agency for education and training of the state's fire and emergency services (Maryland Fire Rescue, 2007).   The MFRETC has separated the training/education and certification testing. This was done so that greater attention could be applied to detail. This has allowed for a deeper refinement of training/education and

certification testing. By narrowing the focus, the product becomes more refined. The training/education is designed to promote teamwork. By producing an adaptive and resilient firefighter, interchangeability of personnel is realized. This achievement was made possible through the establishment of sound minimum standards and reciprocal systems. The MFRETC's certification strategy increases firefighter resiliency while making them more adaptive to challenges. Overall, there is strong evidence in the form of communication and data exchange that supports the element of interchangeability. Maryland is rated a (+ +) in the matrix.

4. South Carolina

The SCFA has a course catalogue with over 100 certified and non-certified courses which are available to the firefighters in the state (South Carolina Department, 2006). Regional training is the preferred choice for delivering academy courses. The SCFA has seven regions that are served by six regional offices (South Carolina Department, 2006). The academy relies upon the regional training representatives to deliver the standardized training course format.

The only course which must be conducted at the SCFA facility is the Firefighter Candidate School. Students are required to live onsite for the eight-week duration of the course (Division of Fire and Life Safety, 2010). The course is designed to develop the student from recruit to firefighter II.   This school is designed to enhance resilience and adaptability in the students (Division of Fire and Life Safety, 2010). This course and the other courses offered by the SCFA enable volunteer and career firefighters to be interchangeable (Division of Fire and Life Safety, 2010). The SCFA accredited course system enables firefighters in South Carolina to be certified in the same course training/education. In turn, this has created the opportunity for firefighters to perform lateral organizational transfers.

The SCFA training/education is designed to include both volunteer and career firefighters. The training/education information promotes universal interchangeability of

firefighters in South Carolina. This reinforces statewide fire resource sharing. The element of interchangeability is strongly supported in the state. South Carolina is rated a (+ +) in the matrix.

5.   Florida

One of the primary goals of the FSFC is to provide career, part-time, and volunteer firefighters with the necessary training/education to prepare them for duty (Division of State Fire, n.d.). The FSFC is the hosting agency for the certified Minimum Standards Course (firefighter I and II) (Division of State Fire, n.d.). This course can be offered at various locations throughout the state. In order to become a career firefighter in Florida the individual must be certified in firefighter II and successfully complete the Firefighter Minimum Standards Course (Division of State Fire, n.d.). The overall training/education for firefighter certification is mentally, physically, and emotionally challenging and includes didactic and procedural training.

This training/education for a career firefighter is extremely rigid in approach and application. The intent of this training is to effectively prepare the student to be adaptive to challenges when exercising life safety skills. This course has training standards that encourage a high level of resiliency through specialized instruction. This course and ones which are similarly certified by the FSFC afford firefighters an increased degree of interchangeability throughout the state. The implementation of the minimum standards course for firefighter I and II strongly supports that element of interchangeability. Florida is rated a (+ +) in the matrix.

6.   Iowa

In 2010, the Iowa State Fire Service and Emergency Response Council successfully lobbied for the creation of *Minimum Training Standards* 661–251.101 (100B) (Minimum Training Standards, 2010). This requires that fire departments ensure that their personnel receive training equivalent to the job performance requirements specific to the firefighter I classification in NFPA 1001, Standard for Firefighter

Professional Qualifications 2002 edition. This training must be completed before a firefighter is permitted to engage in a structural fire operation (Minimum Training Standards, 2010).

This minimum training standard provides for a level of sameness statewide for firefighters. The FSTB has an established baseline for firefighters who actively perform structural firefighting duties. This standards driven training/education has increased degree of interchangeability of firefighters in Iowa. Iowa is rated a (+) in the matrix.

7.   Oklahoma

Oklahoma State Legislature passed House Bill 2372 in 2004 creating the COFT (Council on Firefighter Training, 2009). This council was created to meet the need for organizing and consolidating fire service training for the state of Oklahoma (Council on Firefighter Training, 2009). As of 2009, the COFT was developing a training program for Oklahoma firefighters. The *Oklahoma Fire Service Training Summit Strategic Initiatives* (2009–2013) document frames out in Addendum A the training/education standards for career and volunteer firefighters (Council on Firefighter Training, 2009). For career firefighters, COFT sets the minimum standards for firefighting. The course standards are as follows: basic firefighter, intermediate firefighter, and advanced firefighter (Council on Firefighter Training, 2009). Implementation of these courses will take place with the assistance of the OFST program. The COFT has hired regional training advisors (RTA) in Oklahoma. These RTAs effectively get the message out to the firefighters in the region about training.

