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THESIS

COMPARATIVE ANALYSIS OF FUSION CENTER OUTREACH TO FIRE AND EMS AGENCIES

by

Scott E. Goldstein

December 2015

Thesis Advisor: Fathali Moghaddam
Second Reader: John Donnelly Sr.

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13. ABSTRACT (maximum 200 words)

Fire and EMS responders have had little involvement with fusion center operations, and this directly impacts the country's safety. Only a handful of fusion centers have integrated the fire and emergency medical services (EMS) responders into the collection, analysis, and sharing of information on homeland security activities. This thesis analyzes the predominant practices of five fusion centers that have integrated fire and EMS responders into their reporting process. The highlighted practices from the study of these fusion centers can be utilized to expand the integration at fusion centers across the country and to further expand the role of the fire and EMS responder in homeland security. Implementing these practices involves the fusion centers commitment to integration, to cooperation, and to preparedness.

Having basic terrorism behavior training, along with suspicious-activity indicator awareness, sets the baseline for fire and EMS agencies to select key decision makers who become the liaison with the fusion center. Sufficient quantities of fusion center liaisons are needed to support the size and number of agencies in the fusion centers' area of responsibility. Having uniformed senior fire and EMS line officers staffing the liaison positions will expand the trust of the fusion centers' processes while providing more channels for outreach and interaction between first responders and fusion centers.

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COMPARATIVE ANALYSIS OF FUSION CENTER OUTREACH TO FIRE AND EMS AGENCIES

Scott E. Goldstein
Fire Chief, Montgomery County Fire and Rescue Service
B.S., University of Maryland University College, 2003

Submitted in partial fulfillment of the
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December 2015**

Approved by: Fathali Moghaddam
Thesis Advisor

John Donnelly Sr.
District of Columbia Fire and EbvMS Department
Second Reader

Erik Dahl
Associate Chair of Instruction
Department of National Security Affairs

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TABLE OF CONTENTS

LIST OF FIGURES

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LIST OF TABLES

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LIST OF ACRONYMS AND ABBREVIATIONS

ACTIC	Arizona Counter Terrorism Information Center
ATAC	Anti-Terrorism Advisory Council
CLP	Community Liaison Program
DHS	U.S. Department of Homeland Security
EMS	emergency medical services
FBI	Federal Bureau of Investigations
FEMA	Federal Emergency Management Agency
FLO	fusion liaison officer
FSIE	Fire Service Intelligence Enterprise
HSGP	Homeland Security Grant Program
HSIE	Health Security Intelligence Enterprise
ILO	intelligence liaison officer
JAG	justice assistance grants
LA JRIC	Los Angeles Joint Regional Intelligence Center
LE	law enforcement
MCAC	Maryland Coordination and Analysis Center
NPS	Naval Postgraduate School
POC	point of contact
SAR	suspicious activity reporting
SDLECC	San Diego Law Enforcement Coordination Center
SLTT	state/local/tribal/territorial
SNCTC	Southern Nevada Counter Terrorism Center
SWTFC	Southwest Texas Fusion Center
TEW	terrorism early warning
TEWG	terrorism early warning groups
TLO	terrorism liaison officer
UASI	Urban Area Security Initiative

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EXECUTIVE SUMMARY

Across the United States nearly two million fire and EMS personnel provide emergency services to the just over 322 million residents.[1] Their role in our communities has expanded to include response to chemical, biological, and radiological attacks/threats, as well as attacks inspired by radical Islamic jihadism. This expansion of duties is in reaction to life-changing events, such as the 9/11 attacks in New York, the Pentagon, and the crash of flight 93 in the Stone Creek Township corn field, the mass transit attacks in London and Madrid, as well as the hybrid targeted violence[2] similar to the 2008 Mumbai attacks. Fire and emergency management service (EMS) personnel are now trained and prepared for an ever-increasing range of threats, emergencies, and incidents.

In spite of their expanded role, fire and EMS personnel across the country have yet to consistently incorporate intelligence activities. Although most fire and EMS personnel have a basic level of awareness, and in some cases, specific intelligence training, the focus from the fusion centers is primarily information dissemination. Alarmingly, what is missing is a consistent processes and training to ensure that fire and EMS personnel are actively involved in the collection and reporting of suspicious activity to state/local/tribal/territorial (SLTT) fusion centers so that the information they receive is more coordinated and relevant to fire and EMS.

Since 9/11, the distillation and dissemination of intelligence and information has become the trademark responsibility of the fusion centers. A fusion center has many configurations, but in general it is an administrative workspace, sponsored by a state or local government, that supports the intelligence needs of multiple agencies including: law enforcement (state/local/federal/tribal), fire and EMS, public health, private sector, and emergency planners during steady state and emerging situations. No one center is alike;

[1] "U.S and World Population Clock," U.S. Census Bureau, accessed November 1, 2015, http://www.census.gov/popclock/.

[2] Tracy L. Frazzano, and Snyder, G. Matthew, "Hybrid Targeted Violence: Challenging Conventional "Active Shooter" Response Strategies," *Homeland Security Affairs* 10 (February 2014), article 3, https://www.hsaj.org/articles/253.

each fusion center has diverse missions, different intelligence capabilities, and varying staffing requirements.

Fusion centers frequently include a: watch section, intelligence and analysis staff, and liaison and training personnel that interact with public and private sector stakeholders in their area of responsibility. As of August 2015, there were 78 fusion centers throughout the country and U.S. territories, with one center per state while some states support additional fusion centers in their major urban areas.

Fire and EMS providers are critical components in homeland security. Unfortunately, the vast majority of these providers are untapped or underutilized as submitters of suspicious activity reports. The approaches for outreach, interaction, and education that have been effective with law enforcement since 9/11 do not cross over to the fire and EMS community.

This thesis examines the current outreach systems to fire and EMS agencies in place at selected fusion centers. The centers where identified through in-person conversations with senior fire and EMS agency subject matter experts. These fusion centers are known as centers having effective outreach, interaction, and education programs involving fire and EMS agencies. The five centers studied are the Arizona Counter Terrorism Information Center, the Los Angeles Joint Regional Intelligence Center, the Southern Nevada Counter Terrorism Center, the Southwest Texas Fusion Center, and the Northern Virginia Regional Intelligence Center.

The primary research questions are: What has occurred since 2001 to integrate fire and EMS agencies in the information sharing and collaboration process performed by fusion centers? What forms of outreach, interaction, and education programs are used by specified fusion centers to interact with fire and EMS agencies?

This thesis utilizes a qualitative comparative analysis that focuses on the core components of outreach, interaction, and education using the appreciative inquiry 4-D cycle analytical method. In addition, a data capture form for historical and factual information was developed and sent to each fusion center. The data capture form collected geographic data for each center's area of responsibility, structure and staffing

style, operation and outreach programs, and a description of the center's suspicious activity reporting procedures.

This thesis focuses on four key functions that are present in the studied centers and can be used to improve the operations at other fusion centers:

1. Provide basic terrorism outreach and education training to all public safety personnel via the National Suspicious Activity Reporting Initiative platform.
2. Transition to an intelligence liaison officer liaison model, from the more common terrorism liaison officer model, with all willing fire and EMS agencies to have key decision makers selected to receive the fusion center products.
3. Utilize uniformed senior fire and EMS line officers as subject matter experts to the fusion center analysis staff. These officers would provide support to the fusion center staff and analysts and provide a bridge from the field personnel.
4. Provide sufficient liaisons to support broad geographical areas to address span of control and to improve the ability for the liaison to interact with field personnel.

These practices have resulted in effective interaction, outreach, and education programs to the fire and EMS agencies and should be considered for adoption in other fusion centers. The ability for the fire or EMS personnel to identify and appropriately report suspicious behaviors and indicators of potential terrorist activities would result in more actionable intelligence that could prevent future tragedies. The two million fire and EMS responders answer thousands of calls a day and have unparalleled access to private places, and their expanded ability to submit suspicious activity reports will better enable law enforcement to interrupt the planning of a terror plot.

The fusion centers have developed into a strong network of analysis and sharing centers of terrorism data. The effectiveness of the fusion centers can be improved with the broader integration of fire and EMS agencies and personnel. This expansion requires intergroup communication and sharing as well as funding to place the proper personnel in the fusion centers.

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I. INTRODUCTION

Since the fire service began in 1735 with Ben Franklin's Union Fire Company,[1] the career and volunteer members of the local fire and emergency medical services (EMS) departments are every community's first responders. They respond to a wide range of events from simple emergencies to complex disasters.

Spread out throughout the 3.8 million square miles, the United States today is protected by over one million fire fighters[2] and just over 900,000 EMS personnel.[3] These two million personnel are spread among nearly 50,000 departments covering macro metropolitan urban areas to those in the barren mid-west deserts and mountains, providing service to just over 322 million residents.[4]

Their role in our communities has expanded to include response to chemical, biological, and radiological attacks and threats, as well as attacks inspired by radical violent extremists. The expanded, all-hazards response capability stems from the terrorist attacks on September 11, 2001 against New York, the Pentagon, the crash of flight 93 in the Stone Creek Township corn field, the mass transit attacks in London and Madrid, as well as the hybrid targeted violence[5] similar to the 2008 Mumbai attacks. Fire and EMS personnel are now preparing for an ever-increasing range of threats, emergencies, and incidents that would cause them to respond or protect critical infrastructure.

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[1] Rebecca L. Gonzales, "Transforming Executive Fire Officers a Paradigm Shift to Meet the Intelligence Needs of the 21st Century Fire Service" (master's thesis, Naval Postgraduate School, 2010), 41.

[2] Michael J. Karter, and Gary P. Stein, "U.S. Fire Department Profile through 2013 Fact Sheet, National Fire Protection Association, 2013, http://www.nfpa.org/research/reports-and-statistics/the-fire-service/administration/us-fire-department-profile, 3.

[3] U.S. National Highway Traffic Safety Administration, and Federal Interagency Committee on Emergency Medical Services, *2011 National EMS Assessment* (Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration, Emergency Medical Services Division, 2011).

[4] "U.S and World Population Clock," U.S. Census Bureau, accessed November 1, 2015, http://www.census.gov/popclock/.

[5] Tracy L. Frazzano, and Snyder, G. Matthew, "Hybrid Targeted Violence: Challenging Conventional "Active Shooter" Response Strategies," *Homeland Security Affairs* 10 (February 2014), article 3, https://www.hsaj.org/articles/253.

In spite of their expanded role, the fire and EMS personnel across the country have yet to consistently incorporate intelligence activities into the daily fire or EMS duties. Activities such as the collection and reporting of suspicious activity to state/local/tribal/territorial (SLTT) law enforcement, to inform personnel of threat and risk and to prepare and potentially prevent attacks must be rolled into the basic expectations and duties for fire and EMS personnel.

Training of fire and EMS personnel to consume and exercise intelligence is similar to how the military and law enforcement use intelligence. In all professions, intelligence is widely available, and there is a lot of variation on how many personnel in each department are trained and on how this information is collected, analyzed, and disseminated.

Based on the examples studied, it seems to be a best practice to restrict decision making based on actionable intelligence from the fusion center to a few key senior level chief staff per agency. Combined with these key senior level chief officers is the presence of a senior fire or EMS agency line officer at the fusion center, whose role is to interpret and analyze the information reported and produce actionable intelligence for a specific customer base. These highlighted practices are not without costs. The utilization of uniformed line officers in the fusion centers will have a cost but the gains of preparedness and situational awareness for the fire and EMS personnel overshadow the salary cost.

One means to incorporate fire and EMS agencies into the information gathering and sharing activities is through expanded joint operations with state and local law enforcement. Joint operations begin at the mid and upper levels of law enforcement, fire, and EMS agencies. As groups begin to share and exchange information, the trust and cooperation improves.

