NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA

THESIS

9-1-1: WHAT’S OUR EMERGENCY?
DIAGNOSING A STRUGGLING OCCUPATION
SERVING A NEGLECTED SYSTEM

by

Kevin P. Haight

March 2020

Co-Advisors: Lauren Wollman (contractor)
Shannon A. Brown

Approved for public release. Distribution is unlimited.
### 1. Agency Use Only (Leave blank)

### 2. Report Date
March 2020

### 3. Report Type and Dates Covered
Master's thesis

### 4. Title and Subtitle
9-1-1: WHAT'S OUR EMERGENCY? DIAGNOSING A STRUGGLING OCCUPATION SERVING A NEGLECTED SYSTEM

### 5. Funding Numbers

### 6. Author(s)
Kevin P. Haight

### 7. Performing Organization Name(s) and Address(es)
Naval Postgraduate School
Monterey, CA 93943-5000

### 9. Sponsoring / Monitoring Agency Name(s) and Address(es)
N/A

### 11. Supplementary Notes
The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

### 12a. Distribution / Availability Statement
Approved for public release. Distribution is unlimited.

### 12b. Distribution Code
A

### 13. ABSTRACT (maximum 200 words)
In 2019, only twelve U.S. states/territories required the Emergency Communications Officer (ECO) to meet hiring standards, twenty-nine required basic training standards, twenty-three required continuing-education standards, and twenty-three required use of pre-arrival medical instruction protocols. Furthermore, the federal government misclassifies the profession within its Office and Administrative Support occupational grouping, as opposed to the Protective Service occupational grouping. There is substantial evidence of 9-1-1 failures in professionalism and proficiency, nationwide. This thesis seeks to answer the question: How could the nation’s 9-1-1 system—specifically its ECO occupation—evolve to address problems and maximize advantages to public safety and homeland security? It is a policy analysis but includes some qualitative analysis.

Professionalization and standardization need to occur within the system, beginning with an accurate occupational classification. Increased compensation commensurate with the work performed is also needed, and that should be accompanied with mandated hiring, basic training and certification standards, and requirements in the use of pre-arrival medical instruction protocols. Lastly, a termination of all jurisdictional misappropriation of 9-1-1 fees, updated and sustainable funding streams, and adequate investment in technological enhancements necessary to improve the system's efficiency, proficiency, redundancy, and resiliency need to occur.

### 14. Subject Terms
9-1-1, 911, public safety telecommunicator, public-safety telecommunicator, emergency dispatcher, emergency telecommunicator, Emergency Communications Officer, Emergency Communications Center, ECO, ECC, PSAP, Public Safety Answering Point, 9-1-1 dispatcher, 911 dispatcher, dispatcher

### 15. Number of Pages
109

### 16. Price Code

### 17. Security Classification of Report
Unclassified

### 18. Security Classification of This Page
Unclassified

### 19. Security Classification of Abstract
Unclassified

### 20. Limitation of Abstract
UU
9-1-1: WHAT’S OUR EMERGENCY? DIAGNOSING A STRUGGLING OCCUPATION SERVING A NEGLECTED SYSTEM

Kevin P. Haight
Captain, Statewide Emergency Communications, Idaho State Police
BA, Ohio Christian University, 2018

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)

from the

NAVAL POSTGRADUATE SCHOOL
March 2020

Approved by: Lauren Wollman
Co-Advisor

Shannon A. Brown
Co-Advisor

Erik J. Dahl
Associate Professor, Department of National Security Affairs
ABSTRACT

In 2019, only twelve U.S. states/territories required the Emergency Communications Officer (ECO) to meet hiring standards, twenty-nine required basic training standards, twenty-three required continuing-education standards, and twenty-three required use of pre-arrival medical instruction protocols. Furthermore, the federal government misclassifies the profession within its Office and Administrative Support occupational grouping, as opposed to the Protective Service occupational grouping. There is substantial evidence of 9-1-1 failures in professionalism and proficiency, nationwide. This thesis seeks to answer the question: How could the nation’s 9-1-1 system—specifically its ECO occupation—evolve to address problems and maximize advantages to public safety and homeland security? It is a policy analysis but includes some qualitative analysis.

Professionalization and standardization need to occur within the system, beginning with an accurate occupational classification. Increased compensation commensurate with the work performed is also needed, and that should be accompanied with mandated hiring, basic training and certification standards, and requirements in the use of pre-arrival medical instruction protocols. Lastly, a termination of all jurisdictional misappropriation of 9-1-1 fees, updated and sustainable funding streams, and adequate investment in technological enhancements necessary to improve the system's efficiency, proficiency, redundancy, and resiliency need to occur.
THIS PAGE INTENTIONALLY LEFT BLANK
TABLE OF CONTENTS

I. INTRODUCTION .........................................................................................................................1
   A. PROBLEM STATEMENT ............................................................................................................1
   B. RESEARCH QUESTION ...........................................................................................................5
   C. LITERATURE REVIEW ..........................................................................................................5
      1. ECO Job Classification .......................................................................................................6
      2. ECC Staffing and Funding .................................................................................................8
      3. Professionalization and Standardization ..........................................................................10
   D. RESEARCH DESIGN .............................................................................................................15

II. THE EMERGENCY COMMUNICATIONS OFFICER: A CLERICAL OR PROTECTIVE OCCUPATION? ......................................................................................................................17
   A. BEGINNINGS OF THE 9-1-1 SYSTEM AND ITS ECO OCCUPATION ..................................17
   B. THE OMB’S OCCUPATIONAL CLASSIFICATIONS .............................................................19
   C. ECO RECLASSIFICATION EFFORTS ....................................................................................20
   D. COUNTERARGUMENTS TO OMB’S RECLASSIFICATION DENIAL ......................................23
      1. Operational Counterarguments .......................................................................................24
      2. Environmental Counterarguments ....................................................................................37
      3. Political Counterarguments ...............................................................................................38

III. ECC STAFFING AND FUNDING CHALLENGES .....................................................................41
   A. PERSONNEL RECRUITMENT AND RETENTION .................................................................41
   B. 9-1-1 FUNDING PAUCITY ...................................................................................................44

IV. PROFESSIONALIZATION AND STANDARDIZATION .....................................................................49
   A. CURRENT STATE OF AFFAIRS .............................................................................................49
      1. Inventory of States With/Without Mandated Minimum Hiring, Training, and Certification Requirements .........................................................................................................................50
      2. What Are the Commonalities/Disparities Among the Varied Hiring, Training, and Certification Requirements? ...................................................................................................................53
      3. Inventory of States With/Without Mandated Certification and Use of Pre-arrival Medical Protocols (EMD) .........................................................................................................................54
   B. THEORIES AND PROCESSES SURROUNDING PROFESSIONALIZATION AND STANDARDIZATION OF OCCUPATIONS ...........................................................................................................55
      1. Pathways To Professionalization and Standardization ..................................................58
LIST OF FIGURES

Figure 1. Common 9-1-1 Call Processing Flow

Figure 2. Mandated Hiring (Character) Standard

Figure 3. Mandated Minimum Training Standard

Figure 4. Mandated Continuing Education Standard

Figure 5. Mandated EMD Training and Certification Standard

Figure 6. Process Model of ECO Professionalization and Standardization
LIST OF TABLES