The training regimen for becoming a career firefighter or for becoming a certified volunteer firefighter are clearly organized and explained by COFT. The COFT set of training standards will need to be further examined once they are fully implemented. In theory, they warrant consideration as a best practice. These standards are similar to the training templates of training employed in South Carolina and Florida. COFTs certified training/education increases personnel interchangeability of firefighters. These individuals can be utilized by local jurisdictions in need of additional fire personnel due to a disaster. Because of the standardized training, the fire personnel are capable of

filling multiple job titles within and ICS framework or at the operational end of the disaster. Oklahoma fire personnel through their core training/education standards are interchangeable. Oklahoma is rated a (+ +) in the matrix.

8. Texas

As a state that has been accredited by a third-party organization, Texas has basic firefighter training that complies with NFPA 1001 Qualification Standards. The TCFP's standards manual for fire protection personnel identifies the minimum standards for Basic Structure Fire Protection Personnel Certification (Texas Commission on Fire Protection, n.d.). Upon completion, a Texas firefighter is certified and has achieved a level of statewide interchangeability (Texas Commission on Fire Protection, n.d.). A firefighter in possession of a basic certification can work anywhere in the state. This specific certification is equivalent to NFPA firefighter I, firefighter II, hazmat-awareness and hazmat-operations (Texas Commission on Fire Protection, n.d.).

This training/education is designed to create behavioral changes that increase the firefighter's comprehension of job specific knowledge, skills, and abilities. Successful completion of a core set of standards promotes resiliency specific to that field of study. The standards driven training is universally taught throughout the state preparing the fire recruit to be adaptive and resilient when performing life safety rescue operations. Texas is rated (+) in the matrix.

9. California

California is aware of the value in standardization of the training and other programs associated with the OFSM. The California Fire Service Training and Education System frames out the educational requirements for various accredited courses. The criteria for the firefighter series in the *State Fire Procedures Manual 2009* were examined for evidence that might support the element of interchangeability.

Listed below are the California training/education standards which support the primary element of interchangeability (State Fire Training, 2009):

1.   Set minimum performance standard for firefighters.

2.   Set tasks which must be successfully completed to achieve certification.

3.   Establish a standardized curriculum for basic courses.

4.   Provide a way for upkeep of records of training accomplishments.

5.   Establish a minimum statewide firefighter certification level (State Fire Training, 2009).

The standardized certification training enhances a firefighter's value. Essentially because the OSFM has statewide certifications, a properly certified firefighter is a licensed individual that can be hired anywhere in the state providing that his or her certifications are current and up-to-date. Standards driven certification training is strong evidence that supports the element of interchangeability. California is rated a (+ +) in the matrix.

10.   Oregon

The DPSST has a fire training section designed to provide the state's firefighting community with basic fire training, leadership, and maintenance training. The DPSST conducts training at its facility in Salem, Oregon and at other regional sites (Department of Public Safety, n.d.). The Oregon Fire Instructor Association, through the DPSST, provides the certified training instructors (Department of Public Safety, n.d.). Fire Fighting Basic is the primary entry level course. The DPSST also accredits local fire service agency programs statewide (Department of Public Safety, n.d.). As a result, a firefighter can only be certified if he or she attends a DPSST accredited program. DPSST does not have the authority to require that all firefighters receive their accredited training in Oregon. This limits the degree of interchangeability of firefighters statewide. Those that are trained and certified through the DPSST accredited programs that have a standardized curriculum have a high level of sameness. Those firefighters that trained/educated through DPSST are prepared to a level of readiness that supports the element of interchangeability. Oregon is rated a (+) in the matrix.

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APPENDIX C.   EMERGENCY MANAGEMENT TRAINING AND EDUCATION

A.   INTRODUCTION

Chapter IV of this study involved the examination of 10 states for evidence in support of the existence of emergency management best practices. In this chapter, Figure 5 applies as primary evaluation criteria, uniformity, interoperability, and interchangeability. The matrix in Figure 5 analyzed the evidence for the degree to which standards can be seen as best practices.