Local cooperation expands to regional and then to the state and federal level information sharing and cooperation. As will be outlined below, sharing and exchanging

are the fundamentals behind fusion centers. A broad definition of fuse as a verb is "to unite or blend into a whole, as if by melting together."[6]

A. FUSION CENTERS

The predecessor to today's fusion centers were the terrorism early warning groups (TEW and later referred to by the TEWG acronym) and specifically the Los Angeles Terrorism Early Warning Group. The LA TEW had its first formal meeting in October 1996 and grew from "an ad hoc monthly meeting of concerned Los Angeles security analysts and emergency responders seeking to share information and build knowledge into an incident-specific intelligence fusion cell (actually more of an operations-intelligence fusion effort)."[7]

After the tragic attacks on September 11, 2001 the country had an immediate focus on attempting to connect information better to prevent repeat attacks and to remove the silos of information long engrained within intelligence agencies. Many law enforcement agencies, with a major emphasis on federal, state, and large metropolitan departments, were increasingly being expected to prevent, respond to, and investigate criminal activities that supported extremist movements and terror groups.

Just six days after 9/11 attacks, Attorney General John Ashcroft directed each of the 93 United States district 'attorney's to establish an anti-terrorism advisory council (ATAC) within their districts. The 'ATACs where "to ensure that effective coordination existed to better enable law enforcement to prevent future terrorist acts. Also, they were to ensure that effective information sharing systems were put in place that would assist public agencies and private entities in being made aware of information that would assist them in combatting terrorism."[8] Thomas DiBiagio, U.S. District Attorney for Maryland,

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[6] *Dictonary.Com*, s.v. "Fuse," last modified September 29, 2015, http://dictionary.reference.com/browse/fuse?s=t.

[7] John P. Sullivan, and Alain Bauer, *Terrorism Early Warning: 10 Years of Achievement in Fighting Terrorism and Crime* (Los Angeles, CA: Los Angeles County Sheriff's Department, 2008), 18.

[8] "Anti-Terrorism: U.S. Attorneys District of Maryland Priorities," Department of Justice, January 27, 2015, http://www.justice.gov/usao-md/anti-terrorism.

assigned a senior prosecutor as the ATAC coordinator and the Maryland Coordination and Analysis Center (MCAC) was opened in November 2003.

While a lot of emphasis was placed on preventing the errors that allowed the 9/11 terrorists to be successful, there is no mention of fusion centers in the Homeland Security Act of 2002.[9] Officially known as Public Law 107-296, the Homeland Security Act created the U.S. Department of Homeland Security (DHS) and the cabinet-level position of the secretary of homeland security.

In 2004, the final report from the National Commission on Terrorist Attacks upon the United States, commonly referred to as the *9/11 Commission Report*, identified the need for a unity of effort amongst government agencies related to intelligence programs as a critical recommendation. *The 9/11 Commission Report's* main focus, understandably, was to break the roadblock of agency silos and to establish a framework that enabled the sharing of key terrorism-related intelligence essential to preventing a future terrorist attack.

In October 2007, President George W. Bush released the *National Strategy for Information Sharing: Successes and Challenges in Improving Terrorism-Related Information Sharing* in which he called for fusion centers to be "the focus…within the state and local environment for the receipt and sharing of terrorism information, homeland security information, and law enforcement information related to terrorism."[10] The national strategy outlined the need for fusion center minimum operation standards that would allow a baseline level of capability to be established.[11]

September 2008, the Departments of Justice and Homeland Security published *Baseline Capabilities for State and Major Urban Area Fusion Centers*. This document

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[9] Homeland Security Act of 2002, Pub. L. No. 107–296, 116 Stat 2135 (2002).

[10] White House, *National Strategy for Information Sharing and Safeguarding* (Washington, DC: White House, 2012), https://www.whitehouse.gov/sites/default/files/docs/2012sharingstrategy_1.pdf.

[11] *Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs. Federal Support for and Involvement in State and Local Fusion Centers Majority and Minority Staff Report*, 112th Cong. (2012), (12), https://www.hsgac.senate.gov/subcommittees/investigations/media/investigative-report-criticizes-counterterrorism-reporting-waste-at-state-and-local-intelligence-fusion-centers.

outlines the basic "structures, processes and tools"[12] fusion centers must develop so they can effectively and securely share counterterrorism intelligence information with the federal government.

In January 2009, President Barack Obama replaced President George W. Bush, and he subsequently replaced Secretary of Homeland Security Michael Chertoff with Janet Napolitano as secretary. Secretary Napolitano inherited a DHS that was criticized for its lack of consistency. One example comes from Bart Johnson, then the Acting Undersecretary of DHS Intelligence and Analysis, who publically wrote

> DHS has failed to date to institute a well-coordinated, department-wide approach to supporting and interfacing with state and major urban area fusion centers…This shortcoming has resulted in a disjointed and ad hoc approach by DHS elements toward supporting and interacting with these centers.[13]

In response, DHS staff proposed "a robust Department-wide initiative to support the establishment and sustainment of a nationwide network of fusion centers."[14] This initiative advanced forward and fusion centers became one of DHS's top priorities.

A fusion center takes on many looks and configurations. In broad description, a fusion center is an administrative work space, sponsored by a state or local government, that supports the intelligence needs of multiple agencies including; law enforcement (state/local/federal), fire/EMS, public health, private sector, and emergency planners during steady state and emerging situations. Each fusion center has diverse missions, different intelligence capabilities, and varying staffing requirements. No one center is alike.

The fusion center frequently includes a:

- Watch section that operates 24 hours-a-day and seven days-a-week to monitor situational awareness feeds, to receive requests for support, and to provide a means to de-conflict information.

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[12] Department of Homeland Security et al., *Baseline Capabilities for State and Major Urban Area Fusion Centers a Supplement to the Fusion Center Guidelines* (Washington, DC: Department of Homeland Security and Department of Justice, 2008). 1.

[13] *Permanent Subcommittee on Investigations, Committee on Homeland Security*, 21.

[14] Ibid., 12.

- Intelligence and analysis staff work to gather, analyze, evaluate data, or trends (crime, suspicious activity, etc.) that frequently results in a product or other information sharing platform.
- Liaison staff that interact with all sectors, including terrorism liaison officers, fusion liaison officers, and intelligence liaison officers in field operations.
- Training staff that establish and deliver a wide assortment of training opportunities to enhance awareness and increase connectivity between the fusion center and the area of operations.

Each fusion center is required by federal standards to have established privacy policies that outline the collection, synthesis, and sharing of information to protect the citizens/residents privacy. It is the joint efforts of the intelligence, analysis, and liaison staff that obtain information, tips, leads, and other injects that feed into the suspicious activity reporting role.

To expand the integration of fire and EMS agencies into the fusion center process and to correct some shortfalls in prior baseline capabilities, DHS released *Fire Service Integration for Fusion Centers: An Appendix to the Baseline Capabilities for State and Major Urban Area Fusion Centers.*[15] The document provides recommendations to fusion centers on how to effectively fold the fire and EMS agencies into the fusion process. In a speech to the 2010 annual Congressional Fire Service Institute Fire and Emergency Services Dinner, Secretary Napolitano announced a move to "officially make the fire service an official partner in fusion centers, a clearinghouse for terrorist information."[16]

In July 2011, DHS released *Implementing 9/11 Commission Report Recommendations: Progress Report 2011*. The report highlights homeland security changes and improvements in intelligence sharing with state and local officials that have been made in the United States since the release of the 9/11 report.[17]

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[15] Department of Justice, Global Justice Information Sharing Initiative, and Department of Homeland Security, *Fire Service Integration for Fusion Centers: An Appendix An Appendix to the Baseline Capabilities for State and Major Urban Area Fusion Centers* (Washington, DC: Department of Homeland Security, 2010).

[16] Susan Nicol, "DHS Wants Fire Service to Join Fusion Centers," *Firehouse*, April 30, 2010. http://www.firehouse.com/news/10467337/dhs-wants-fire-service-to-join-fusion-centers.

[17] Department of Homeland Security, *Implementing 9/11 Commission Report Recommendations: Progress Report 2011* (Washington, DC: Department of Homeland Security, 2011).

As of August 2015, DHS has separated fusion centers[18] into two categories, primary and recognized. The primary fusion centers serve "as the focal point within the state and local environment for the receipt, analysis, gathering, and sharing of threat-related information…and are the highest priority for the allocation of available federal resources."[19] This includes the assignment of personnel from federal agencies and access to federal data systems. The 53 primary fusion centers are established with one in each state (except Wyoming, which has none), a center in the District of Columbia, and one each in the territories of Guam, Puerto Rico, and the U.S. Virgin Islands. In lieu of a fusion center, Wyoming utilizes a criminal intelligence center as a component of the state's attorney general's office as an ad hoc fusion center, and thus it is not classified as a primary fusion center.[20]

Some states have diverse geographic areas along with multiple major urban areas. DHS acknowledges the states' rights to establish and operate additional centers within their state in addition to the primary fusion center. These additional fusion centers are frequently referred to locally as intelligence or threat assessment centers and identified by DHS as recognized fusion centers. As of August 2015, there are 25 recognized fusion centers, spread out over 12 states with six of the recognized fusion centers in Texas and five in California.[21] All but one of the recognized fusion centers are located in top 40 metropolitan areas as defined by the United States Census Bureau and the Office of Management and Budget.[22] The only exception is the El Paso Multi-Agency Tactical Response Information Exchange as the El Paso, Texas, metropolitan area ranks sixty-seventh.

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[18] For the remainder of this document—the title fusion center will be used synonymous for fusion center or regional intelligence centers.

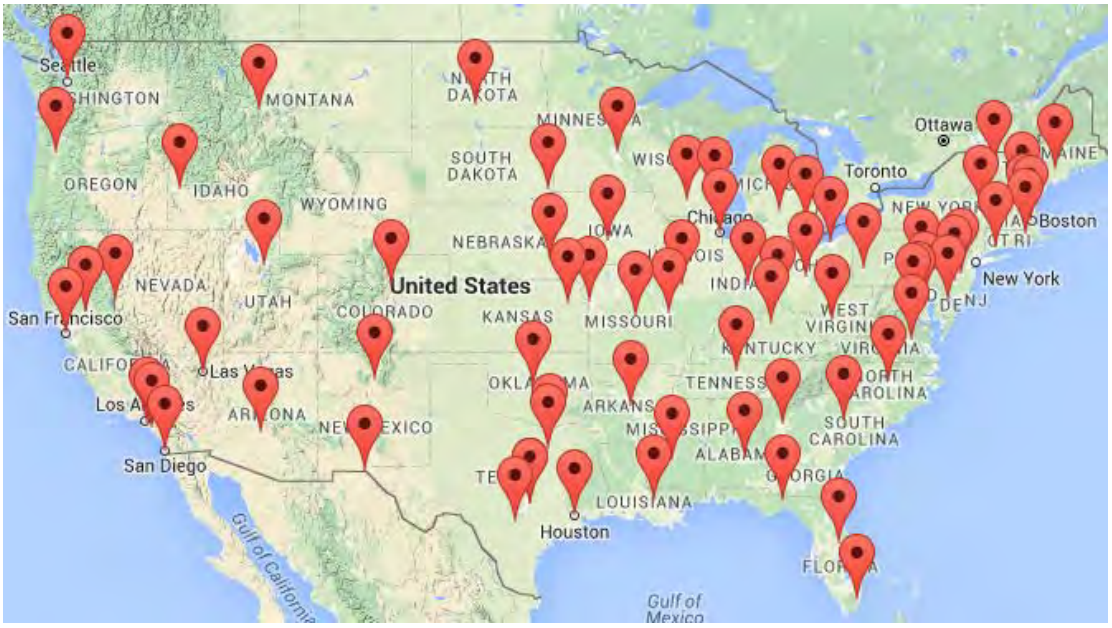
[19] "Fusion Center Locations and Contact Information," Department of Homeland Security, July 23, 2015, http://www.dhs.gov/fusion-center-locations-and-contact-information.