Table 1.  Public Safety Opponents of Professionalization and Standardization Policy .................................................................22

Table 2.  Occupations Included in the SOC’s Protective Service Category ........26

Table 3.  Occupations Included in the SOC’s Office and Administrative Support Occupations Category .........................................................28

Table 4.  ECC Related Liability in the U.S. and Canada ........................................36
LIST OF ACRONYMS AND ABBREVIATIONS

APCO  Association of Public-Safety Communications Officials
CAD   computer aided dispatch
CPR   cardiopulmonary resuscitation
DA-CPR dispatcher-assisted cardiopulmonary resuscitation
ECC  Emergency Communications Center
ECN  Emergency Communications Nurse
ECO  Emergency Communications Officer
EMD  emergency medical dispatch
EMS  emergency medical service
EPIC  El Paso Intelligence Center
ERC  Emergency Response Centre
ERCA  Emergency Response Centre Administration
ERICA  Emergency Response Integrated Common Authorities
ESINet Emergency Services Information Network
FCC  Federal Communications Commission
IAED International Academy of Emergency Dispatch
ICS  Incident Command System
IRI  incident related imaging
MPDS  Medical Priority Dispatch System
NCIC  National Crime Information Center
NENA  National Emergency Number Association
NG9-1-1 Next Generation 9-1-1
NLETS International Justice and Public Safety Network
OMB  Office of Management and Budget
PERF Police Executive Research Forum
PII  personally identifiable information
POST Peace Officer Standards and Training
PSAP Public Safety Answering Point
PTSD Post-traumatic stress disorder
RETAINS responsive efforts to address integral needs in staffing
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC</td>
<td>Standard Occupational Classification System</td>
</tr>
<tr>
<td>SOCPC</td>
<td>Standard Occupational Classification Policy Committee</td>
</tr>
<tr>
<td>t-CPR</td>
<td>telephone cardiopulmonary resuscitation</td>
</tr>
<tr>
<td>TSA</td>
<td>Transportation Safety Administration</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

One caveat is in order at the outset: this monograph should not be viewed as a generalization of conditions existing at all Emergency Communications Centers (ECC) or among all of this nation’s Emergency Communications Officers (ECO). The extent of professionalization and degree of standardization within the emergency communications system can differ greatly from one agency to the next, and from one U.S. state or territorial jurisdiction to the next. The outstanding dedication and services provided by this occupation, most of the time, is highly appreciated and admired by this author. Still, the findings presented in this project demonstrate the degree to which the 9-1-1 system and its practitioners need an intervention with the status quo.

The discipline of emergency communications has entered a period where dramatic and transformational change in technology and duties is occurring. Over fifty-one years ago the first 9-1-1 call was made in Haleyville, Alabama, and an occupation subsequently emerged that was eventually deemed by the Office of Management and Budget (OMB) to be a clerical type of service providing important communication between the emergency caller and first responder. Over the years, that practitioner has become the forgotten member of the public safety project. In 2018, after significant public safety and political advocacy for reclassification of the ECO from a clerical occupational category to a protective occupational category, the OMB refused. It asserted that,

The work performed is that of a dispatcher, not a first responder. Most dispatchers are precluded from administering actual care, talking someone through procedures, or providing advice. Moving the occupation to the Protective Services major group is not appropriate and separating them from the other dispatchers would be confusing. Also, dispatchers are often located in a separate area from first responders and have a different supervisory chain.1

---

Today, the duties of the ECO are far more complex than merely collecting and disseminating information between the public and field responders.\(^2\) The ECO frequently communicates with people who are under severe duress and uses various technical systems in the performance of those duties. This thesis is a call to action regarding professionalization and standardization of the ECO occupation, nationwide.

Action begins by the OMB reclassifying the occupation to the Protective Service Occupational classification. A bill in the U.S. House of Representatives was introduced on March 7, 2019, the 9-1-1 SAVES Act (H.R. 1629), which directs the OMB to execute the reclassification, and on April 3, 2019, the Senate introduced a companion bill (S. 1015).\(^3\) Currently, both bills are stalled within committees. Next, policy makers and public safety institutions need to address systemic ECC staffing and funding deficiencies. The recruitment and retention of skilled ECO staff is a daunting challenge, and it is further exasperated by the fact that the nation’s emergency communications system faces declining funding due to a combination of outdated and/or declining revenue streams, routine misappropriation of 9-1-1 fees by numerous jurisdictions for numerous years, and insufficient jurisdictional investment. Policy makers and public safety institutions need to aggressively address these matters, including ensuring that compensation and benefits are commensurate with the local market and the demands of the work performed by the ECO practitioner.

Finally, public safety institutions and policy makers need to enact systemic professionalization and standardization regulations of the occupation, by way of mandating consistent hiring (character) standards, basic training and certification or licensing standards, continuing education standards, and proper use of established pre-arrival medical instruction protocols. Far too much anecdotal evidence exists that amplifies this need, but none more egregious than that of Denise Amber Lee.


On January 17, 2008, Denise Amber Lee, a 21-year-old wife and mother of two little boys, was kidnapped from her southwestern Florida home by a stranger later known to be Michael King. The ECC in both Charlotte County, and Sarasota County, Florida received five 9-1-1 calls related to her kidnapping. The first call was from her husband, Nathan, who reported her missing. The second call was from Denise herself, who surreptitiously used King’s cell phone while blindfolded and bound in the back seat of his green Camaro. Denise placed her call at 6:14 p.m. hoping it would lead the ECO and police to her. The call was disconnected when King discovered that she had his phone. At 6:30 p.m., Jane Kowalski called 9-1-1. Kowalski was traveling south on U.S. Highway 41. She reported what she thought was a screaming child banging on a window of a dark-colored Camaro next to her. Kowalski remained on the phone with the Charlotte County Sheriff’s Office ECO for nine minutes, providing updated location information, as she continued driving close to the Camaro. No fewer than four marked police cars were within one mile of Kowalski’s final location update, and dozens more were within a ten-mile radius. When King turned north onto Toledo Blade, Kowalski lost sight of him. Two days later, Denise’s body was located in a shallow grave with evidence of brutal rape, approximately six miles from her last reported location.

For Denise’s dad, Sheriff’s Sergeant Rick Goff, one of the hardest realities to face is that the very agency with which he spent his career bore liability for King’s success at killing his daughter. Sergeant Goff told Dateline, “She was beating on the window so

---

6 Murphy.
7 Murphy.
8 Denise Amber Lee Foundation, “Our Story.”
9 Murphy, “The Detective’s Daughter.”
10 Murphy.
11 Murphy.
12 Murphy.
hard and screaming, trying to get help. Which is the smart thing to do because by that time she knows she probably wasn’t coming back. And as far as I’m concerned, we blew it. And I say ‘we’ because I’m part of that sheriff’s office.”

Denise’s family and investigators believe she planted evidence of her being in the Camaro. In the back seat of King’s Camaro, detectives found some of Denise’s hair which had been removed by the root. A heart-shaped ring that Nathan had given Denise around their first Valentine’s Day was also found in the seat.