B.   UNIFORMITY

1.   Connecticut

Under Title 32 of General Statutes, the state of Connecticut established the Department of Emergency Management and Homeland Security (DEMHS), which coordinates the Division of Emergency Management (Department of Emergency Management, 2011). The Division of Emergency Management provides assistance and support to 169 municipalities and two tribal nations (Connecticut Department, 2011). The state is organized into five DEMHS regions. State level emergency management coordinates and manages procedural policy within the five regions through the application of Regional Emergency Planning Teams (REPTS) (Connecticut Department, 2011). Currently, Connecticut Emergency Management is not accredited by EMAP. Accreditation is verification that an organization has established core competencies. Standards are supportive of core competencies and can be readily observed. Because Connecticut is absent a third party accreditation, evidence of statewide sameness is not sufficiently supported. Connecticut is rated a (- -) in the matrix.

2.   New York

In 2010, New York State Legislature created the Division of Homeland Security and Emergency Services (DHSES), which is comprised of five offices including the Office of Emergency Management (OEM) (Division of Homeland, n.d.). The OEM is divided into five regions that are designed to support emergency management activities involving the local governments (Division of Homeland, n.d.). OEM coordinates the operational response of all state agencies to support county and local government (Division of Homeland, n.d.). OEM is EMAP accredited (Emergency Management Accreditation, 2010). Because OEM is a standards driven program, it is capable of influencing emergency managers statewide. This translates into a level of sameness within the OEM fields of operations and administration at the state, county and local levels. This sameness is a valuable supporting element to the primary element of uniformity. New York is rated a (+ +) in the matrix.

3.   Maryland

The Maryland Emergency Management Agency (MEMA) is divided into five regions and is spread out over the 23 counties in the state (State of Maryland, 2009). It is MEMA policy that at the outset of a disaster, the initial response will occur at the local level (State of Maryland, 2009). Local jurisdictions develop their planning initiatives based upon this MEMA policy. In the case where local resources are not sufficient to meet the challenge, the state region coordinators provide supplemental resource assistance (State of Maryland, 2009). The regional coordinators provide a valuable role by communicating state level emergency management policy to local jurisdictions and then, in turn, relay information back from the local jurisdictions to the state, relating their wants and needs (State of Maryland, 2009).

The application of the regional coordinator policy strategy is an example of a statewide best practice and is one reason why MEMA is accredited by EMAP. The accreditation of MEMA qualifies that there is a continuous strategic refining of standards that are based on organizational, operational, and administrative planning and preparedness. The regional coordinators are an excellent example to statewide

coordination of emergency management operations. Within Maryland, emergency management policy, planning, and procedures carry statewide uniformity, which is collectively accepted by the majority of the jurisdictions (State of Maryland, 2009). Maryland is rated a (+ +) in the matrix.

4. South Carolina

Like New York and Maryland emergency management agencies, South Carolina Emergency Management Division (SCEMD) coordinates and manages the Regional Emergency Management (REM), which is organized into six regions statewide (South Carolina, 2009). This form of a regionalized emergency management strategy effectively ensures community outreach from the state to its stakeholders. The REM staff communicates program policy, training and exercising standards, and federal funding opportunities to their constituents (South Carolina, 2009). The EMAP accreditation, the program and its strategy provide evidence of a high degree of uniformity. South Carolina is rated a (+ +) in the matrix.

5. Florida

The Florida Division of Emergency Management (DEM) is fully accredited through EMAP. Florida is compliant with all 63 EMAP national standards (State of Florida, 2009). Emergency management accreditation represents organizational, operational, and administrative response systems (Emergency Management, 2009). The DEM exhibits the capability of building interrelationships with local jurisdictions personnel, resources and communications to various state agencies and organizations (Emergency Management, 2009). Accreditation for Florida serves to confirm that the DEM has established policies and directives that have statewide reach. Florida's commitment to excellence in the field of emergency management is demonstrated through the implementation of nationally based standards to the 67 counties in the state. Accreditation and the implementation of statewide emergency management policies by the DEM, together, support the primary element of uniformity. Florida is rated a (+ +) in the matrix.