[20] Dana Priest, and William M. Arkin, "Top Secret America: A Washington Post Investigation," *The Washington Post*, September 2010, http://projects.washingtonpost.com/top-secret-america/states/wyoming/.

[21] "Fusion Center Locations and Contact Information," Department of Homeland Security.

[22] "Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2014—United States—Metropolitan and Micropolitan Statistical Area," U.S. Census Bureau, March 2015, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk.

Figure 1. Locations of the Fusion Centers in the 48 Contiguous States



Source "Fusion Centers," National Fusion Center Association, accessed October 20, 2015, https://nfcausa.org/default.aspx?act=directorymap.aspx&menugroup=Map.

There are three primary federal grant sources that support fusion center operations: DHS Homeland Security Grant Program (HSGP), FEMA Urban Area Security Initiative (UASI), and Department of Justice (DOJ) Justice Assistance Grants (JAG). These grants are utilized to supplement the SLTT funding that forms the base of the fusion center support and operations. In attempts to quantify the federal funding that has been directed to developing and supporting fusion centers form 2003 to 2011, the 2012 Senate Investigative Committee places the range at between $289 million and $1.4 billion.[23]

B. PROBLEM STATEMENT

Fire and EMS providers are critical components in homeland security. Unfortunately, the vast majority of these providers are untapped or under-utilized as submitters of suspicious activity reports. The approaches for outreach, interaction, and

[23] *Permanent Subcommittee on Investigations, Committee on Homeland Security*, 3.

education that have been effective to law enforcement since 9/11 do not cross over to the fire and EMS community as each group's mission varies greatly.

The fire and EMS community have unique challenges that are often presented as limitations to expanding the role of fire and EMS providers in intelligence gathering; however, there are a few examples where fire and EMS providers have been integrated into the intelligence gathering. The success and challenges from these fusion centers must be analyzed and best practices shared with other fusion centers and fire and EMS community organizations. These practices must be assessed for the fiscal impact of implementation to the fusion center sponsoring agency. This presents an opportunity for researchers to examine examples of existing fusion centers and identify lessons to be learned.

C. THESIS QUESTION

This thesis will examine the current outreach systems to fire and EMS agencies in place at selected fusion centers or regional intelligence centers. The primary research questions are:

- What has occurred since 2001 to integrate fire and EMS agencies in the information sharing and collaboration process performed by fusion centers?
- What forms of outreach, interaction, and education programs are used by specified fusion centers to interact with fire and EMS agencies?

D. CHAPTER OVERVIEW

Chapter II provides the literature review for the thesis. As the field of homeland security in the current sense and use of the word is new, the depth of material is limited. Literature on fusion centers and the integration of fire and EMS personnel is mainly limited to government documents and academic studies respectively. The methodology utilized for study is highlighted at the end of Chapter II.

In Chapter III, the selected fusion centers are profiled and initial comparisons created through information presented in a series of tables and graphs to outline the center's operation, structure, outreach, and suspicious activity reporting format. Chapter

IV provides in-depth comparison of how the fusion centers approach the liaison, to fire and EMS agencies, function differently. This ranges from the title used for the liaison role to the number of liaisons from each fire or EMS agency. Chapter V looks closely at the number of responders and fire and EMS departments served by each fusion center and how this plays a role in the effectiveness of outreach, interaction, and education.

Chapter VI outlines specific practices and implementation strategies for effective outreach, interaction, and education that can be jointly adapted by both the fusion centers as well as the fire and EMS agencies in the center's area of responsibility. Implementing these practices and strategies would result in a higher level of outreach, interaction, and education to fire and EMS agencies and should be priorities for all fusion centers and fire and EMS agencies.

II. LITERATURE REVIEW

The majority of the sources evaluated for this review are academic sources on fire, EMS, public health, and various elements of the public safety community's involvement in the collective war on terror. The other major body of literature is the guidance documents that provide the framework for the establishment and operation of fusion centers. The research literature regarding integration of fire and EMS personnel into intelligence gathering can be categorized into five categories areas:

- Academic literature supporting fire service intelligence integration
- Academic literature supporting health and EMS involvement in fusion centers
- Fusion center operational and guidance documentation
- Fire service member organization terrorism/intelligence guidance documents
- Government reports and findings

Among the literature reviewed for this project, five themes emerged as the most important:

- Evolution of literature
- Availability of fire and EMS personnel
- Impact on fire and EMS perception in the community
- Legal basis for fire and EMS observation and reporting
- Fusion center inclusion of fire and EMS personnel

A. EVOLUTION OF LITERATURE

There is a clear distinction of academic literature written before and after the establishment and startup of the Fire Service Intelligence Enterprise (FSIE) in 2006. The mission of the FSIE is to "establish an institutionalized Fire Service information and intelligence sharing framework that will enhance the preparedness level of fire

departments across the country while supporting the prevention, protection, response, and recovery efforts of all homeland security partners."[24]

Many of the academic literature sources in 2008 and 2009 highlight the faults of the fusion center process and the lack of oversight and high-level federal support for fire and EMS representation in the intelligence cycle. The academic literature written between 2009 and 2013 captures the creation of the FSIE, but it also highlights the demise and now the formal dissolving of the FSIE. The authors of this later academic literature capture how the fire and EMS community was on the right track with the FSIE but that activity has stalled greatly after the FSIE dissolved. Joshua Dennis in his 2012 NPS thesis "Standing on the Shoulders of Giants" best lays this out with three high level factors: reduced engagement due to budget limitations; advancement of key stakeholders in the FSIE development; and the inability to achieve consensus amongst the various fire service interest groups.[25]

The predominance of the guidance documents on the creation of fusion centers are from the early and mid-2000s. The 2001 PATRIOT Act is an example of this early reactive literature. The 2012 *National Strategy for Information Sharing and Safeguarding* is an example of later literature.[26] As experience has been used to modify the operation and structure of the fusion centers, supplemental documents have been produced to build on the earlier documents, including the 2010 *Fire Service Integration for Fusion Centers: An Appendix to the Baseline Capabilities for State and Major Urban Area Fusion Centers.*[27] Over roughly a six-year period, the fusion center guidance documents transform from no mention of fire and EMS personnel to the need to incorporate both groups into the fusion center. This transformation demonstrates increased inclusion and broader acceptance of non-law enforcement partners in the fusion centers.

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[24] Bryan Heirston, "Terrorism Prevention and Firefighters: Where are The Information-Sharing Boundaries?" (master's thesis, Naval Postgraduate School, 2009), 31.

[25] Joshua M. Dennis, "Standing on the Shoulders of Giants: Where Do we Go from Here to Bring the Fire Service into the Domestic Intelligence Community?" (master's thesis, Naval Postgraduate School, 2012), 5.

[26] White House, *National Strategy for Information Sharing and Safeguarding*.

[27] Department of Justice, Global Justice Information Sharing Initiative, and Department of Homeland Security, *Fire Service Integration for Fusion Centers.*

B. AVAILABILITY OF FIRE AND EMS PERSONNEL

One element that repeats throughout many of the literature sources is the presence and availability of fire and EMS personnel to be intelligence gathers or first preventers[28] at the same time as they serve as the first responders. Many of the authors outline how fire and EMS personnel are present in the community and towns performing their daily duties and how that presents enormous opportunity for observing activities and behaviors of suspicious activity. There is some discussion of existing programs aimed at collecting this data but none goes further into analyzing quality of data collected; nor are there any examples found of how this data is applied and disseminated. For instance, in her thesis, Rebecca Gonzales ties how the general citizen is expected to See Something and Say Something, as a force multiplier, that all fire and EMS personnel must be included in the intelligence collaboration.[29]

C. IMPACT ON FIRE AND EMS PERCEPTION IN THE COMMUNITY

The public perception of the ethics of using fire and EMS personnel for reporting of suspicious activity is debated in the literature. A study of 32 chiefs conducted by Richard Blatus resulted in 82 percent reporting that the fire fighters' image in the community would be diminished if they were trained to "recognize non-traditional forms of terrorist threats."[30]

Some in academic literature, including the theses of Blatus and Gonzales, outline current practices in place for fire fighters to report illegal activity they observe during the regular course of incident response and daily activities. These include drug activity, drug paraphernalia, and drug production or processing along with the presences of firearms and fireworks.

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[28] Gonzales, "Transforming Executive Fire Officers a Paradigm Shift," 4.

[29] Ibid., 38.

[30] Richard J. Blatus, "Altering the Mission Statement the Training of Firefighters as Intelligence Gatherers" (master's thesis, Naval Postgraduate School, 2008), 8, 19.

A second core issue in the use of fire and EMS personnel as intelligence gathers is the "sacred trust" established at the patient and medical provider level.[31] This trust is created between the patient and provider, similar to the trust one has to talk to his or her primary physician, and is perceived by the public to be private.

The core element to combat the concerns about perception is open and progressive communication with the community. As Blatus writes in his thesis, educating the community will greatly alleviate the possibility of concerns from the community. Furthermore, the community operates under a general pre-standing expectation that fire fighters report activity and materials "deemed to be potentially dangerous to the community"[32] like elder or child abuse. The expectation for fire fighters to report dangers to the community is broadly the norm across the country.

D. LEGAL BASIS FOR FIRE AND EMS OBSERVATION AND REPORTING

A key difference between the legal basis for law enforcement entry into private property and that of the fire and EMS service is the presence of exigent circumstances. The most general description of exigent circumstances includes any situation where people are in imminent danger.[33] The fire and EMS basis for imminent danger is applied to structures on fire, structures threatened by a hazardous material leak or from pending structural compromise or collapse, or the immediate need for medical treatment and interventions. Through several rulings, the Supreme Court has validated the actions of fire departments entering private properly during the course of incident response and the subsequent discovery of illegal activity.[34]

Tied into the legal basis for entry into private property is the legal basis for identification and seizure of items in plain view. Fire and EMS personnel who enter a structure for incident mitigation and observe items in plain view (not behind closed doors

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[31] Malcolm Kemp, "Expanding the Role of Emergency Medical Services in Homeland Security" (master's thesis, Naval Postgraduate School, 2012), 27.

[32] Blatus, "Altering the Mission Statement the Training of Firefighters," 25.

[33] *Wikipedia*, s.v., "Exigent Circumstance in United States Law," accessed November 20, 2014, https://en.wikipedia.org/wiki/Exigent_circumstance.

[34] Heirston, "Terrorism Prevention and Firefighters," 8.

of closets or cabinets or in boxes) are permitted by case law to report such items to local law enforcement.[35]

In conjunction with the legal basis for observing and reporting suspicious activity is the legal requirement of the duty to act.[36] These duties to act are prescribed in the medical protocol and/or medical licensure agencies for EMS personnel. The traditional form of duty to act is the initiation and continuation of treatment to a patient, notwithstanding factors of prejudice or the patient's social, race, or economic standing.

E. FUSION CENTER INCLUSION OF FIRE AND EMS PERSONNEL

The first document that outlines the inclusion of fire and EMS personnel in the protection of the homeland is the *9/11 Commission Report*, published in 2004. The Commission commission's report lumps fire and EMS personnel into the broader category of frontline personnel, but does not specifically examine their role in intelligence gathering.[37] Frontline personnel include local law enforcement, fire and EMS personnel, public health staff, public transportation, as well as emergency management personnel.