The case reflects a cascade of failures in handling the 9-1-1 call. The details collected from Kowalski’s call were never transmitted to the police by the Charlotte County Sheriff’s Office’s ECC. The ECO who took Denise’s call was ill-prepared for that pivotal moment, asking meaningless and upsetting questions. She was also the ECO who took Kowalski’s call and had reportedly earned the nickname of “liability Millie” by her peers; she loathed using the agency’s computer aided dispatch (CAD) system while on the phone with callers. Her preferred method was to write the details of the call, and then enter them later into the CAD system. She wrote down the details of Kowalski’s call and handed them off to a peer ECO who refused to broadcast the information until it appeared in CAD, which never happened. Besides this, no ECO or the ECC supervisor knew how to patch multi-jurisdictional radio channels quickly, and wasted precious time trying. The ECC’s leadership seems to have tolerated systemic workplace dysfunction that contributed to the outcome of this horrific incident.

Initiatives are under way to enhance technological processes and systems within the 9-1-1 system, yet in 2019 only twelve of the fifty-six U.S. state and territorial
jurisdictions mandate a hiring (character) standard. Only half of those fifty-six jurisdictions mandate a basic training standard. Less than half of those fifty-six jurisdictions mandate a continuing education standard, and less than half of those fifty-six jurisdictions mandate that their ECCs use and train their ECOs on industry-accepted, pre-arrival medical instruction protocols. Some jurisdictions and stakeholder organizations seem uninformed or apathetic about these various issues, resisting professionalization and standardization initiatives for reasons such as being an unfunded mandate, or the mandate may cause an undue financial or personnel burden, or they may be hesitant to relinquish regulatory control. Some simply view the ECO job as less significant than that of a field responder. Professionalization and standardization can go a long way to addressing these problems and maximizing advantages to public safety and the homeland security project, and should precede enhancement initiatives of 9-1-1 technological systems and processes.
ACKNOWLEDGMENTS

Achievement in an academic journey of this caliber is impossible without the
unwavering support and investment of many on one’s behalf. While countless family,
friends, and colleagues have been tremendously encouraging to me throughout this
endeavor, and it was greatly appreciated, I felt it was important to recognize the following
individuals who have gone above and beyond in helping me successfully complete this
milestone.

First, and foremost, I thank God and my family for unfailing love and patience. I
pray that my academic accomplishments will always be foreshadowed by an unrelenting
commitment to the success of those I lead, and the homeland security project. I want to
acknowledge and thank my lovely wife, Anita, who has unselfishly supported me through
every personal and professional goal, including this one. She listened when I needed to
vent, she critiqued when I needed honesty, and she believed when I needed encouragement.
You are an amazing soulmate, mother, and anchor of our home. I am deeply grateful and
humbled. I love you.

To my children, Courtney and Kevin (son-in-law), Kayla and Wes (son-in-law),
and Ashley, I thank you for your love, support, and encouragement. There has never been
a title, nor will there be, for which I am prouder than Dad. You inspire and challenge me,
and I love you.

To my parents, who have exemplified selfless service to God and country, and have
instilled in me the value of integrity and perseverance, I thank you and I love you.

To the administration of the Idaho State Police, my emergency communications
staff, and my homeland security colleagues across Idaho, I thank you. You, too, have
believed in me, encouraged me, and inspired me.

To my editor, Kelly Kast, of the Idaho State Police, you challenged me, questioned
me, and guided me toward literary excellence. Thank you.
To Nathan Lee, founder of the Denise Amber Lee Foundation, who has inspired me by both his refusal to harbor bitterness, and his determination that Denise’s legacy is professionalization and standardization within the nation’s 9-1-1 system. I thank you.

To this nation’s Emergency Communications Officers who stand watch over me and my first-responder peers nationwide, as well as my family and yours, with the sharpest eyes and ears tuned to the first clue of potential danger or distress, and who only rest easy upon knowing those they are called to serve are safe.

To all of the faculty and staff at Naval Postgraduate School, Center for Homeland Defense and Security, who have invested in me and my academic success, thank you. You are among the most supportive and dedicated people I have known. Specifically, I want to thank Mark Fish, Greta Marlatt, Heather Issvoran, Dr. Lauren Wollman, and Dr. Shannon Brown. Your contribution to my learning and academic achievement was immense.

Finally, this thesis contains copyrighted material (Table 4) from International Academies of Emergency Dispatch, used with permission.
I. INTRODUCTION

A. PROBLEM STATEMENT

On January 17, 2008, Denise Amber Lee, a 21-year-old wife and mother of two little boys, was kidnapped from her southwestern Florida home by a stranger, later learned to be Michael King.1 The emergency communications center (ECC) in both Charlotte County, and Sarasota County, Florida received five 9-1-1 calls related to her kidnapping. The first call was from her husband, Nathan, who reported her missing. The second call was from Denise herself, who surreptitiously used King’s cell phone while blindfolded and bound in the back seat of his green Camaro.2 Denise placed her call at 6:14 p.m. hoping it would lead the Emergency Communications Officer (ECO) and police to her.3 The call was disconnected when King discovered that she had his phone. At 6:30 p.m., Jane Kowalski called 9-1-1. Kowalski was traveling south on U.S. Highway 41. She reported what she thought was a screaming child banging on a window of a dark-colored Camaro next to her.4 Kowalski remained on the phone with the Charlotte County Sheriff’s Office ECO for nine minutes, providing updated location information, as she continued driving close to the Camaro.5 No fewer than four marked police cars were within one mile of Kowalski’s final location update, and dozens more were within a ten-mile radius.6 When King turned north onto Toledo Blade, Kowalski lost sight of him.7 Two days later, Denise’s body was located in a shallow grave with evidence of brutal rape, approximately six miles from her last reported location.8

---

1 Denise Amber Lee Foundation, “Our Story.”
2 Murphy, “The Detective’s Daughter.”
3 Murphy.
4 Murphy.
5 Denise Amber Lee Foundation, “Our Story.”
6 Murphy, “The Detective’s Daughter.”
7 Murphy.
8 Murphy.
For Denise’s dad, Sheriff’s Sergeant Rick Goff, one of the hardest realities to face is that the very agency with which he spent his career bore liability for King’s success at killing his daughter.\(^9\) Sergeant Goff told Dateline, “She was beating on the window so hard and screaming, trying to get help. Which is the smart thing to do because by that time she knows she probably wasn’t coming back. And as far as I’m concerned, we blew it. And I say ‘we’ because I’m part of that sheriff’s office.”\(^10\) Denise’s family and investigators believe she planted evidence of her being in the Camaro.\(^11\) In the back seat of King’s Camaro, detectives found some of Denise’s hair which had been removed by the root.\(^12\) A heart-shaped ring that Nathan had given Denise around their first Valentine’s Day was also found in the seat.\(^13\)

The case reflects a cascade of failures in handling the 9-1-1 call. The details collected from Kowalski’s call were never transmitted to the police by the Charlotte County Sheriff’s Office’s ECC. The ECO who took Denise’s call was ill-prepared for that pivotal moment, asking meaningless and upsetting questions.\(^14\) She was also the ECO who took Kowalski’s call and had reportedly earned the nickname of “liability Millie” by her peers; she loathed using the agency’s computer aided dispatch (CAD) system while on the phone with callers. Her preferred method was to write the details of the call, and then enter them later into the CAD system. She wrote down the details of Kowalski’s call and handed them off to a peer ECO who refused to broadcast the information until it appeared in CAD, which never happened. Besides this, no ECO or the ECC supervisor knew how to patch multi-jurisdictional radio channels quickly, and wasted precious time trying.\(^15\) The ECC’s

\(^9\) Murphy.  
\(^10\) Murphy.  
\(^11\) Murphy.  
\(^12\) Murphy.  
\(^13\) Murphy.  
\(^15\) Martin, “Two Dispatchers Suspended in 911 Call Gone Wrong.”
leadership seems to have tolerated systemic workplace dysfunction that contributed to the outcome of this horrific incident.