6.   Iowa

Iowa Homeland Security and Emergency Management (HSEMD) received accreditation in 2009 by EMAP (Iowa Homeland Security, n.d.). For Iowa, accreditation was made possible due in large part to the success that HSEMD has had with building collaborative partnerships with various organizations throughout the state. Iowa has effectively leveraged these partnerships to mitigate, prepare for, and recover from disaster emergencies (Iowa Homeland security, n.d.). The accreditation process required HSEMD to incorporate nationally recognized standards and apply them statewide. The element of uniformity is supported through the establishment of statewide standards that have provided Iowans with an emergency management team strategy that works. Iowa is rated a (+ +) in the matrix.

7.   Oklahoma

The Oklahoma Department of Emergency Management (OEM) is at this time conditionally accredited by EMAP (Emergency Management Accreditation, 2010). The OEM is focused on minimizing the effects of disasters on its communities (Oklahoma Department, n.d.). For that reason, OEM is working diligently with EMAP to become compliant with all 63 nationally recognized standards. Currently, OEM is in the process of addressing all non-compliance issues with the intent of becoming accredited (Emergency Management Accreditation, 2010). Accreditation will strengthen OEM as a statewide leader in emergency management.   Evaluation of Oklahoma emergency management revealed that evidence does exist for uniformity. Oklahoma is rated a (+) in the matrix.

8.   Texas

The Texas Division of Emergency Management (TDEM) is not accredited by EMAP nor is it accredited as an academic institution (Texas Division, n.d.). This is relevant because training/education that involves college-level work may potentially be eligible for college credits (Texas Division, n.d.). The TDEM fails to adequately display statewide emergency management standards that support the element of uniformity.

Research has revealed negative results for TDEM accreditation. Overall, for TDEM, insufficient evidence has been found to support the element of uniformity. Texas is rated a (- -) in the matrix.

9.   California

The California Emergency Management Agency (CAL EMA) is similar to Oklahoma in that it is conditionally accredited by EMAP (Emergency Management Accreditation, 2010). A critical element of accreditation is the establishment of qualified standards that allow for the use of similar and/or comparable frameworks for the qualification and certification of emergency management/response personnel. EMAP bases its evaluation process on a nationally recognized core set of standards that through accreditation is effectively promoting sameness of emergency managers nationwide (Emergency Management Accreditation, 2010). Conditional accreditation for CAL EMA signals that the organization is engaged statewide with developing standards driven policies.

CAL EMA is responsible for the management and coordination of response operations to large scale disasters for local jurisdictions in need of assistance (CAL EMA, 2007). Because of the fact that California is such a large state, accreditation and recognized statewide standards can insure the uniformity of emergency management in subject areas such as training, planning, education of personnel, incident response, and incident command systems. The primary element of uniformity is marginally supported by CAL EMA due to its conditional accreditation. If and when full accreditation takes, the element of uniformity will be sufficiently supported in CAL EMA. California is rated a (+) in the matrix.

10.   Oregon

Oregon Emergency Management (OEM), like Connecticut and Texas, is not accredited by the EMAP (Emergency Management Accreditation, 2010). OEM lacks statewide core competency standards that would support the element of uniformity. Oregon is rated a (- -) in the matrix.

C.   INTEROPERABILITY

1.   Connecticut

The training and exercising division of DEMHS manages and delivers training and exercise planning statewide (Department of Emergency Management, 2011). The division disseminates relevant information its message through the DEMHS Website. On-line classes, training or exercises are not offered. All training and exercises are conducted in a classroom setting or in the field. Course materials for training and exercises are designed based upon local and regional needs (Connecticut Department, 2011). The training and exercise division maintains an internal database that tracks certifications (Connecticut Department, 2011). The database is not interactive in design.

Marginal evidence was found in support of data exchange. Specific to training records, no evidence was found evidencing organizational information sharing of certification levels of personnel at the state, county, and local levels. There is evidence of emergency management refresher training. Overall, marginal evidence in support of the element of interoperability exists. Connecticut is rated a (–) in the matrix.

2.   New York

New York State OEM routinely provides training to local governments, voluntary organizations, and private industry (Division of Homeland, n.d.). The absence of a state level training database prohibits information sharing specific to training/education and certification of personnel. Additionally, the absence of a centralized record keeping system adversely impacts organizational information sharing relative to personnel readiness levels. The state OEM places the burden on the individual or his or her supporting organization to maintain training records. The OEM does not require refresher training for emergency managers. Overall, the element of interoperability is not present in the OEM. New York is rated a (- -) in the matrix.