In 2006, the involvement of the fire and EMS services grew by leaps and bounds as the Department of Homeland Security (DHS) created the FSIE, via the Office of Intelligence and Analysis. Many of the documents that support the FSIE, including the *FSIE Concept Plan*, *FSIE National Strategy 2008*, and the *FSIE Intelligence Requirements*, outlined the key capabilities fire and EMS personnel provide in the information gathering process.[38] A critical flaw outlined in two sources, Blatus and Dennis, is that the FSIE focuses on fire and EMS personnel's involvement at the

[35] Colonnade Corp. V. United States, 397 U.S 71, Colonnade Corp. v. United States, 397 U.S 711970).

[36] Kemp, "Expanding the Role of Emergency Medical Services in Homeland Security," 29.

[37] National Commission on Terrorist Attacks upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States* (New York: Norton, 2004), 426.

[38] Dennis, "Standing on the Shoulders of Giants," 4.

information sharing process while excluding them from the critical steps of the intelligence process: defining requirements, recognition, and gathering intelligence.[39]

The 2010 DHS *Fire Service Integration for Fusion Centers: An Appendix to the Baseline Capabilities for State and Major Urban Area Fusion Centers* was a second significant step forward to normalizing the inclusion of the fire and EMS service involvement in fusion centers and information exchange. The appendix adds elements to the operations of the fusion centers and highlights how fire and EMS agencies can be integrated to assist fusion centers and how fusion centers can assist fire and EMS agencies.[40]

1. Examples of Fire and EMS Providers' Involvement in Suspicious Activity Reporting

As noted, some in the fire and EMS community are resistant to tarnishing the image of the fire and EMS personnel to the eyes of the community that they serve by expanding into the role of information reporting. Parallel to the resistance to impact the community trust is a lack of understanding of what type of incidents or information the fire and EMS personnel can contribute to the fusion center suspicious activity reporting.

Outlined below are two examples of everyday occurrences that fire and EMS personnel encountered, how reporting one led to the investigation and possible disruption of a terror plan, and how a report was delayed, which could have altered the course of a case.

a. Case 1

The first case is from a National Capital Region fire department in 2013. A fire department inspector observed a full-scale commercial jet flight simulator in a stand-a-lone closet in an auto repair shop during the course of his annual inspection. The inspector reported the observations to the local fusion center, which immediately passed

[39] Blatus, "Altering the Mission Statement the Training of Firefighters;" Dennis, "Standing on the Shoulders of Giants."

[40] Department of Justice, Global Justice Information Sharing Initiative, and Department of Homeland Security, *Fire Service Integration for Fusion Centers*, 8.

the report details onto local law enforcement. The local law enforcement (LE) conducted a site visit and a rapid interview of the shop owner. The local LE task force officer provided an investigation update back to the fusion center and additional follow-up occurred by federal LE.[41]

b. Case 2

The second case occurred in January 2015 in the National Capital Region at scene of a structure fire incident. An adult male approached fire fighters preparing the apparatus to depart the scene. The male stated he was a rescuer from a foreign country, and he wanted to know more about United States firefighting in order to take the information back to his home country.

The firefighter provided the interest party with several options to obtain information, from joining a volunteer department to a station tour to a ride-a-long. In response to the offers, the male responded that he did not want a tour or ride-a-long but desired a weekly interaction to share his experience and learn U.S. firefighting actions. During the exchange, the male mentioned that he had stopped at numerous area fire stations and that no one would help him.

When the male was asked for contact information so the firefighter could attempt to follow up, the male refused and walked away. Once a report of this event was submitted to the fire liaison in the fusion center and distributed to area fire department points of contact (POCs), four additional stations/personnel reported contact with a male with the same physical description and actions.[42]

In both cases, the fire and EMS personnel actions reflect recognition of indicators and behaviors. After the firefighters recognized the abnormal actions, they took action according to set procedures and notified the local fusion center fire liaison. Follow up interaction with local fusion center and law enforcement personnel enhances the ability to

[41] Jared Goff, email message to author, April 16, 2015.

[42] Ibid.

utilize established resources, conduct analysis, and report suspicious activity through standard policies.

Case 1 represents a situation that could be consistent with the indicator or behavior category of "aviation activity, learning to operate...an aircraft that poses a threat of harm to people or property and that would arouse suspicion of terrorism or other criminality in a reasonable person."[43] Case 2 illustrates a situation that requires additional vetting and investigation, is consistent with the indicator/behavior of "eliciting information, beyond mere curiosity"[44] and "acquisition of expertise, by attempting to gain knowledge or skills in a manner that arouse suspicion."[45]

F. AREAS REMAINING UNKNOWN—AREAS OF FURTHER STUDY

In a focus group led by Blatus, two new research questions focusing on the inclusion of fire and EMS personnel were raised:[46]

- Would requiring recipients of federal anti-terrorism grant funding, including fire and EMS personnel, to become trained in the recognizing, identifying, and reporting of terrorist indicators and behaviors result in better reporting and inclusion of fire and EMS personnel?
- Would fire and EMS personnel training increase if DHS imposed sanctions on current federal grant funding recipients that did not include fire and EMS personnel in established information reporting processes?[47]

While reviewing the literature, two additional areas for further study became clear:

- What replaced the FSIE? Did the FSIE dissolve due to the planned increased involvement by the national member organizations or due to the lack of funding and support of fire and EMS personnel involved in information submission?

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[43] Bureau of Justice Assistance, U.S. Department of Justice, *Suspicious Activity Reporting Indicators and Examples* (Washington, DC: U.S. Department of Justice, 2015), https://nsi.ncirc.gov/documents/ISE-SAR_functional_standard_indicators_and_examples_0315.pdf.

[44] Ibid.

[45] Ibid.

[46] Blatus, "Altering the Mission Statement the Training of Firefighters," 26.

[47] Ibid.

- What are the common elements of suspicious activity reporting in-use by fire departments today? Does the size of the fire or EMS organization/ or department impact the use of fire and EMS personnel as information gathers and reporters?

In reviewing the literature that argues for the use of fire and EMS personnel as information gathers and reporters, two primary issues arise. The first questions revolved around the legal basis for fire and EMS personnel to be information reporters. The second is what infrastructure is required within each fire and EMS agency to support the information reporting activity.

The literature is very helpful in laying out the past assessment of the operating picture of the incorporation of fire and EMS personnel in the net of public safety professionals protecting the United States. The vast majority of fire and EMS agencies lack the infrastructure and support mechanisms inherent to law enforcement to receive, synthesize, and distribute the products from fusion centers or other intelligence sources. This is largely due to the lack of necessity to do so and traditional roles and responsibilities already established for fire and EMS. While fire and EMS agencies have clearly defined processed for protecting patient medical records, they lack the culture and work process to handle sensitive or secure intelligence and security information. Many of the issues identified in the early literature that have limited the integration of fire and EMS personnel still remain today, possibly due to the primary focus being on other elements of the intelligence puzzle.

G. METHODOLOGY

The thesis will be a qualitative comparative analysis that focuses on the core components of outreach, interaction, and education by selected fusion centers toward fire and EMS agencies. Currently, there are 78 fusion centers, 46 of which have a mission area in the fire service. For the purpose of this thesis, five fusion centers were identified as a focus for case studies through questioning senior fire and EMS service leaders as fusion centers with effective outreach, interaction, and education programs to and with fire and EMS agencies.

The five selected centers are:

1. Arizona Counter Terrorism Information Center (ACTIC)
2. Los Angeles Joint Regional Intelligence Center (LA JRIC)
3. Southern Nevada Counter Terrorism Center (SNCTC)
4. Southwest Texas Fusion Center (SWTFC)
5. Northern Virginia Regional Intelligence Center (NVRIC)

The study will only focus on outreach to fire and EMS agencies. Fusion center outreach to law enforcement, public health, utilities, or other critical infrastructure/key resource community partners will not be included for study. The research initially started with a review of annual reports and governance documents from each fusion center. These documents (typically strategic plans, center governance agreements, or operational doctrine) outline the centers operational requirements, threat assessment, intelligence requirements, and operational procedures and provide information pertaining to fire and EMS outreach, interaction, and education programs.

A data capture form for historical and factual information was developed and sent to each fusion center (see example in Appendix A). The data capture form ascertained geographic data for each center's area of responsibility, structure and staffing style, operation and outreach programs, and a description of the center's suspicious activity reporting procedures.

During research, a sixth fusion center, the San Diego Law Enforcement Coordination Center (SDLECC), was identified as effective on "regularly publishing products for the emergency services community and their applicability to fire and EMS" by the House of Representatives Committee on Homeland Security majority staff report on the National Network of Fusion Centers.[48] The author attempted to contact the SDLECC to request a copy of the data capture form, but without success.

[48] *United States House of Representatives, Committee on Homeland Security, Majority Staff Report on the National Network of Fusion Centers*, 113th Cong. (2013), (56), https://www.archives.gov/isoo/oversight-groups/sltps-pac/staff-report-on-fusion-networks-2013.pdf.

The information obtained from the data capture form, the published annual reports, and center governance documents was analyzed using the appreciative inquiry 4-D cycle analytical method. The 4-Ds stand for:

- Discover—dialog among people, often via interviews, to find the most effective points or when the organization is at its best.
- Dream—allowing group members to envision the team or organization at its peak.
- Design—a small group embodied to form the team or organization as envisioned in the dream.
- Destiny—implementing the changes out outlined in the dream and formatted during the design.

The thesis will present a list of highlighted practices for fusion center outreach, interaction, and education programs to fire and EMS agencies. Fusion center management can utilize the practices to modify its outreach and interaction programs by incorporating highlighted models and/or programs.

H. CLOSING

The literature outlining the integration of fire and EMS personnel into intelligence gathering has evolved in the 14 years since 9/11. Many of the early obstructions to fire and EMS personnel involvement, including legal basis and community perception, have been openly discussed and are no-longer distractors. The federal government guidance on information and intelligence sharing and the inclusion of sectors outside of law enforcement is complete and supports the inclusion of fire and EMS personnel.

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III. FUSION CENTER DESCRIPTION

The fusion centers selected for analysis in this thesis where strategically selected to represent fusion centers with effective outreach, interaction, and education programs. Conversations with senior fire and EMS agency subject matter experts led to the selection of the fusion centers (ACTIC, LA JRIC, SNCTC, SWTFC, NVRIC). Four of the five fusion centers studied are recognized fusion centers, as discussed in Chapter II; only the ACTIC is a DHS designated primary fusion center.