This incident finally inspired Florida’s legislature to pass voluntary training standards legislation for the ECO on April 24, 2008, known as the Denise Amber Lee Act.¹⁶ Those standards remained voluntary until October 1, 2012, when they became a state mandate, intended to mitigate future 9-1-1 failures.¹⁷

The ECO’s work is vital to facilitating emergency response needs and far more complicated than merely collecting and disseminating information between the public and field responders.¹⁸ An ECO collects information on missing, exploited, and abducted children; processes calls from hostage-takers, suicidal callers, or desperate victims during traumatic events such as domestic abuse, rape, active shooter incidents, road rage, medical emergencies, and traffic collisions; and when field responders such as police or firefighters face extreme danger, the ECO must dispatch the additional help needed.¹⁹ The ECO frequently communicates with people who are under severe duress. Significant anecdotal evidence of challenges and failures within the ECC exists to substantiate the need that an ECO be adequately trained and equipped to effectively collect and discern important emergency information.

Recognizing the causes of performance failures is a first step toward resolving these failures. In 2015, less than half of states did not require hiring, training, or continuing education standards for the ECO profession. A similar number of states did not require ECCs to use industry-accepted, pre-arrival medical instruction protocols for assisting those

---


¹⁹ Association of Public-Safety Communications Officials.
experiencing medical emergencies.\textsuperscript{20} In 2019, minimal improvement from 2015 has transpired.

Other challenges related to the profession include: systemic and high attrition rates resulting in many understaffed centers with overworked and burned-out ECOs; technological advancements such as Next Generation 9-1-1 (NG9-1-1) that render greater visual exposure to traumatic events by these practitioners; and, jurisdictions using 9-1-1 funds for political interests unrelated to 9-1-1 or the ECO profession, shortchanging a lifeline to public safety and our homeland’s security.\textsuperscript{21}

Research focusing on these deficiencies is critical because they are causing vulnerabilities to public safety and the homeland security project. The United States Department of Labor’s Office of Management and Budget (OMB) classifies the ECO profession as “Dispatcher—Public-Safety Telecommunicator” under its Office and Administrative Support Occupation group, and has refused to move the ECO occupation to the Protective Service Occupation group.\textsuperscript{22} OMB, numerous states, and some stakeholder organizations seem uninformed or apathetic about the nature of work the profession performs and its criticality to a secure homeland.

Some opposed to mandated training and standards for the ECO object to what they regard as an unfunded mandate, or they are concerned about an undue financial or


\textsuperscript{22} Association of Public-Safety Communications Officials, \textit{Comments of APCO International in Response to the Office of Management and Budget’s Notice of Solicitation of Comments for the Proposed Revision of the 2010 Standard Occupational Classification}. 

4
personnel burden to their agency, or they are hesitant to relinquish regulatory control to others, or they view the job as less significant than that of a first responder. Others opposed to mandated training argue that too many disparities exist between systems, equipment, and policies used within the emergency response system. It should be noted, mandating hiring, training, continuing education, and work performance standards, is accepted and expected of police officers, firefighters, hairdressers, contractors, nurses, and nurse aides, to name a few, in most if not all states. Yet in many states, no specific standards exist for a profession that serves as both the public’s and first responders’ lifeline, the ECO. Countering these vulnerabilities requires an assessment of systemic deficiencies and opportunities for improvement as they relate to the ECC and the ECO profession, so best practices, training needs, and resource needs can be identified.

B. RESEARCH QUESTION

This thesis seeks to answer the question: How could the nation’s 9-1-1 system—specifically its ECO occupation—evolve to address problems and maximize advantages to public safety and homeland security?

C. LITERATURE REVIEW

The purpose of this literature review is to evaluate sources that diagnose the state of the ECO profession operating in a neglected 9-1-1 system. More narrowly, it examines sources on existing conditions, practices, and policies regarding the profession that may result in vulnerabilities to public safety and the homeland security project. The assumption is that systemic professionalization of the ECO and standardization within the ECC, needs to occur in order to mitigate vulnerabilities to homeland security at large. The review of literature follows this structure: OMB’s classification of the ECO occupation, the systemic

---

23 Marie Nordberg, “Dispatch Disasters,” National Academy of Emergency Dispatch, August 1995, https://www.emergencydispatch.org/articles/dispatchdisasters1.htm; Bill McDaniel, Minimum Mandatory Training and Certification for Florida Public Safety Telecommunicators (Tallahassee, FL: Florida Criminal Justice Executive Institute, 1996), http://www.fdle.state.fl.us/FCJEI/Programs/SLP/Documents/Full-Text/McDaniel; I have also personally heard this argument, but I have no substantiating evidence to support my claim.
staffing and funding challenges within the 9-1-1 system, and the theories and processes surrounding professionalization and standardization.

1. **ECO Job Classification**

   This classification contributes to the ECO profession’s struggles to be not only appropriately recognized, compensated, and benefitted commensurately with the life-safety services it performs, but also adequately credentialed, equipped, and trained appropriately for the work. The ECO—previously and variously known as “call-takers,” “emergency dispatchers,” “communications officers,” and “public-safety telecommunicators”—are officially classified by the OMB under the “Office and Administrative Support Occupation,” as a “Dispatcher—Public-Safety Telecommunicator.”

   A significant public safety industry effort was launched in 2014. This effort included bipartisan and bicameral political support that grew through late 2017, arguing that the OMB should reclassify these practitioners from the “Office and Administrative Support Occupations,” a clerical type of job, to the major group “Protective Service Occupations,” a first responder or care-taking type of job. The OMB declined the proposal, reasoning that,

   The work performed is that of a dispatcher, not a first responder. Most dispatchers are precluded from administering actual care, talking someone through procedures, or providing advice. Moving the occupation to the Protective Services major group is not appropriate and separating them from the other dispatchers would be confusing. Also, dispatchers are often located in a separate area from first responders and have a different supervisory chain.