3.   Maryland

In the Maryland *Core Plan for Emergency Operations*, it defines the Comprehensive Emergency Management Program (CEMP) (State of Maryland, 2009). The CEMP uses a comprehensive approach by addressing the activities, functions, and required skills necessary to meet the challenges of emergencies (State of Maryland, 2009). This program identifies the importance of establishing reliable interrelationships at all levels of government. The program promotes collaborative partnerships that are designed around the four phases of emergency management.

This system is dependent upon partnerships and trust established as a result. If organizations believe that their time and efforts are seeing a return on investment, then they will be inclined to become more active participants in the information sharing process. Organizational information sharing is a valuable asset to enhancing unity of effort at the state level. The CEMP strategy targets building quality interrelationships that will cultivate stronger unity of effort (State of Maryland, 2009). This enables the MEMA to achieve its goals and missions with increased state agency participation. Research of the MEMA did not reveal any organizationally mandated refresher training. Additionally, no evidence was found that revealed that the MEMA manages a central database for personnel certifications and/or training. Maryland is rated a (-) in the matrix.

4.   South Carolina

The SCEMD offers courses to individuals involved in emergency management activities statewide and provides a Web-based program called the Learning Management System (LMS), which provides training courses on-line and in person (South Carolina Emergency, n.d.). This system provides agencies in the state a way to stay trained and educated in subjects relating to emergency management. It also provides awareness to emergency managers who are in need of informational training opportunities. By making emergency management training and education more accessible the state has increased its overall level of preparedness.

There is no evidence that SCEMD maintains a master recordkeeping system on individual training/education certifications. Also, there is no evidence to support the proposition that SCEMD has a refresher training/education program for emergency managers. There is minimal evidence to support the primary element of interoperability. South Carolina is rated a (–) in the matrix.

5. Florida

The DEM Regional Coordination Section closely coordinates with local jurisdictions statewide to ensure that vital state personnel are present during emergency events (Florida Division, n.d.). The state of Florida through the DEM divided Florida into seven regions (Florida Division, n.d.). The DEM regional coordinators work with local jurisdictions to review and approve county disaster plans and coordinate and facilitate training of emergency managers (Florida Division, n.d.).

The DEM coordinators can act as an effective communication resource for the state. The coordinator can provide guidance and direction in regard to state emergency management directives to the local jurisdictions. The regional coordinator participates with county and local emergency management to update planning based upon regional evacuation studies (Florida Division, n.d.). Overall, the regional coordinators are an effective conduit for communicating information between state, county, and local emergency management.

There is no evidence to indicate that the state requires refresher training. Florida along with Connecticut, New York, Maryland, and South Carolina emergency management are similar in that they lack any framework of refresher training/education. There is no evidence to indicate that Florida is managing a training/education database. Because the state is void of a centralized training database for tracking emergency manager readiness levels and the state does not require refresher training and education, the element of interoperability in the Florida DEM is not well supported. Florida is rated a (–) in the matrix.

6. Iowa

The HSEMD in the Code of Iowa 29C, Chapter 7 titled *Local Emergency Management* identifies continuing education requirements for local emergency management coordinators (Iowa Legislation, n.d.). The code requires that emergency management coordinators within five years of hire complete a prescribed amount of FEMA independent study courses (Iowa Legislation, n.d.). This requirement marginally supports the secondary element of communication within the element of interoperability.

The HSEMD was evaluated for evidence of the existence of a system of statewide data exchange specific to record keeping of training/education certifications, but no evidence was found. Additionally, there was no evidence found in support of statewide refresher training and/or recertification training. The HSEMD regionalization was examined for having value relative to the secondary element of communication.

Iowa consists of 99 separate counties that are organized into six homeland security and emergency management regions (Iowa Strategy, n.d.). The HSEMD, at the state level, coordinates its homeland security strategy and the state's emergency management strategy with the HSEMD regional representatives (Iowa Strategy, n.d.). The representatives serve as critical links between the state and local Iowans (Iowa Emergency Management, 2010). These representatives work with the local emergency management commissions to ensure that the 11 specific responsibilities as per the Iowa Administrative Code, Section 605, Chapter 7 are successfully accomplished (Iowa Emergency Management, 2010). Training, exercises, and public education are among the 11 responsibilities which support the element of interoperability. This regional strategy enhances the quality of communication from the state to local jurisdictions in a timely manner. Professional trust is built from this continuous communication cycle and the element of interoperability receives marginal support because of the points mentioned above. Iowa is rated a (–) in the matrix.