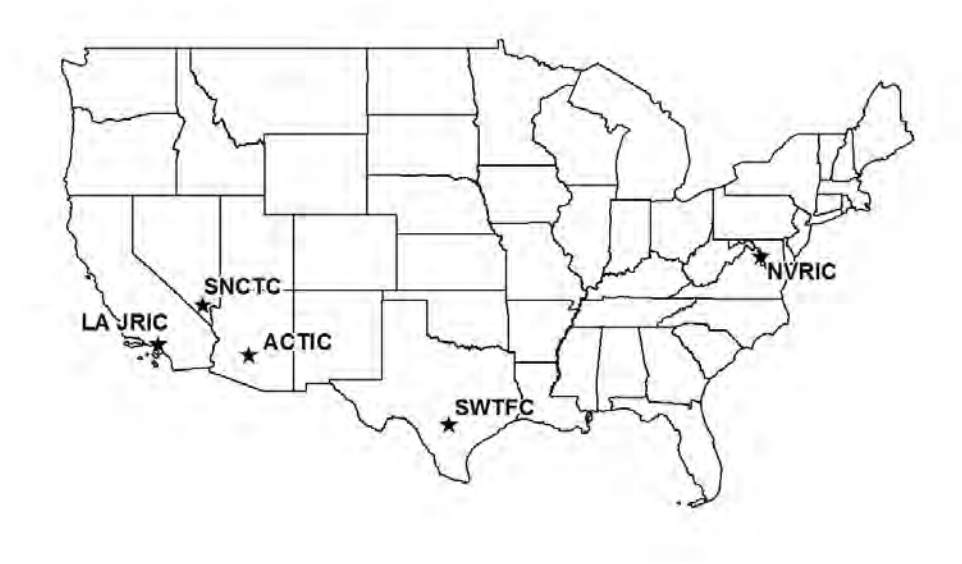
Each fusion center completed a data capture form that collected historical and factual information about the center. The form focused on specific elements of the fusion center structure and outreach:

- Geographic data for the center's area of responsibility allows for the size and magnitude of the area covered, the number of residents protected, the number of fire and EMS agencies, and the number of fire and EMS providers/personnel. This set of data is utilized to compare similar and dis-similar data points.
- Fusion center age and sponsoring agency data points are utilized to compare the age and experience of the fusion center for established procedures and processes while the sponsoring agency data point is used to compare the role/position in the broader federal, state, local, territorial, and tribal spectrum of government agency.
- Governance, baseline, and staffing data points are analyzed to identify if the fusion center's outreach, interaction, and education is influenced by specific variables.
- Outreach methods and communication style and frequency data points establish the style and method by which each fusion center interaction with the fire and EMS agenesis in their Area of Responsibility (AOR). These data points are reviewed to identify trends or similar formats that associate with the effective practices.

The selected centers are resulted in a heavy west coast predominance (see Figure 2). Three centers are in U.S. Census Bureau west statistical region. The LA JRIC is in the Pacific division, and the SNCTC and ACTIC are in the mountain division. The remaining two centers fall within the Census Bureau's south statistical region. The SWTFC is in the

west south central division, and the NVRIC is in the south Atlantic division.[49] The fusion centers serve major metropolitan areas and rank in the top 50 metropolitan areas of the United States, according to the 2012 U.S. Census Bureau core based statistical area rankings.[50]

Figure 2. Map of Fusion Centers Utilized for Comparative Analysis



Source: Sarah Ierely, email to author, September 14, 2015.

A. AREA OF RESPONSIBILITY

Each fusion center has an established AOR. The term AOR originates from U.S. military planning for pre-defined geographic regions assigned to commanders who had the authority to defend and protect the specified area. Similarly, AOR has been applied thought out the federal, state and local government level as a practical means to define service areas for specific agencies. One example is the specified AOR for each of the 56

[49] "Census Regions and Divisions of the United States," U.S. Census Bureau, accessed September 1, 2015, http://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

[50] "Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas: April 1, 2010 to July 1, 2012," United States Census Bureau, March 2013, http://www.census.gov/popest/data/metro/totals/2012/tables/CBSA-EST2012-01.csv.

Federal Bureau of Investigations field offices.[51] Table 1 outlines the selected fusion center AOR, size in square miles and number of residents.[52]

Table 1. Selected Fusion Center Area of Responsibility

Fusion Center	**Geographic Description**	**Square Mileage**	**Number of Residents**[53]
ACTIC	The entire state of Arizona including the Phoenix-Mesa-Glendale, Tucson-Nogales, Prescott, Lake Havasu City-Kingman, Yuma, and Flagstaff metropolitan statistical areas.	114,000	6.7
LA JRIC	The greater Los Angeles area consisting of the counties of: Los Angeles, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara, and Ventura along with all the cities inside the counties.	40,000	18
SNCTC	The Las Vegas-Henderson-Paradise metropolitan statistical area including the cities of Boulder City, Henderson, Las Vegas, North Las Vegas, and Clark County.	8,000	1.5
SWTFC	Central Texas from San Antonio south to the Mexico border.	1,240	2.3
NVRIC	The communities of northern Virginia adjacent to the nation's capital. The counties of Arlington, Fairfax, Loudoun, Prince William, and the city of Alexandria, along with the cities inside the counties.	1,089	2.8

As a natural tie to the large metropolitan areas served by the fusion centers, the fire and EMS agencies served by the fusion centers assemble into formidable public safety strength. Table 2 highlights the number of fire and EMS agencies and number of fire and EMS providers supported by each fusion center

[51] Ibid.

[52] Unless indicated otherwise, numbers in table provided by data capture form.

[53] Number of residents in millions.

Table 2. Fire and EMS Agencies Supported by Fusion Centers

Fusion Center	Number of Fire & EMS Agencies	Number of Fire & EMS Providers[54]
ACTIC	66	Unknown
LA JRIC	124	23,000
SNCTC	9	2,600
SWTFC	35	Unknown
NVRIC	11	5,000

B. CENTER AGE AND SPONSOR

The five fusion centers age range from the early TEWG days to relatively new startups less than 10 years old. In addition, each fusion center is sponsored by a local/municipal law enforcement agency. Furthermore, these fusion centers are all located in facilities with singular law enforcement missions and the majority being in stand-alone structures not directly affiliated with the host law enforcement traditional police station environment and not co-located with elements of the local fire and EMS agencies. Table 3 outlines the age of each studied fusion center along with the centers sponsoring agency.

Table 3. Fusion Center Age, Sponsoring Agency, and Located with Fire/EMS

Fusion Center	Year FC was Created	Sponsoring Agency of the FC	Co-Located with Fire/EMS
ACTIC	2004	Arizona Department of Public Safety	No
LA JRIC	1999	Los Angeles County Sherriff Department	No
SNCTC	2007	Las Vegas Metropolitan Police Department	No
SWTFC	2007	San Antonio Police Department	No
NVRIC	2004	Fairfax County Police Department	No

[54] An accurate number of fire and EMS providers in the fusion center AOR is a constantly changing number. Each fusion center provided approximation numbers based upon their last internal survey or general department information.

C. GOVERNANCE AND STAFFING

All five fusion centers have representation of the fire and EMS agency in the fusion center governance organization as well as dedicated representation of a uniformed staff member from the local fire and EMS agency in the fusion center. Four of the five centers have dedicated fire and EMS analyst, and the fifth uses an analytical section that shares information among the center agency partners (see Table 4).

Table 4. Fusion Center Governance and Staffing

Fusion Center	Fire EMS Part of Governance	Dedicated Fire/EMS Analyst	Uniformed Fire/EMS Rep
ACTIC	Yes	Yes	No
LA JRIC	Yes	Yes	Yes
SNCTC	Yes	Yes	Yes
SWTFC	Yes	Yes	Yes
NVRIC	Yes	No	Yes

In comparison only 50 percent of fusion centers (39 of the 78 centers) have fire service as a component in their fusion centers multidisciplinary governance as outlined in the 2014 National Network of Fusion Center's final report.[55] The National Network report summarizes the fusion center performance program evaluations.

D. BASELINE REQUIREMENTS

As discussed in Chapter I, in April 2010 DHS published the *Fire Service Integration for Fusion Centers: An Appendix to the Baseline Capabilities for State and Major Urban Area Fusion Centers*. The report notes that without clearly identified requests for information or intelligence requirements, the fusion center analysts are limited in their ability to highlight information as valuable to fire and EMS personnel.[56] Table 5 outlines how each of the selected fusion centers reported utilizing the baseline Intel requirements.

[55] Department of Homeland Security, *2014 National Network of Fusion Centers: Final Report* (Washington, DC: Department of Homeland Security, 2015), viii.

[56] Department of Justice, Global Justice Information Sharing Initiative, and Department of Homeland Security, *Fire Service Integration for Fusion Centers.*

Table 5. Baseline Intel Requirements

Fusion Center	Fire & EMS Baseline Intel Requirements
ACTIC	Not Reported
LA JRIC	Yes
SNCTC	Yes
SWTFC	No
NVRIC	Yes

E. LIAISON MODEL

A core mission of the fusion center is aggregating and then dispersing of threat-related information amongst federal and SLLT partners; how each center configures its outreach training and information exchange model is critical. A general model of outreach is the liaison officer (LO) with various names or prefixes. Three common prefixes are terrorism (TLO), fusion (FLO), and intelligence (ILO), each with separate scoping issues and associated connotations. The specifics of the title and the impact on outreach and interaction with residents and business professionals will be highlighted in Chapter IV along with two vastly different models of outreach evident by the significant disparity in the number of trained personnel. Table 6 breaks out which outreach model each center utilizes and the number of trained personnel.

Table 6. Outreach Model and Number of Trained Personnel

Fusion Center	Model	Number of Training Fire/EMS Personnel
ACTIC	TLO	400[57]
LA JRIC	TLO	1,500[58]
SNCTC	FLO	1,900
SWTFC	TLO	3
NVRIC	TLO	26

[57] The ACTIC data figure for number of fire and EMS personnel in Figure 6 reflects the active TLO personnel. Over 1,200 personnel have been trained per the ACTIC.

[58] The LA JRIC data figure for number of fire and EMS personnel in Figure 6 is based upon the last three years. Accurate figures prior to 2012 are unavailable.

The 2014 National Network of Fusion Centers final report highlights that only 40 centers have liaison officer participation from the EMS discipline and 59 centers report liaison officer participation from fire service organizations.[59]

F. COMMUNICATION AND INTERACTION/OUTREACH

The means and frequency by which the fusion center communicates is related to the style of liaison outreach and number of trained personnel from the fire and EMS agencies serviced by the fusion center. This is accomplished utilizing a mix of formats and styles of communication, including meetings, conference calls, video conferences, regular bulletins, special event/threat bulletins, and emails (see Table 7).

Table 7. Format of Communication/Interaction with Fire/EMS Agencies

Fusion Center	Format(s)	Frequency
ACTIC	Email bulletins Briefings and meetings	Daily Recurring
LA JRIC	Email bulletins Meetings—Fire executives and arson analysis	Daily Recurring
SNCTC	Email—for official use only (FOUO) products Meetings—Assorted	Daily Weekly and recurring
SWTFC	Email bulletins Meetings—Assorted	2 to 5 times a week Recurring
NVRIC	Email bulletins Meetings—Assorted	Situational dependent and weekly digest Recurring

The response on the fusion center data capture form for the frequency of communication revealed that some centers distribute a daily bulletin while the remaining utilize just-in-time, situational dependent and a weekly digest. The responses on the data

[59] Department of Homeland Security, *2014 National Network of Fusion Centers,* viii.

form related to meetings and other forms of dynamic two-way communication grouped mainly in a general category of recurring. This ranges from weekly, to bi-monthly, to monthly, and to quarterly. As noted in Table 1, the AORs for the fusion centers ranged from just over 1,000 square miles for the NVRIC to roughly 114,000 for the ACTIC. This demonstrates the vast differences of a regional center (the NVRIC) and the state designated and DHS primary fusion center (the ACTIC).

In addition to communications from the fusion center to the fire and EMS agencies, each center performs in-person outreach to the departments in its AOR. The forms and frequency of outreach are summarized in Table 8. The distinction between communication in Table 7 and outreach in Table 8 lies with the communication mainly pushed one-way from the fusion center (Table 7) while outreach is two-way interactive sessions between the fusion center fire and EMS analysis or liaisons and the fire and EMS agency representatives and/or personnel (Table 8). Meetings differ from both communication and outreach. Table 9 lists the frequency of meetings by each fusion center. More detail about the size of the AOR and the style of outreach and meetings will be discussed in Chapter V.