   The OMB assigns the ECO to the broad occupational classification section of “Dispatchers” within its “Office and Administrative Support Occupation” major group

---


category, a broad section that includes taxicab, trucking company, tow-truck, or train dispatchers.26

In its 2016 response to public safety industry proposed OMB revisions, the Association of Public-Safety Communications Officials (APCO) asserted that the work performed by ECO practitioners goes beyond being conduits for information between the public and first responders.27 Instead, as the International Academies of Emergency Dispatch point out, an ECO provides life-and-death instruction to people facing dire emergencies, collects critical information from often traumatized callers, attempts to dissuade a suicidal caller from self-destruction, and a plethora of other things, all of which is often performed by following established industry protocols and procedures.28 Indeed, the criticality and difficulty of the position is precisely why some jurisdictions, such as Idaho, recognize these professionals by more appropriate titles like ECO.29 Roberta Troxell, in her doctoral thesis for University of Illinois at Chicago, posits that the ECO is a professional performing critical functions as a true first-responder and that their role is not realized by many because the ECO does not physically respond to emergencies.30 She concludes that this failure of realization, validated by OMB’s current occupational classification, is a deficiency that needs to be corrected to curb staffing challenges and ensure ECC operational effectiveness.


2. ECC Staffing and Funding

Nationwide, ECCs are grappling with the recruitment and retention of ECOs, often resulting in staffing shortages, mandatory overtime, and ECO burnout, according to Officer.com.\textsuperscript{31} The 2007 Officer.com article partially attributes this situation to an increasingly technical job for pay that does not correspond with the skills required.\textsuperscript{32} It reports three adverse consequences: to ECO health, to public safety, and an increased cost to taxpayers due to mandatory ECO overtime.\textsuperscript{33} An APCO Project RETAINS (Responsive Efforts to Address Integral Needs in Staffing) study indicates that 97 percent of ECOs fail to stay in the profession long enough to retire, and most of their retirement plans require the ECO to work several years longer than their first responder counterparts.\textsuperscript{34} Sarah Krouse, reporter for the Wall Street Journal, depicted the same issue as a dire problem in 2018, citing numerous ECCs across the country that are not attracting applicants for understaffed centers, and are overworking the ECOs they do have.\textsuperscript{35} She reports that, “A daunting situation for emergency call centers has turned urgent.”\textsuperscript{36} Echoing her urgent call, Barry Furry, a public safety communications consultant, recently wrote that first responders should no longer assume an ECO is solely dedicated to their emergency event because the ECC may not have enough ECOs.\textsuperscript{37} He highlights that uniform, regulatory standards do not exist and he sharply disagrees with OMBs refusal to reclassify the occupation, implying that the ECO needs better pay, benefits, staffing, and technology to curb staffing deficiencies.\textsuperscript{38}

\textsuperscript{32} “Where Did All the Dispatchers Go?”
\textsuperscript{33} “Where Did All the Dispatchers Go?”
\textsuperscript{35} Krouse, “911 Emergency.”
\textsuperscript{36} Krouse.
\textsuperscript{37} Furey, “Fire Dispatch.”
\textsuperscript{38} Furey.
Nationally, ubiquitous funding deficiencies plague many 9-1-1 systems. In 2010, Bob Smith, director of strategic development for APCO wrote, “While there are myriad challenges facing the 911 industry today, the biggest are funding, training and staffing disparities between different agencies across the United States.” Many Americans assume that 9-1-1 is a robust, seamless service always ready for their emergency, but Smith admits that policymakers do not view the ECO as equally important among emergency response personnel. Such emergency programs consequently under-train the ECO and often 9-1-1 is not a budget priority. Smith also reports that several states raided more than $200 million in cellular and landline 9-1-1 fees between 2007 and 2009 for things like road repairs and vehicle purchases. In 2018, the Federal Communications Commission (FCC) reported that states collected over $2.9 billion in 9-1-1 fees, with nearly $285 million of it being siphoned off for initiatives unrelated to 9-1-1. According to the FCC, a number of jurisdictions have participated in the illegal diversion of FCC fees for several years.

Two bills have been introduced in the U.S. Congress to address both the occupational reclassification and the misappropriation of 9-1-1 fees. Introduced in the House on March 7, 2019, the 9-1-1 SAVES Act (H.R. 1629) directs the OMB to place the ECO occupation in the Protective Service Occupation classification, and on April 3, 2019, the Senate introduced a companion bill (S. 1015). Both bills are currently stalled. The 9-1-1 Fee Integrity Act (H.R. 6424) aims to better regulate jurisdictional uses of 9-1-1 fees, but despite being introduced in the House on July 18, 2018, it appears to have stalled within the House Committee on Energy and Commerce.

40 Smith.
41 Smith.
43 Federal Communications Commission.
3. Professionalization and Standardization

Literature arguing against professionalization and standardization of the ECO position is scarce. As noted earlier, the OMB declined a reclassification effort that began in 2014, but that refusal had to do with its disagreement about the nature of work of the ECO. Bill McDaniel, former Plant City, Florida Police Chief, does include three responses to his survey (found in his Appendix E, and in Table 1) of law enforcement leaders in Florida who opposed ECO certification requirements. Those opposition comments assert that training is best handled at the local level because a statewide standard presumes a standardization of equipment, systems, and methodologies. McDaniel’s study concluded in 1996 and contained the only documented, explicit arguments against the professionalization and standardization of the ECO position.

Professionalization of an occupation generally includes training and qualification enhancements that result in improved competence and service, in turn leading to stakeholder recognition of the occupation as a profession. Brett Williams, Associate Professor Andrys Onsman, and Dr. Ted Brown, Australian researchers, argue that a vocation becomes a profession through a process that is incremental, staggered, and inevitably complicated, and only after a sufficient number of people recognize it as a profession. In The Routledge Companion to the Professions and Professionalism, professor and author Stephen Ackroyd posits that an argument can be made for two main types of theorizing about professions, with the first being functionalism/institutionalism and the other being conflict theory.

According to the functionalism/institutionalism theory, professionalism is environmentally inspired, consensual, and met with innovation to better serve the

---


47 McDaniel.


stakeholders. In conflict theory, professionalism generally occurs as a result of threats or opportunities stemming from group activities that are politically or economically motivated.\textsuperscript{50} It focuses on the regulations or practices of certain professions that are believed to be designed to restrict supplies, services, or even the number of skilled practitioners.\textsuperscript{51} Thus, a conflict theorist would posit that professionalizing the ECO occupation is likely motivated by self-interests in elevating the occupation’s social status and increasing its salaries.\textsuperscript{52} Functionalism/institutionalism theory focuses on the regulations or practices of inter and intra-related organizations, the putative characteristics of those organizations, and their applicability to professionalism, including similarities and continuities.

Following the theory of functionalism/institutionalism, public safety interest in professionalizing and standardizing the ECO occupation seems to have begun around the early to mid-1990s.\textsuperscript{53} In 1996, Dr. Jeff Clawson, Robert Martin, Bill Lloyd, Mike Smith, and Geoff Cady, researchers and writers for the \textit{Journal of Emergency Medical Services}, pointed out that the ECO is not recognized as a professional because they hold an ambiguous role that is primarily viewed as clerical and lacks a certification standard.\textsuperscript{54} This judgment of the ECO’s work being clerical in nature comports with the OMB’s longstanding assessment. Clawson et al. go on to surmise that ECO professionalism can be demonstrated once they receive ongoing training, certify and recertify in the use of certain life-safety protocols, maintain a customer-service mindset, and uphold the highest level of respect for the human conditions for which they serve, supporting the premise of Williams, Onsman, and Brown. Scholars seem to agree that professionalization of an occupation not

\textsuperscript{50} Ackroyd, 27.
\textsuperscript{51} Ackroyd, 18.
\textsuperscript{52} Ackroyd, 18.
only includes increased hiring, training, and performance requirements, but also follows cultural recognition of it as a profession resulting from improved services.