7. Oklahoma

There is no evidence of refresher or certification training for OEM emergency managers. There is also no evidence that shows that OEM maintains a data exchange (record keeping) system to track training/education certifications.

The OEM relies heavily on area coordinators who represent OEM in geographical areas made up of six to eight counties (Emergency Management, n.d.). These individuals act as state resource coordinators within their areas of responsibility. Regionalization as it relates to communication is a valuable piece for the OEM strategy. Regionalization of training/education would make it easier to reach the target audience. In this case, the audience is the OEM volunteer and the local jurisdiction emergency manager. These individuals act as liaisons between OEM and local government coordinators (Emergency Management, n.d.). The coordinator's duties include some of the following: 1) coordination of state resources, 2) providing guidance to local government administrators, 3) assistance and coordination in the development of educational programs, 4) assistance with planning (Emergency Management, n.d.). Regionalization standard the use of area coordinators supports the secondary element of communication. Regionalization should be considered a good approach to reaching out to the community, but for the purposes of evaluation and analysis this evidence does not support interoperability. In total, Oklahoma emergency management revealed marginal evidence that specifically supports the criteria of communication, and, data exchange and ultimately the element of interoperability. Oklahoma is rated a (–) in the matrix.

8. Texas

The TDEM does not offer any form of recommended or mandated refresher or recertification training for emergency managers in Texas. Texas, along with Connecticut, New York, Maryland, South Carolina, Florida, Iowa, and Oklahoma, has no form of database tracking of emergency manager training and/or personnel certification updates at a statewide level. No evidence to support the element of interoperability was discovered while examining the TDEM. Texas is rated a (- -) in the matrix.

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9. California

Cal EMA does not require any form of refresher or recertification training for emergency managers in California. California, along with the states noted above, has no form of database tracking of emergency manager training, refresher training and/or personnel certification updates at a statewide level.

CAL EMA has designed the Emergency Response and Management Credentialing Program to assist statewide emergency response (Cal EMA, 20007). The goal behind this is to create a seamless transition into what is going to become the National Emergency Responder Credentialing system (Cal EMA, 20007). Two of the goals of this program are to support mutual aid requests in a more timely and accurate manner and also to properly support Emergency Management Assistance Compact (EMAC) requests (Cal EMA, 20007). The effectiveness and accuracy of the program fall short due in large part to the fact that it requires a high degree of participation of state, county, city and local jurisdictions. This program provides marginal support to the element of data exchange where information could be organizationally shared for administrative and operational needs. For California EMA, the absence of a data exchange system and required refresher training means that marginal evidence exists in support of the element of interoperability. California is rated a (–) in the matrix.

10. Oregon

OEM failed to meet the evaluation criteria for interoperability. OEM does not provide any form of emergency manager data exchange or refresher training/education. An initiative that OEM has begun is a partnership with Clackamas Community College (CCC) for the acceptance of course credits for emergency management courses. Emergency managers can work towards an Associate of Applied Science Degree in Emergency Management (Oregon Emergency Management, 2011). Because OEM is without a records management data exchange system and refresher training/education program, the element of interoperability is insufficiently supported. Oregon is rated (- -) in the matrix.

D.   INTERCHANGEABILITY

1.   Connecticut

The Connecticut Training and Exercise Division effectively serve all of the emergency management personnel within the state. This promotes statewide emergency manager resiliency. This achievement would not be possible but for the divisions focus on building collaborative partnerships with local, tribal, and other state agencies to organize and produce worthwhile training and exercises (Department of Emergency Management, 2011). The state encourages the local entities to identify their training needs. Course curriculum is then drafted in a manner that successfully meets the defined training needs (Department of Emergency Management, 2011). The division's policy promotes a degree of interchangeability through requiring pre-screening selection criteria for course application. Emergency managers in Connecticut are required to complete a specific amount of baseline training which pre-qualifies them for acceptance to the specified training course (Department of Emergency, 2005).

The application of "selection criteria" promotes more resilient emergency managers. This is because individuals are required to follow an orderly educational training progression involving course completions. This indirectly creates sameness in the fundamental educational background that a large portion of emergency managers will ultimately have. Therefore, emergency managers within the state have an increased level of interchangeability when it comes to preparedness. Connecticut is rated a (+) in the matrix.