Table 8. Outreach Frequency and Methods

Fusion Center	**Frequency**	**Method**
ACTIC	1 per week	E-mail bulletins
LA JRIC	Daily	E-mail bulletins
SNCTC	1 per week	E-mail bulletins
SWTFC	2 to 5 per week	E-mail bulletins
NVRIC	1 to 2 per week	E-mail bulletins

Table 9. Meeting Cycle/Frequency

Fusion Center	**Regular Meetings**	**Frequency**
ACTIC	Yes	Once a week
LA JRIC	Yes	
SNCTC	Yes	Weekly
SWTFC	Yes	
NVRIC	Yes	Monthly with regional groups

G. CLOSING

The data capture form obtained a large amount of historical and factual information about each of the five fusion centers. The data ranged from geographic and demographics describing each fusion center's AOR as well as the size of the fire and EMS agencies while the fusion center and sponsoring agency data outlined the age and support structure for each center. As each fusion center is different the governance, baseline intelligence, and staffing data points provide information that influence the centers outreach methods, frequency, and format. A combination of geographic and demographic data along with the style and format outreach, specifically the liaison officer role, is analyzed in the next chapter.

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IV. LIAISON FUNCTIONS

As outlined in Chapter III, the selected five fusion centers provide support to communities from different areas across the country and serve metropolitan areas ranging from just over one million people to close to 20 million. The number of fire and EMS personnel parallels the population of the fusion center AOR and ranges from 2,500 personnel to an estimate of 23,000 for the LA JRIC.

This chapter focuses on the title and role of the liaison officers by each of the fusion centers. This highlights important differences in how the outreach occurs in difference fusion centers; however, regardless of title, each center is effective with its style of outreach.

A. LIAISON OFFICERS

As first mentioned in Chapter III and portrayed in Figure 6, the liaison officer is primarily responsible for outreach. A description of each officer (TLO, FLO, and ILO) can be founding the following sections. The key concerns about the liaison officers can be categorized into name/title and the quantity of liaisons within each agency.

1. Terrorism Liaison Officer

As TWEGs continued and anti-terrorism advisory councils (ATACs) developed followed by the early fusion centers, the title for the local point of contact from the police or fire and EMS agency to the collective fusion center family first was coined as terrorism liaison officer (TLO). As defined by the Terrorism Liaison Officer Network, a TLO is "not necessarily an expert in terrorism," but the "principal point of contact for a public safety agency in matters related to terrorism information."[60] Additional research reveals that the TLO terms originates back to 2005 California Commission on Peace Officer Standards and the 2006 Training Terrorism Liaison Officer program.[61]

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60 "What is a Terrorism Liaison Officer," Terrorism Liaison Officer Information Network, September 21, 2015, http://tlo.org/what_is_tlo.html.

61 "Terrorism Liaison Officer (TLO) Program: Public," Public Intelligence, August 10, 2010, https://publicintelligence.net/terrorism-liaison-officer-tlo-program/#footnote_1_14471.

As TLOs began watching and reporting anomalous activity they soon discovered being titled a "terrorism liaison officer" implied their role was focused on terrorism. This created problems, conflicts, and inserted barriers to effective outreach as these liaison officers where perceived to only work on terror and limited the officer's ability to build a sense of trust with organizations and personnel.

2. Fusion Liaison Officer

A derivative to the TLO is the prefix of fusion—coined the fusion liaison officer (FLO). This evolution broadened the scope and role of the liaison officer to receiving, analyzing, gathering, and sharing of data that is used to fuse information and, ultimately, create intelligence. Moving away from the terrorism title removed the connotation of only focusing on violent or dangerous activities that threaten people or governments; however, term "fusion" is not widely understood by the public.

While the basic definition of fusion is "a merging of diverse, distinct, or separate elements into a unified whole,"[62] when joined together with liaison officer the role and scope of the FLO is often misunderstood outside the fusion center community. As reported by one fusion center, during outreach activities with local religious groups and leaders, the liaison officer frequently has to clarify his or her role and scope as the term fusion is not understood.[63] As the prefix terrorism brings about negative connotations and erects barriers to communication the prefix of fusion creates ambiguity.

3. Intelligence Liaison Officer

A second derivative of the TLO is the intelligence liaison officer (ILO). The terrorism or fusion prefix is replaced with intelligence, which both separates from the message and connotations of terrorism and the frequently misunderstood term fusion. Along with the change in prefix comes the escalation in involvement and the level of the authority for fire or EMS agency.

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[62] *Merriam-Webster*, s.v., "Fusion," last modified September 25, 2015. http://www.merriam-webster.com/dictionary/fusion.

[63] Evan Hannah, personal communication to author, July 9, 2015.

In the NVRIC model, the ILO is the agency point of contact for information and intelligence push and pull with the fusion center. This individual is frequently a senior level department chief or executive staff that has the department head's approval to represent the department at the fusion center. This allows for the building of a community of trust among the ILOs and the fusion center staff. For the NVRIC, this role resides with the agency special operations chiefs.

The NVRIC utilizes the ILO with its multiple public and private sector partners, as it seeks the further integration of separate sector intelligence roles. As part of outreach efforts, the ILO works with the Health Security Intelligence Enterprise (HSIE), similar to the FSIE. The HSIE was pushed by the DHS Office of Health Affairs in conjunction with the DHS Office of Intelligence and Analysis as a means to reach into the public health and healthcare organizations to increase awareness of health security information sharing.

B. BASIC TERRORISM AWARENESS

While the studied fusion centers provide TLO, FLO, or ILO training to a wide group of recipients based upon their specific outreach model, a consistent level of basic terrorism awareness is not universally offered. The key element to utilizing the responders from fire and EMS agencies as information reporters is the ability to recognize the specific terrorism behaviors and indicators. For instance, the fire and EMS providers may observe a materials storage area of items and components that can be used for bomb making; they could observe bystanders photographing incident scenes or critical infrastructure elements, or persons the testing and probing of security. These activities alone may not indicate illegal activity but may be precursors or planning steps to a terror plot. Given the collection of data for this research, it is safe to assume that the nearly two million fire and EMS responders across the country have not received a formal, base level of awareness to the indicators and examples of suspicious activity.[64]

[64] Bureau of Justice Assistance, *Suspicious Activity Reporting Indicators and Examples*.

C. STAFFING MODEL

Another use or twist in the use of the acronym for the liaisons officer role can be broken into those that staff the fusion centers and those field personnel that liaise with the fusion center. Many centers fill staff positions with personnel loaned or detailed from their primary agencies. Often times these "detailed" personnel assume the title of TLO while professional analyst fills the full time positions by staff specifically trained in information and intelligence analysis. As noted in Chapter III, three of the centers, Arizona, Los Angeles, and southwest Texas, utilize the TLO title while one (southern Nevada) utilizes FLO title, and one (northern Virginia) utilizes the ILO title.

D. QUANTITY OF LIAISON OFFICERS

The studied fusion centers have structured their data collection and information flow to fire and EMS personnel very differently. The density of trained liaison offers results in very different amounts of information captured and a different form of intelligence being created and disseminated. As noted Chapter III, Table 6, the number of trained liaison officers ranges from two dozen at the NVRIC to almost two thousand at the SNCTC. Table 10 outlines the ratio of trained liaison personnel per fire department and the ratio of trained liaison personnel to the total number of fire and EMS personnel in the AOR.

Table 10. Ratio of Trained Personnel to Number of Departments and Number of Personnel

Fusion Center	**Ratio to number of Departments**	**Ratio to number of Total Personnel**
ACTIC	Unknown	Unknown
LA JRIC	12 per department	1 in every 15 personnel
SNCTC	211 per department	1 in every 1.5 personnel
SWTFC	Unknown	Unknown
NVRIC	2 per department	1 in every 192 personnel

Table 10 highlights two distinct approaches to outreach training and liaison. The SNCTC has roughly 1,900 trained TLOs throughout the nine agencies in the Las Vegas-

Henderson-Paradise metropolitan area. This results in one out of every two fire or EMS personnel being trained as TLOs. A clearly different approach to liaison is taken by the NVRIC; it utilizes 26 ILOs among the 11 fire and EMS agencies in the northern Virginia area. This results in a ratio of one trained liaison for every 192 fire and EMS personnel. As highlighted earlier in this chapter, the NVRIC utilizes the ILO outreach and liaison model, which accounts for this difference.

E. ROLE OF LIAISON OFFICERS

As outlined above in the quantity of liaison officer section, some departments and fusion centers select to have a very limited group of senior level department officials as opposed to training the majority of the department personnel as TLOs. Agencies and fusion centers utilizing the senior level liaison officer model create a natural data and information check and balance stop. This check and balance stop allows for the bulletins, releases, and intelligence products to be reviewed, synthesized to the agencies need, and selectively distributed to agency personnel with the need to know. The opposite model is one where almost 50 percent of the employees in the agency receive the push directly from the fusion center, as each employee is a TLO and a recipient on the fusion center distribution list.

F. CLOSING

The title of the liaison officers has impact on their interactions with personnel outside of the intelligence community, especially if the liaison is responsible for providing information to similar disciplines. The connotations and message that is perceived and conveyed by a specific title, be it terrorism or fusion or intelligence, impact the liaisons acceptance in some interactions. Of equal impact on outreach to the firefighters and paramedics on the rigs is the role of liaison officer the department selects. Having over 50 percent of the department trained as liaisons is very different than only training several key individuals in each department. Chapter V looks closely at the number of responders and fire and EMS departments served by each fusion center and how this plays a role in the effectiveness of outreach, interaction, and education.

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V. SIZE AND OUTREACH

This chapter looks closely at two sections of the fusion center operation. The first is the size of the fusion center AOR, the number of fire and EMS agencies served by the fusion centers, and how the size of the AOR and the number of responders/agencies correlates to effective outreach, interaction, and education. The second analysis looks at the presence of a uniformed fire officer at the fusion center and their impact on the outreach, interaction, and education.

A. ANALYSIS OF FUSION CENTER AOR SIZE AND OUTREACH

To establish a baseline for comparison to measure and compare each state, an analysis of the 50 states and the District of Columbia on size and structure was performed. The three U.S. territories with primary fusion centers were excluded from the analysis due to a lack of information about their fire department. These baselines centered around the state's size in square mile of land and water, the number of counties or statistically equivalent entities,[65] the population based upon the 2013 U.S. Census Bureau data, and the number of fire departments in the state. The fire department data was derived from the DHS U.S. Fire Administration (USFA) January 2015 National Fire Department Census data. This data represents 90 percent of the fire departments through the county based upon a self-reporting program. As of January 2015, there were 27,140 departments registered with the National Fire Department Census.[66] For the 11 states[67] with more than one fusion center, the analysis included both primary and recognized fusion centers. The full table analysis is available in Appendix B.

[65] County is the primary legal division for sub-municipal organizations. In some states the term is district, parish, or boroughs. This paper utilizes county to identify county and all statistically equivalent entities.

[66] "National Fire Department Census Quick Facts," U.S. Fire Administration, October 2, 2015, https://apps.usfa.fema.gov/census/summary.

[67] The states are: California (6), Florida (3), Illinois (2), Michigan (2), Missouri (3), Nevada (2), Ohio (3), Pennsylvania (3), Texas (7), Virginia (2), and Wisconsin (2). The number in parentheses indicates the total of primary and recognized fusion centers in the state.

The size disparity across the 50 states is enormous. The smallest state, Rhode Island, is just over 1,500 square miles, while Alaska is the largest at roughly 665,000 square miles.[68] The state footprint is meaningless when not associated to the state's population as Alaska has only 735,000 residents while Rhode Island has just over 1,000,000 residents.[69] Table 11 places the five studied fusion centers in perspective to the area and population served as compared to the 50 states and the three territories. The rank column represents the fusion center as if it was a state.