Unfortunately, an event or incident that highlights a deficiency often inspires change. McDaniel references several poorly-handled 9-1-1 calls from the mid-1990s and explains how certification requirements for law enforcement were implemented in Florida in the late 1960s to improve professionalism and standardization, as he builds his argument for the same outcome of the ECO occupation. McDaniel posits that the role of the ECO is just as complex and critically important to the public safety system as the law enforcement officer, and laments that mandated minimum training standards have been widely overlooked or ignored. Minnesota’s Legislative Audit Commission published a report in 1998 asserting that the ECO is an equal partner to first responders in providing public safety. It also noted a different quality of service among the state’s 112 ECCs and stated that the ECO needs to receive comprehensive and continuing training, something the state had not mandated at that time. This report inspired little regulatory change because, in 2019, Minnesota still lacks laws or rules mandating ECO certification and minimum training requirements. Freelance writer David Raths’ article highlights the need for policymakers to comprehend a need fully, often inspired by a catastrophe, before they are inspired to fulfill it. Countless examples of deficient service provided by an ECO should be sufficient and abhorrent enough to clarify that need and inspire policymakers into action, but in too many jurisdictions it still has not.

56 McDaniel, 7.
Neither the states nor the nation has consistent standards in certification, training, and continuing education for the ECO. In 2013, according to APCO, approximately 20 states did not require a certification process, including training and continuing education. Among the 30 states that did, the standards were inconsistent. Only 18 states mandated the training and use of Emergency Medical Dispatch (EMD) protocols that equip the ECO with life-saving medical instructions for callers awaiting Emergency Medical Service (EMS) units to arrive. The website 911.gov argues that the ECO should be required to meet standards related to the job because the public expects professional and competent emergency communications service when calling an ECC. The National 911 Program (911.gov) has facilitated a project designed to establish those agreed-upon standards, but they are nothing more than recommendations. ECCs are at the tip of the homeland security spear, a place where consistent professionalization and standardization should be pervasive and obvious. In 2019, the nation still formally views the ECO as fulfilling a clerical support function where professionalization and standardization remains largely discretionary.

Focus on professionalization and standardization of the ECO position has accelerated since the Denise Amber Lee tragedy. Stacy Banker, standards program and APCO consulting services manager for APCO International, quantifies the acceleration of professionalization and standardization by pointing out that APCO has eight published standards for personnel employed within an ECC (dispatcher, trainer, supervisor, manager, etc.). The National Emergency Number Association (NENA) is another national 9-1-1 organization that has also developed numerous recommendations, best practices, and published standards paving the pathway to professionalization and standardization within

---


60 Association of Public-Safety Communications Officials, APCO ProCHRT Report.


62 National 911 Program.

While positive developments have continued to occur, the ECO occupation still has gaps in professionalism. For example, Boston Globe journalist Peter DeMarco writes about the tragic and unnecessary death of his asthmatic wife right outside a Boston area hospital’s emergency room door while on her phone with an ECO who was unsuccessful determining her exact location. ABC News journalist Emily Shapiro writes about teenager Kyle Plush suffocating to death in the back of his family’s minivan while making two 9-1-1 calls requesting help that never arrived. Both of these tragic examples, and many more, have been attributed to failures by an ill-prepared ECO or technological limitations within the neglected ECC system, or both.

The OMB argues that the ECO’s work is more consistent with those in the Clerical and Administrative Support occupations, while public safety affiliated organizations assert the ECO’s work is commensurate with those in the Protective Service Occupational classification. The 9-1-1 SAVES Act (H.R. 1629) could force the classification change to the Protective Service Occupational classification, but delineating the true nature of work of the ECO remains essential to the argument for universal professionalization and standardization. The occupation suffers from high turnover rates, applicant recruitment challenges, inconsistencies in training and hiring standards, and works within a system that is underfunded and largely encumbered by antiquated technological systems. Literature arguing against professionalization and standardization is nearly non-existent, but the failure of many states to mandate hiring standards, training standards, or the use of established pre-arrival medical instruction protocols demonstrates profound apathy about this issue. Also, the apparent need for bipartisan, bicameral legislation directing change to the ECO occupational classification further illustrates the systemic misunderstanding or dismissal of the ECO’s work. This thesis will highlight these various issues so readers can

better understand the need and will seek to identify ways to maximize advantages to public safety and homeland security.

D. RESEARCH DESIGN

The premise of this thesis is that a professionalized ECO occupation and standardized emergency communications system would mitigate vulnerabilities to public safety and homeland security.

The literature review determined that policy analysis, generally following the Eightfold Path presented by authors Eugene Bardach and Eric Patashnik, is the best approach for this research study.67 This thesis identifies ways the ECO occupation is struggling and how its system, 9-1-1, is being neglected. It will be followed with some anecdotal evidence, and analysis of the OMB’s current ECO occupational classification policy within its Office and Administrative Support Occupation, using primary and open-source published documents. This analysis will evaluate the exact nature of the ECO’s work and criteria the OMB used in its 2018 rejection of ECO occupational reclassification to the Protective Service Occupation.

According to author and scholar, Dvora Yanow, analyzing policy involves analysis of diverse views or understandings of the policy as well as the policy artifacts. The OMB’s ECO classification policy will be analyzed and presented in the form of a background discussion of the ECO occupation from its early beginnings to 2019, the OMB’s 2018 policy determinations regarding the occupational classification and the disparate assertions made by the OMB, and the counter views by industry experts, policymakers, and public safety professionals. Yanow also notes that “it is not possible for the analyst to stand outside the issue being studied,” thus some qualitative analysis will also be used.68 That analysis will comprise a study of prolonged, systemic ECC recruitment, retention, and funding challenges, including an appraisal of varying state requirements regarding basic

---


training and certification, and additional training and certification in the use of medically approved pre-arrival medical instruction systems and protocols, to substantiate the premise further. Open-source documents and primary sources will provide the data used as the basis for qualitative analysis data, such as government regulations.

Next, the process of professionalization and standardization of an occupation, including an inventory of state and U.S. territory jurisdictions with current ECO professionalization and standardization regulations, will be analyzed. Specifically, identification of state and U.S. territory jurisdictions that mandate a character standard for ECO employment, a minimum training requirement, a continuing education requirement, and a requirement that EMD protocols are used and that the ECO must certify and recertify, through training, in its use. Identifying implemented professionalization and standardization policy within the ECC, among those jurisdictions, can lead to defensible and actionable recommendations for other jurisdictions.
II. THE EMERGENCY COMMUNICATIONS OFFICER: A CLERICAL OR PROTECTIVE OCCUPATION?

To diagnose a struggling ECO occupation serving a neglected 9-1-1 system, it is first necessary to understand the OMB’s occupational classification, through 2019, of the ECO practitioner. There are several key factors to consider surrounding the current classification. This chapter will briefly review the history of the ECO and background of the classification, highlight a public safety initiated reclassification effort and the OMB’s subsequent denial, and focus on the denial arguments and counterarguments.