2.   New York

The intent of the State Preparedness Training Center (SPTC) is to promote interoperability. The center was designed to increase the level of awareness and preparedness within the state's first responder community (Division of Homeland, n.d.). The training center provides standardized first responder training. In 2008, the SPTC was CALEA accredited (Division of Homeland, n.d.). Through standards-based training personnel are more resilient and adaptive to the continuously changing first responder

landscape. This increases the degree to which personnel are interchangeable. As state budgets begin to tighten and consolidation of resources occurs, statewide mutual aid and resource allocation will become increasingly more valuable to state, county, and local governments. This training is not mandated throughout the state, and, therefore, the element of interchangeability is not strongly supported. This hinders statewide compliance. New York is rated a (–) in the matrix.

3. Maryland

Maryland has a *Multiyear Training and Exercise Plan* (TEP) that is based on an approach which incorporates federal, state, regional, and local level response organizations (State of Maryland, n.d.). The TEP has established broad goals which span calendar years 2011 to 2013 (State of Maryland, n.d.). The programs intent is to create a coordinated approach which will reinforce the MEMA commitment to all-hazards preparedness (State of Maryland, n.d.). This is a stepping off point for Maryland to eventually creating a self-sustaining training and exercise program. This plan is consistent with the *Quadrennial Homeland Security Review Report* (QHSR), *Mission Five, Ensuring Resilience to Disasters,* which identifies the elements of hazard mitigation, enhanced preparedness, effective emergency response, and rapid recovery as being critical elements in promoting resiliency to disasters. TEP is focused on providing emergency management training that is centered on hazard mitigation, preparedness, emergency response, and recovery (Department of Homeland, 2010).

Maryland's TEP exhibits a low degree of interchangeability. The program is in the early stages and the training and exercising are not mandated statewide for emergency managers. The TEP reveals the existence to a small degree of the supporting elements of resiliency and the development of an adaptive emergency manager. There is a marginal amount of evidence in support of the primary element of interchangeability. This is because the training is not mandatory and lacks internal design so as to prepare personnel to be organizationally interchangeable. Maryland is rated a (–) in the matrix.

#### 4.	South Carolina

Executive order 2005–12 formally adopted the NIMS as the standard for incident management (South Carolina, 2010). Local jurisdictions are not required by the state to comply. This limits the influence of state training requirements and standards compliance. Standards based training, planning and exercising provides the SCEMD with an emergency manager that has successfully met individual qualification standards (South Carolina, 2010). The SCEMD Training Section sponsors many other forms of training and exercising throughout the year. The courses which are offered vary from on-line training from the Emergency Management Institute (EMI) to classroom training at the state level (South Carolina, 2010). Overall, the curriculum provides the individual student with the opportunity to become a more resilient and adaptive emergency manager in South Carolina. South Carolina is rated a (–) in the matrix.

#### 5.	Florida

Goal 10 of the Florida Division of Emergency Management *2008–2013 Strategic Plan* identifies the need to professionalize emergency management in the state of Florida (Florida Division, 2008). The goal has five support objectives:

1.	Offer training to meet the needs of the DEM mission (Florida Division, 2008).
2.	Establish a training matrix for all emergency manager experience levels: entry, mid-level and advanced (Florida Division, 2008).
3.	Establish a campaign to promote the emergency management profession at Florida colleges and universities that offer similar degrees.
4.	Establish emergency management academy more along the lines of a traditional paramilitary academy environment (Florida Division, 2008).
5.	Establish specific guidelines and standards for emergency managers statewide in law. (Florida Division, 2008)

This DEM training strategy effectively provides a high degree of sameness among career emergency managers through the implementation of training and education. By training and educating emergency managers to a set of standards, personnel have a higher probability of becoming more adaptive to the challenges of planning for and responding to disaster emergencies. By the DEM becoming more self-adaptive to disaster

emergencies the citizens in need are better served. Interchangeability is strongly supported through Florida goal 10. Florida is rated a (+ +) in the matrix.

6. Iowa

The Iowa Emergency Management Association (IEMA) coordinates and manages a voluntary training and certification program for emergency management professionals (Iowa Emergency Management, 2011). The program is organized into a framework which identifies the initial certification, recertification requirements, and the procedural process (Iowa Emergency Management, 2011). The initial certification addresses requirements such as minimum educational standards, experience, and training level (Iowa Emergency Management, 2011). A baseline level of education and training creates a more resilient emergency manager. Recertification requires the emergency manager to complete planning documents and complete refresher training/education on an annual basis (Iowa Emergency Management, 2011). These requirements influence internal behavioral changes that make the individual better prepared to meet challenges in disaster management and planning. Overall, this voluntary emergency manager training/education certification is an example of a best practice and supports the element of interchangeability. Iowa is rated a (+) in the matrix.