Table 11. Fusion Center Comparison in Area and Population

Fusion Center	**Size of AOR**	**Size Rank**	**Population**[70]	**Population Rank**
ACTIC	114,000	6[71]	6.7	15
LA JRIC	40,000	38	18	5
SNCTC	8,000	48	1.5	40
SWTFC	1,240	51	2.3	36
NVRIC	1,089	51	2.8	35

Two of the studied fusion centers, LA JRIC and SNCTC, service AORs larger than many states, and all of the studied fusion center population rank higher than dozens of states. They are amongst the top 10 percent of U.S. population centers as calculated by the U.S. Census Bureau.[72]

The comparison of the fusion center size of the AOR and the population identifies that the five studied centers serve a diverse group of large states to small urban areas while also supporting predominately large dense metropolitan areas. Four of the studied

[68] U.S. Census Bureau, *United States Summary: 2010, Population and Housing Unit Counts, 2010 Census of Population and Housing* (Washington, DC: U.S. Government Printing Office, 2012), http://www.census.gov/prod/cen2010/cph-2-1.pdf.

[69] Ibid.

[70] Population in millions.

[71] As the ACTIC covers the entire state of Arizona—the ACTIC rankings corresponds to the actual Arizona state positions.

[72] "Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More, Ranked by July 1, 2014 Population: April 1, 2010 to July 1, 2014," U.S. Census Bureau Population Division, May 2015, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk.

AORs focus on dense population centers while the ACTIC serves the entire state of Arizona.

B. STATE AND COUNTY FIRE DEPARTMENT STRUCTURE

The exact structure and affiliation of individual fire departments to the county or municipal level to the state level varies from state to state, but all follow a general structure. The individual fire departments are separately organized and the department frequently operates as a corporation under general business law. The individual fire departments in the county sub-division operate under an association or committee process. This is frequently a group of fire department leaders that are elected or selected to establish common objectives, operating procedures, and support activities for all the departments with the set geographic boundary.

The next level above the county sub-division may be a statewide fire department association, committee, or chief's group or a mid-level regional sub-division that groups multiple counties. Like the county level group, the statewide group focuses on setting direction and guidance to the county and/or regional association or committees while obtaining direction and guidance from the state governor or public safety director or similar elected or appointed official. This creates a multiple tier system from the local community fire chief to the statewide policy decision element.

C. FUSION CENTER OUTREACH TO FIRE DEPARTMENTS

A state's size influences county division within the state. For instance, Texas, as the second largest state, has 254 counties while Delaware, the forty-nine state in size, is divided into three counties. Relational to the number of counties in the state is the number of fire departments. Texas has 1,519 departments while Delaware records 58 departments spread across its 2,500 square miles. The table in Appendix B includes data on the number of counties in each state.

One critical element to effective outreach, interaction, and education for the fusion center liaison staff is frequent contact and interaction with local and regional public safety managers and leaders. While on-going and recurring contact and interaction

can be accomplished via email, bulletins, or conference/video calls, face-to-face contact opens more doors. In large states, measured by both geographical size and or population, this level of interaction is a huge hurdle for the fusion fire liaison personnel unless the liaison position is staffed with multiple personnel to distribute the AOR into smaller segments.

Imagine the analyst in Minnesota who attempts to outreach to over 700 fire departments spread over 87 counties and just under 87,000 square miles. Minnesota is supported by one fusion center located in Saint Paul, a suburb of Minneapolis, along the state's eastern border with Wisconsin. This requires a three and a half hour one-way car trip to the southwest border communities of Luverne, near South Dakota, and a six-hour one-way trip to Warroad, along the northern state boarder with Canada.

For the 39 states with a single fusion center, the average number of counties is 53, and the average number of fire departments is 438. This creates an almost insurmountable challenge of getting the fusion center liaison staff to all segments of the state, to at least interact with the county fire department association or chiefs committee.

D. AOR AND NUMBER OF FIRE DEPARTMENTS

Part of the analysis for this thesis includes looking at the number of fire departments in each state when compared to the number of fire and EMS agencies served by the studied fusion centers. Excluding the District of Columbia, with three reported departments in the USFA Census data, the lowest number of departments is found in Hawaii, which has with 11. In contrast, Pennsylvania records 1,795 departments.

Recall that Table 2 in Chapter III outlined the number of fire and EMS agencies supported by the studied fusion centers. The SNCTC was the lowest at nine, followed closely by the NVRIC at 11. The SWTFC supports 35 agencies while the ACTIC supports 66. The LA JRIC supports 124 fire and EMS agencies in seven counties that comprise their AOR. The LA JRIC supports more fire and EMS agencies in their AOR than reported in the entire states of Wyoming, Nevada, Rhode Island, Delaware, and Hawaii.

The USFA census data identifies 248 fire departments in Arizona[73] while the ACTIC reported supporting 66. The delta develops from the ACTIC internal requirement that a TLO must be a sworn paid fire department official. The 400 active TLOs interacting with the ACTIC are from 66 departments across the state. The USFA census data breaks down the 248 departments as: 62 career, 41 mostly career, 65 mostly volunteer, and 80 volunteer.[74] The ACTIC utilizes the Community Liaison Program (CLP), which provides outreach to volunteer fire departments

The comparison of the fusion center AOR and the number of fire departments identifies that the five studied centers are effective at outreach, interaction, and education. This is true while each fusion center supports a wide range of fire and EMS agencies, ranging from a small core group, nine or 11, or, in the case of LA JRIC, up to 124 departments.

The geographic territory supported by many fusion centers is massive. While some smaller states account for far less population and square miles than do some large metropolitan areas—the need for interaction, outreach, and education to fire and EMS agencies does not diminish with size. The 251 fire departments in Connecticut, the 246 fire departments in Maryland, and the 292 fire departments in South Dakota all have the same need for support from their respective fusion center. The geographic difference in a state, such as the 77,000 square miles in South Dakota and the 5,500 square miles in Connecticut, make the task much more challenging.

E. FIRE OFFICER IN FUSION CENTER

Each of the studied fusion centers had at least one uniformed fire officer assigned to the fusion center. All of the fusion centers operated with a minimum of a captain rank as the liaison to the fusion center with some having multiple fulltime personnel. The fusion centers with multiple uniformed liaisons frequently have a first or second level chief officer, often identified as a battalion or assistant chief, filling the second or third position. In traditional station duties and assignments, the captain position is responsible

[73] "National Fire Department Census Quick Facts," U.S. Fire Administration.

[74] Ibid.

for supervision and management of staff consisting of multiple other crewmembers and multiple services. The battalion chief position is the first level command officer, who carries out primary administrative and management work both focused on direct emergency response. She or he is also responsible for coordinating and exchanging information with other fire department personnel, other public safety/response organizations, and the public.

The captain provides direction, instruction, supervision, and guidance along with planning and coordinating work while exchanging information with fire department personnel, other public safety/response organizations, and the public. This places the captain as a "trusted" firefighter who rides apparatus and establishes the bridge to outreach to the other departments. The captain's position brings along the field credibility in the fire department, similar to the detective in law enforcement agencies. The fire officer, regardless of rank, is able to provide context and field experience to the analysis and fusion process that the analyst does not possess nor can relate. This lack of context and field experience can lead to lost opportunities, failed connections, or exclusion from critical information flow.

F. INTELLIGENCE ANALYSTS

In all five fusion centers, the fire officer fills more of a liaison or conduit role than that of an analyst. Each of the centers had either dedicated civilian fire and EMS analyst or a pool or team of professional analysts that focus on identifying and extract key points from products, reports, and documents to then analyze the key points. They then synthesize the points into a report that support the mission assignment. The Federal Bureau of Investigations (FBI) breaks intelligence analysts into three categories: strategic, tactical, or collection/reporting.[75] The FBI provides a general description of the strategic analyst as working on "long term threats on a broad scale" while the tactical analyst is "less big picture and more boots on the ground"[76] and the collection/reporting

[75] "Intelligence Analysts: Part 2 The Subject Matter Experts," Federal Bureau of Investigations, August 23, 2011, https://www.fbi.gov/news/stories/2011/august/intelligence-analysts-subject-matter-experts.

[76] Ibid.

analyst utilize the intelligence data tools and work to integrate across agency systems. As noted above the fire officer in each of the fusion centers is a liaison/conduit for the field providers to the fusion center professional analyst, a mix of strategic and tactical.

G. FIRE OFFICER—INTELLIGENCE ANALYST OR DISCIPLINE EXPERT

As noted above, all of the fusion centers have professional analyst filling their intelligence and analysis positions and utilize the uniformed fire officer as an expert from the fire and EMS discipline. This role, combined with the fire department rank of captain, molds nicely into a position of trust with the field personnel and fire department chiefs while providing a respected field responder/practitioner inside the fusion center.

H. CLOSING

The size of the fusion center AOR and the number of fire and EMS agencies served by the fusion center vary greatly from state to state. The larger the area, the more departments and personnel the fusion center is tasked with supporting, and the more critical adequate fusion center staffing becomes. Along with sufficient staffing for the liaison positions, utilizing a uniformed fire officer paired up with the tactical and/or strategic analyst builds a strong team to support outreach, interaction, and education.

Chapter VI outlines the four key functions that this study has developed that can be implemented at fusion centers to improve the outreach, interaction, and education with fire and EMS agencies.

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VI. RECOMMENDATIONS

The members of the U.S. fire and EMS agencies have reacted to the world changing events of September 11, 2001, the mass transit attacks in London and Madrid, the hybrid targeted violence of the 2008 Mumbai attacks as well as the increase in active shooter violence. The reaction has been to increase training and preparedness for a broader range of threats, emergencies, and incidents. While this additional training is appropriate for ensuring awareness and safer response to incidents, it does not go far enough towards collecting field responder observations with the hope of better actionable intelligence. Fire and EMS personnel are uniquely positioned to collect data that may result in actionable intelligence if it were effectively collected and analyzed.

While some fusion centers are effective in their approaches to outreach, interaction, and education to fire and EMS personnel, this thesis focused on four (4) key functions that are present in the studied centers and can be used to improve the operations at other fusion centers. The four functions are:

- Provide basic terrorism outreach and education training to all public safety personnel:
- Distribute intelligence products to key decision makers in each agency:
- Utilize uniformed senior fire and EMS line officers as subject matter experts to the fusion center analysis staff, and:
- Utilize multiple fire and EMS liaisons to deliver actionable intelligence back to front line fire and EMS personnel. Additional liaison(s) to be added, as needed, to support broad geographical areas to address span of control issues.

A. RECOMMENDATION 1: BASIC TERRORISM TRAINING

Each fusion center establishes its training and outreach program with targeted audience expectations based upon their outreach model, to a wide range of fire and EMS personnel or a narrower group of key decision makers. This creates different levels of training among fire and EMS personnel. As outlined in Chapter VI, several of the studied fusion centers train nearly 50 percent of the fire and EMS responders in the AOR as

TLOs while other fusion centers focus training and outreach to key fire and EMS agency decision makers.

Training the two million fire and EMS personnel on suspicious activity behaviors and indicators would significantly increase the reporting of suspicious activity observed during the regular activates of fire and EMS personnel. Hazardous materials awareness was integrated in the late 1970s and early 1980s. In a similar fashion, initial suspicious activity report (SAR) training as well as reoccurring training must become a basic element of initial training for all personnel. Incorporating basic terrorism training for all personnel would expand the umbrella of fire and EMS personnel who can identify the behaviors and indicators beyond just the trained TLOs.

To ensure that all of the nearly two million fire and EMS personnel across the country are able to recognize the suspicious behaviors and indicators associated with pre-incident terrorism activities, an expanded push must be made by each of the 78 fusion centers to support the National Suspicious Activity Reporting (SAR) Initiative (NSI). NSI is a joint effort of the FBI, DHS, along with STLL law enforcement agencies, and seeks to offer basic training for all personnel in recognition and identification of suspicious activity. Since the fall of 2013, NSI has been the focus of the FBI, DHS, and Bureau of Justice Assistance for a coordinated training platform for "seamless sharing of SAR's"[77] while working closely with the National Network of Fusion Centers to support the local fusion center training and SAR process.