A. BEGINNINGS OF THE 9-1-1 SYSTEM AND ITS ECO OCCUPATION

In the late 1950s, with a growing U.S. population and its rapidly expanding mobility, government officials recognized increasing demands placed on public safety services necessitating a more effective and centralized reporting process, the 9-1-1 Call Center. On February 16, 1968, Alabama legislator Rankin Fite successfully placed the nation’s first 9-1-1 call in Haleyville, Alabama, and six days later, Nome, Alaska activated the second 9-1-1 service. Today, the NENA estimates that around 96 percent of the geographic United States and 98 percent of its population is covered by the 9-1-1 system.

Since that first 9-1-1 call, the emergency dispatcher has been known by a range of titles including call-taker, dispatcher, communications officer, telecommunicator, and public-safety telecommunicator. In the state of Idaho, the occupation is formally identified as an ECO within its professionalization and standardization policies, commencing in the use of that title throughout this thesis. All of these practitioners work at either primary or secondary Public Safety Answering Points (PSAPs), synonymous with an ECC or 9-1-1 call center. A primary ECC receives 9-1-1 calls placed within its jurisdictional

---


70 National Emergency Number Association.

71 National Emergency Number Association.

72 Peace Officer Standards and Training Council, Definitions.
boundaries, and a secondary ECC receives 9-1-1 calls transferred from a primary ECC. Each call is processed and dispatched by a trained ECO as depicted in Figure 1.

Figure 1. Common 9-1-1 Call Processing Flow

Some ECCs employ sworn police, fire, or EMS practitioners to serve in this role, demonstrating the importance some agencies place on the role and performance of the ECO position, but most employ a civilian workforce trained in the use of emergency dispatching systems, processes and protocols. The ECO typically must pass a background investigation and training program, although the 56 U.S. states and territories lack consistency of standards, with many of those jurisdictions requiring very little. In 2019, 40 of those jurisdictions do not require a hiring (character) standard (four are unknown), 23 do not require a minimum training standard (four are unknown), 29 do not require a continuing education standard (four are unknown), and 29 do not require the use of, or training in, EMD protocols (three are unknown; more details contained in Chapter IV). ECCs are operated by governmental agencies, or answer to public safety-oriented boards with
expertise in Police, Fire, and EMS matters. In most instances, ECCs are directly operated and managed by law enforcement, fire, and EMS agencies. According to the NENA, there are approximately 5,748 ECCs. Contrary to the OMB’s assertion that, “Dispatchers are often located in a separate area from first responders and have a different supervisory chain,” approximately 4,565 of those ECCs, or 79 percent, have an agency name that includes one of the following within those names: Sheriff, Police, Fire, State Patrol, Highway Patrol, Marshall, Law Enforcement, State Trooper, Ambulance, or EMS.

B. THE OMB’S OCCUPATIONAL CLASSIFICATIONS

The United States Department of Labor’s OMB is responsible for the classification of all occupations for the purposes of collecting, calculating, and disseminating labor related data. It completes this process through a group of experts appointed to the Standard Occupational Classification Policy Committee (SOCPC) who use the Standard Occupational Classification System (SOC) developed in 1977. Occupational classifications are reviewed and revised, when appropriate, every ten years. In 2018, the SOC contained 867 detailed occupations. Those detailed occupations comprise 459 broad occupations, 98 minor occupations, and 23 major occupational groups. Presently, this system classifies the ECO occupation under the “Office and Administrative Support Occupation,” as “Dispatcher—Public-Safety Telecommunicator.”

Inquiry into the ECO occupation classification is important because ECCs are the nerve-centers of public safety, not unlike air traffic control is to transportation. The OMB

---


75 Federal Communications Commission, “911 Master PSAP Registry.”


places the air traffic control occupation within the Transportation and Material Moving Occupations group, among airline pilots, flight engineers, train conductors, baggage handlers, truck drivers, and numerous other transportation and material moving type occupations.81 The ECO works equally close, and perhaps more closely, to the occupations within the Protective Service Occupations group, yet the OMB places them outside of it.

The ECO is likely to be first to know about and process requests for public safety, and some of those incidents are later recognized to be formidable homeland security events. Countless ECCs are experiencing high attrition rates, diminished recruitment success, and understaffing, and are operating in a system where occupational compensation is commonly incommensurate with the demands of the job, and where professionalization and standardization policies are inconsistent or nonexistent.82

C. ECO RECLASSIFICATION EFFORTS

While SOC classification neither impedes nor enhances occupational professionalization and standardization, and compensation directly, it can indirectly affect them. The ECO operates at the tip of the spear within the homeland security project, the “air traffic controller” of emergency services for the public. Acknowledgement by the OMB of the type and role of service the ECO provides can contribute to policymakers establishing appropriate hiring and training standards, enhanced staff recruitment and retention, and compensation commensurate with the nature of the work. Those objectives align with national vigilance for strengthening the homeland’s security, hardening those systems tasked with its administration, and enhancing its resiliency and readiness. The SOC classification should accurately reflect the nature and type of work to ensure the associated occupational data is valid, highlighting the importance of professionalization and standardization, and compensation commensurate with associated responsibilities.

A significant public safety industry effort launched in 2014, including bipartisan, bicameral support that grew through late 2017, urging the OMB to reclassify the ECO

---

82 Krouse, “911 Emergency.”
occupation from the “Office and Administrative Support Occupations,” a clerical type of job, to major group “Protective Service Occupations,” a first responder or care-taking type of job. The SOCPC analyzed and deliberated through 2017 after which it released its decision which read, “The SOCPC did not accept these recommendations based on Classification Principle 2, which states that workers are coded according to the work performed.”

The OMB and SOCPC’s 2018 analysis and subsequent denial may be flawed, but the public safety project also bears responsibility. Public safety has long been perceived to include three essential disciplines: police, fire, and EMS. Many public safety leaders have relegated 9-1-1 practitioners to a support services role, including hiring, compensating, and training them accordingly. They have not treated emergency communications as a critical public safety discipline, when embracing ambiguous positional titles such as dispatcher, telecommunicator, public-safety telecommunicator, specialist, and call-taker, among others. These are titles that depreciate the ECO’s role in the administration of public safety and within the greater homeland security enterprise. Many public safety officials have been apathetic to this misalignment and some have even openly opposed initiatives to mandate standards of character for employment, certification that includes training and continuing education standards, and mandated use of, and certification in, industry accepted EMD protocols.

Few published examples of opposition to professionalization efforts within the ECO profession exist, but McDaniel identified three (contained within his Appendix E) from the state of Florida, an ominous position taken in light of Florida’s Denise Amber Lee case in 2008, and those comments are highlighted here in Table 1.