7. Oklahoma

In Oklahoma, Title 63, Section 683.11, mandates the creation of a training/education standard that advances statewide interchangeability of emergency managers (Oklahoma Department, n.d.). The legislation states that within one year of hire, emergency management directors shall complete emergency management training (Oklahoma Department, n.d.). These courses prepare directors to be more resilient as emergency managers. The standard places an emphasis on the NIMS and program management (Oklahoma Department, n.d.). The fact that this standard is state mandated and the training/education enhances the capabilities of resiliency and adaptability in emergency management directors signifies that strong evidence exists. Oklahoma is rated a (+ +) in the matrix.

8.   Texas

One of the core missions of the TDEM is promote readiness statewide and emergency management planning, training, and exercising of elected officials, emergency responders, members of volunteer organizations and emergency management professional whose role it is to prepare for local disaster emergencies (Texas Division, n.d.).   As a result of this mission, the TDEM established standards for emergency management planning (Texas Department, 2000).   Texas Code § 418.010(b) provides standards for local emergency management (Texas Department, 2000). The TDEM has established standards for evaluating local emergency management agencies for basic, intermediate, and advanced levels of preparedness (Texas Department, 2000).   The evaluation criteria for emergency management programs are structured upon the emergency planning, training, and exercise actions (Texas Department, 2000).

The TDEM preparedness standards allow for the division to evaluate the local emergency management agencies to determine if they are at a basic, intermediate, or advance readiness level. The creation of standards based upon preparedness effectively lays the groundwork for training/education of emergency management personnel. Whether through course study, participation in planning initiatives, active participation in tabletop scenarios or exercise and design assistance, emergency manager's enhance their statewide interchangeability.   These standards promote a level of sameness for the personnel in emergency management agencies.   This is a best practice that supports interchangeability. Texas is rated a (+ +) in the matrix.

9.   California

CAL EMA coordinates and manages training/education through the EMA Training Division (CAL EMA, 2007).   There is no evidence that indicates that CAL EMA has any degree of established standards based training/education for emergency managers which is adaptive and resilient in nature.   The division coordinates the statewide training strategy (CAL EMA, 2007).   The state does manage the California Specialized Training Institute (CSTI), which is a training facility in California that focuses on the first responder and provides only training (CAL EMA, 2007).

In the Cal EMA *2010–2015 Strategic Plan*, Objective 2.6, emphasis is placed on statewide training that is focused on the emergency manger (CAL EMA, 2007). This objective identifies the need to design and certify college credits while still making emergency management training available to emergency management workers (CAL EMA, 2007). CAL EMA is focused on professionalizing the emergency manager position by providing valuable training/education. By CAL EMA partnering with academic institutions for training/educational opportunities, the element of interchangeability is effectively supported. California is rated a (+) in the matrix.

10. Oregon

The Oregon Emergency Management Association (OEMA) manages and coordinates the Oregon Certified Emergency Management Specialist program (ORCEMS) (Oregon Emergency Management, 2008). This is a voluntary program and was designed out of the need for standards in emergency management and the need to certify accomplishments of this standard within OEM (Oregon Emergency Management, 2008). This is a cooperative effort between OEM and OEMA that mandates extensive documentation of the applicant's qualifications. The ORCEMS Application Packet requires disclosure in four areas: credentials, training, contributions to the emergency management profession, and a management essay (Oregon Emergency Management, 2008).

This program serves as a foundation onto which further standards relative to emergency management can be built. The ORCEMS promotes the element of interchangeability. This is a program which should receive increased statewide support for the OEM because it provides an increased level of professionalism to the job position. The "contributions to the emergency management profession" criterion challenges the emergency manager to become universally proficient and actively engaged in state run emergency management administration and operations. This certification does not provide training but rather, through its requirements, guide the emergency manager in a

direction that outlines the way forward for achieving the necessary training. In Oregon, ORCEMS assists the emergency manager into becoming self-adaptive and ultimately more resilient. Oregon is rated a (+) in the matrix.

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