NSI currently provides a free nationwide platform for web-based training targeting emergency responders, police, fire and EMS personnel on the recognizing behaviors that are frequently association with pre-incident terrorism activities while ensuing that the public's civil rights and liberties are protected. The NSI has also created similar SAR awareness web-based trainings for private sector security, parole and correction officers, 9-1-1 operators, emergency management officials, public health and health care, and workers in the maritime industry.

[77] "About the NSI," Nationwide SAR Initiative, accessed September 25, 2015, https://nsi.ncirc.gov/about_nsi.aspx.

The transition to the NSI platform will result in training and outreach savings for fusion centers that utilize a wide saturation TLO training delivery model. These fusion centers will be able to reduce classroom based training sessions as the NSI training can replace the majority of the classroom TLO sessions.

B. RECOMMENDATION 2: ESTABLISH KEY POINTS OF CONTACT

Currently, too much information is being distributed and cross-distributed between and among numerous distribution lists on terrorism related subjects. This leads to the readers becoming overloaded with information and unable to quickly access and implement relevant pieces of information that would improve incident prevention and/or response. If fire and EMS agencies selected a core group of key senior chief level decision makers to be the conduit from their given agency to the fusion center, the information passed along would be more streamlined and come with specific directions on how and where the information was to be applied. Currently, NVRIC does just this using the ILO model. For example, the key decision maker follows agency procedures for review of the joint bulletin, roll call release, or suspicious activity report to determine the applicability to his or her specific agency and personnel.

C. RECOMMENDATION 3: UNIFORMED FIRE LIAISON TO FUSION CENTER

All of the studied fusion centers operate with uniformed senior fire and EMS line officers as liaisons/subject matter experts for the fusion center analysis staff. This places an experienced field provider/responder in the fusion center to support the fusion center watch section, the intelligence and analysis staff, as well as, the liaison and training staff. This uniformed officer provides a field perspective to the analysis while provide credibility of the information source when distributed to the field responders.

All fusion centers and fire and EMS agencies must develop a program upon which uniformed fire and EMS line officer (or officers) are assigned to all fusion centers. A frequent hurdle that limits the assignment or detail of an operational fire or EMS officer to the fusion center is the salary and backfill cost to the department. The funding

issues, while on the surface are significant, can be overcome by designing the officer's position to be both a liaison as well as a suspicious activity reporting (SAR) POC.

There are three primary grant sources available to fire and EMS departments to provide support to fusion center operations: DHS HSGP, FEMA UASI, and DOJ JAG. These grants can be utilized to completely or in part fund the positions within the fusion center.

D. RECOMMENDATION 4: MULTIPLE LIAISONS TO SUPPORT WIDE AREAS

The fusion centers need to carefully plan the number of liaison offers they have so that liaisons are not overwhelmed with the size of their territory or breadth of their assigned regions, counties, or agencies. As noted in Chapter V and shown in Appendix B, some fusion centers support over 700 fire departments spread out across almost 90,000 square miles and just under 90 counties. This creates an enormous AOR that is impractical to manage with limited fusion center interaction, outreach, and education staff.

One core element to effective outreach is a manageable element of agencies, counties, and communities assigned to a specific analyst or liaison. Each fusion center must review its specific AOR and the geographic features, the defined organization/sub-division of the state's fire and EMS agencies, and the infrastructure of the fusion center to create a manageable distribution of work. Establishing manageable groupings of agencies, counties, and regional divisions of the AOR will develop into effective interaction, outreach, and education pathways for the fusion center.

The same grant funding sources as outlined earlier for the uniformed fire liaison are available for multiple liaison officer positions. As the need for multiple liaisons varies based upon the state/fusion center specific issues, each state legislature and/or the fusion center sponsoring agency should be approached for funding. As these liaison positions will have a connection and/or affiliation to the fire and EMS agencies, the statewide agency/organization for fire and EMS regulation and oversight are also possible funding sources.

E. CONCLUSION

Four predominate practices emerged from the study of five fusion centers. These practices have resulted in effective interaction, outreach, and education programs to the fire and EMS agencies and should be considered for adoption in other fusion centers. The ability for the fire or EMS personnel to identify and appropriately report suspicious behaviors and indicators of potential terrorist activities would result in more actionable intelligence that could prevent future tragedies. The two million fire and EMS responders answer thousands of calls a day, and their expanded ability to submit SARs will better enable law enforcement to interrupt the planning of a terror plot.

The fusion centers have developed into a strong network of analysis and sharing centers of terrorism data. The effectiveness of the fusion centers can be improved with the broader integration of fire and EMS agencies/personnel. This expansion requires intergroup communication and sharing as well as funding to place the proper personnel in the fusion centers.

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APPENDIX A. FUSION CENTER QUESTIONNAIRE

Name: Rank/Title:

Contact Information Email:

Agency: Phone:

Fusion Center Name:

Geographic Data for Area of Responsibility (AOR)

General geographic description of AOR	[Enter response here]
Size of AOR—square mileage	[Enter response here]
Number of residents in AOR	[Enter response here]
Number of municipalities in AOR	[Enter response here]
Number of fire and EMS providers in AOR	[Enter response here]
Number of fire and EMS agencies in AOR	[Enter response here]

Fusion Center (FC)—Structure

What year was the FC created?	[Enter response here]
What year was your FC recognized by DHS as a FC?	[Enter response here]
What is the primary mission of your FC?	[Enter response here]
What threats or trends initiated the creation of the FC?	[Enter response here]

Fusion Center (FC)—Structure (continued)

Does the FC governance include a representative(s) from a fire/EMS agency? If no, please explain.	[Enter response here]
Is the FC co-located with a fire/EMS agency or an emergency management agency? If not, who is the primary/host agency?	[Enter response here]
Does the FC have a dedicated fire/EMS analyst? If no, please explain.	[Enter response here]
What is the analysis background/training?	[Enter response here]
Do they work onsite daily at the FC?	[Enter response here]
Are they uniformed, civilian, or have volunteer Fire/EMS background?	[Enter response here]
Does the FC have baseline Fire/EMS intelligence requirements? ***Please provide a copy.***	[Enter response here]
Are the FC's baselines capabilities in line with the Fire Service Integration for Fusion Centers Appendix?	[Enter response here]
Does the FC use the terrorism liaison officer (TLO) program for outreach?	[Enter response here]
In this question TLO is a broad grouping, including TLO, intelligence liaison officer (ILO), and fusion liaison officer (FLO)	
If so—how many fire/EMS terrorism liaison officers do you have	[Enter response here]
Does the FC collaborate and liaise with the fire/EMS agencies in their area of responsibility?	[Enter response here]
How do they liaise? How often?	[Enter response here]
What triggers the interaction?	[Enter response here]

Fusion Center—Operation/Outreach

How many staff hours, of the fire/EMS analyst or other FC staff, are dedicated to training fire/EMS providers in the center's AOR	[Enter response here]
What type(s) of outreach does the fusion center participate in?	[Enter response here]
Does the FC have regular meetings with the fire/EMS agencies?	[Enter response here]
How frequent does the FC push bulletins to the fire/EMS agencies?	[Enter response here]
What triggers the FC to send out the bulletins?	[Enter response here]
Does the FC have separate groups of contacts or organizations under fire/EMS?	[Enter response here]
What agencies does the fire/EMS analyst collaborate with on a regular basis?	[Enter response here]

Suspicious Activity Reporting

Does the FC have a suspicious activity reporting process for fire/EMS personnel to submit?	[Enter response here]
Is it on-line? Paper/fax or other?	[Enter response here]
Have suspicious activity reports been reported by fire/EMS agencies?	[Enter response here]
Have suspicious activity reports submitted by fire/EMS agencies been used to support investigations?	[Enter response here]

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APPENDIX B. NUMBERS

State/Territory	Size	Population	Number of Counties	Number of Fusion Centers	Number of FDs
Alabama	52,420.07	4,833,000	67	1	799
Alaska	665,384.04	735,000	30	1	157
Arizona	113,990.30	6,626,000	15	1	248
Arkansas	53,178.55	2,959,000	75	1	675
California	163,694.74	38,332,000	58	6	870
Colorado	104,093.67	5,268,000	64	1	325
Connecticut	5,543.41	3,596,000	8	1	251
Delaware	2,488.72	925,000	3	1	58
District of Columbia	68.34	646,000	1	1	3
Florida	65,757.70	19,552,000	67	3	477
Georgia	59,425.15	9,992,000	159	1	463
Guam	570.62	182,000		1	
Hawaii	10,931.72	1,404,000	5	1	11
Idaho	83,568.95	1,612,000	44	1	193
Illinois	57,913.55	12,882,000	102	2	1103
Indiana	36,419.55	6,570,000	92	1	762
Iowa	56,272.81	3,090,000	99	1	731
Kansas	82,278.36	2,893,000	105	1	502
Kentucky	40,407.80	4,380,000	120	1	677
Louisiana	52,378.13	4,625,000	64	1	416
Maine	35,379.74	1,328,000	16	1	338
Maryland	12,405.93	5,928,000	24	1	263
Massachusetts	10,554.39	6,692,000	14	1	362
Michigan	96,713.51	9,895,000	83	2	962
Minnesota	86,935.83	5,420,000	87	1	726
Mississippi	48,431.78	2,991,000	82	1	416
Missouri	69,706.99	6,044,000	115	3	772
Montana	147,039.71	1,015,000	56	1	279
Nebraska	77,347.81	1,868,000	93	1	389

State/Territory	Size	Population	Number of Counties	Number of Fusion Centers	Number of FDs
Nevada	110,571.82	2,790,000	17	2	86
New Hampshire	9,349.16	1,323,000	10	1	212
New Jersey	8,722.58	8,899,000	21	1	709
New Mexico	121,590.30	2,085,000	33	1	244
New York	54,554.98	19,651,000	62	1	1664
North Carolina	53,819.16	9,848,000	100	1	1078
North Dakota	70,698.32	723,000	53	1	324
Ohio	44,825.58	11,570,000	88	3	1143
Oklahoma	69,898.87	3,850,000	77	1	740
Oregon	98,378.54	3,930,000	36	1	307
Pennsylvania	46,054.35	12,773,000	67	3	1795
Puerto Rico	5,324.84	3,596,000		1	
Rhode Island	1,544.89	1,051,000	5	1	72
South Carolina	32,020.49	4,774,000	46	1	441
South Dakota	77,115.68	844,000	66	1	292
Tennessee	42,144.25	6,495,000	95	1	637
Texas	268,596.46	26,448,000	254	7	1519
U.S. Virgin Islands	732.93	104,000		1	
Utah	84,896.88	2,900,000	29	1	194
Vermont	9,616.36	626,000	14	1	202
Virginia	42,774.93	8,260,000	133	2	547
Washington	71,297.95	6,971,000	39	1	397
West Virginia	24,230.04	1,854,000	55	1	409
Wisconsin	65,496.38	5,742,000	72	2	775
Wyoming	97,813.01	582,000	23	1	114

Population source: 2013 U.S. Census data. "United States Summary: 2010, Population and Housing Unit Counts, 2010 Census of Population and Housing," U.S. Census Bureau, September 2012, http://www.census.gov/prod/cen2010/cph-2-1.pdf.

Number of fire departments source: United States Fire Administration, "2015 National Fire Department Census Quick Facts, U.S. Fire Administration, October 5, 2015, https://apps.usfa.fema.gov/census/summary. USFA data does not include the three territories.

Size measured in square miles, including land and water.

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