---

Table 1. Public Safety Opponents of Professionalization and Standardization Policy

<table>
<thead>
<tr>
<th>Agency type (size)</th>
<th>Response #</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police (356 officers)</td>
<td>18</td>
<td>“My opinion is that dispatcher training is best handled at the local level. While it is recognized that many tasks that dispatch personnel perform are similar among agencies, there is vast differences in operational, instructional and policies within the state. However...a state sponsored basic academy may be appropriate for smaller agencies.”</td>
</tr>
<tr>
<td>Police (91 officers)</td>
<td>31</td>
<td>“There is too much difference between departments, different computer aided dispatch programs, methodology, etc.”</td>
</tr>
<tr>
<td>Sheriff (301 deputies)</td>
<td>10</td>
<td>“Statewide standardization presumes...a standardization of equipment, systems and methodology. Differential (sic) agencies with respect to size, funding and mission would probably create hardships for some jurisdictions relative to meeting any comprehensive standards. We have found little relationship between any prior experience with other agencies and the acceleration of progress in our own training program. A minimum standard would guarantee very little.”</td>
</tr>
</tbody>
</table>

In recent years, more public safety leaders are recognizing these policy positions as a failure within the project and are working to correct it.

The OMB’s argument against an ECO occupational reclassification was supported by it using the following six points: 1) the work performed is that of a dispatcher, not a first responder; 2) the ECO is normally precluded from administering actual care; 3) the ECO is normally precluded from talking someone through procedures (protocols); 4) the ECO is normally precluded from providing advice; 5) separating them from the other non-public

---

safety “dispatcher” professions would be confusing, and; 6) the ECO has a different supervisory chain. Its denial begs further analysis on the type, nature, and volume of calls handled by ECCs, as well as the technologies used and the potential psychological impacts to the ECO workforce experienced as a result of those duties. The OMB’s assertion that “separating them [the ECO] from the other non-public safety dispatcher professions would be confusing” also begs comparative analysis of the type, nature, psychological side-effects, liabilities, responsibilities, and technologies used in the ECO occupation versus those of other non-public safety dispatcher responsibilities.

D. COUNTERARGUMENTS TO OMB’S RECLASSIFICATION DENIAL

In late August of 2018, a female was driving along State Highway 97 in Kootenai County, Idaho when she dozed off and veered into Lake Coeur d’Alene. With her car sinking, the panicked driver dialed 9-1-1 and reached ECO Talina Moyer. ECO Moyer calmly and confidently instructed the woman to put her rear driver’s side window down and exit the car as soon as she could safely do so, countering the OMB’s third and fourth argument (the ECO is normally precluded from talking someone through procedures; the ECO is normally precluded from providing advice). ECO Moyer was using a Priority Dispatch ProQA protocol developed for such an incident. ECO Moyer was able to quickly determine that the driver was the only occupant, identify her approximate location off of State Highway 97, and that the driver believed she could safely swim to the shoreline, countering the OMB’s first argument (the work performed is that of a dispatcher, not a first responder). ECO Moyer admonished her to use the car to keep herself above water as long as possible, if necessary, countering the OMB’s second argument (the ECO is normally precluded from administering actual care). ECO Moyer later told KHQ channel 6 news, “I

---


87 Mayer.

The work performed by ECO Moyer was that of a first responder and starkly different from “other” dispatchers such as the tow truck or train dispatcher, countering OMB’s fifth argument (separating them from the other non-public safety “dispatcher” professions would be confusing), and she works for a Sheriff’s Office where her chain of command includes a sheriff’s deputy at the rank of lieutenant, countering OMB’s sixth argument (the ECO has a different supervisory chain). By the time the Kootenai County field responders arrived, the driver was waiting safely on some rocks and her emergency was effectively over.

1. **Operational Counterarguments**

Again, ECO Moyer’s occupation currently resides in the federal job classification with clerical occupations. Those in her occupation process roughly 240 million emergency calls annually, with approximately 80 percent being wireless calls in many parts of the country. In 2016, the U.S. Bureau of Labor Statistics estimated the number of ECO positions nationwide to be 98,600. This means each ECO handles an average annual volume of 2,434 9-1-1 calls, an average monthly volume of 203 calls each, or more than one emergency call per ECO per working hour. The ECO working an urban area is likely to process greater call volumes than the counterpart working rural areas, but the same holds true for police officers, firefighters, and EMS practitioners. The OMB’s denial of occupational reclassification is perplexing and seems more complicated to defend, and its assertions are misleading.

It is helpful to compare the job descriptions included within the Protective Service and the Office and Administrative Support occupational classifications. The Protective Service Occupations category includes: a) various levels and positions within law

---

89 Mayer, “Kootenai County Dispatcher Honored for Helping Save Woman Who Drove into Lake Coeur d’Alene.”


91 National Emergency Number Association, “9-1-1 Statistics.”

enforcement, including corrections, jails, bailiffs, and all types of patrol and investigation police officers; b) various levels and positions within firefighting and fire prevention workers, including firefighters, fire investigators, fire marshals, and prevention specialists; c) various levels of security workers, including loss prevention, security guards, animal cruelty investigators, casino surveillance officers, bodyguards, bouncers, and Transportation Safety Administration (TSA) officers and screeners; d) fish and game wardens; e) parking enforcement workers; f) animal control workers, including dog catchers; g) private detectives and investigators, including store detectives and private eyes; and h) miscellaneous protective service workers, including crossing guards, flaggers, lifeguards, ski patrol, school bus monitors, and warrant servers. This is the only SOC category for first responder occupations. Within this classification, general job descriptions for a few of the vocations are shown in Table 2.

---

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Occupational Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighter</td>
<td>Control and extinguish fires; respond to emergencies where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.</td>
</tr>
<tr>
<td>Fire Inspectors and Investigators</td>
<td>Inspect buildings to detect fire hazards and enforce local ordinances and state laws, or investigate and gather facts to determine cause of fires and explosions.</td>
</tr>
<tr>
<td>Police and Sheriff’s Patrol Officers</td>
<td>Maintain order and protect life and property by enforcing local, tribal, state, or federal laws and ordinances. Perform a combination of the following duties: patrol a specific area; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts. Includes police officers working at educational institutions.</td>
</tr>
<tr>
<td>Security Guards</td>
<td>Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules. May operate x-ray and metal detector equipment.</td>
</tr>
<tr>
<td>Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers</td>
<td>Monitor recreational areas, such as pools, beaches, or ski slopes, to provide assistance and protection to participants.</td>
</tr>
</tbody>
</table>

The Office and Administrative Support Occupations category includes: a) various levels and positions of office and administrative support workers, including: clerical, payroll and timekeeping, teller, switchboard, answering service, directory assistance/telephone operator, communications equipment operator, bill and account collector, billing and posting, bookkeeping, accounting, auditing, gambling cage, mortgage and finance, dividend and commodities clerk, court and municipal clerk, licensing clerk, customer service, file clerk, travel industry clerk, census and market research interview, library

---

assistant, human resource assistant, receptionist, cargo and freight agent, and courier; b) otherwise dispatchers, including taxicab, tow truck, train, and utility service dispatchers; and c) meter readers, postal service clerks and carriers, postal service sorters and processors, shipping and receiving clerks, planning and production clerks, scale and weigh station operators, secretaries and administrative assistants, legal assistants, data entry and transcription workers, insurance claim and policy processing clerks, mail clerks, proofreaders and editorial assistants, statisticians, and notary clerk.95 This is currently the SOC category where one will find the Public-Safety Telecommunicator (aka, ECO). Within this classification, one will find general job descriptions for some of the vocations as shown in Table 3.

---

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Occupational Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switchboard Operators, including Answering Service</td>
<td>Operate telephone systems equipment or switchboards to relay incoming, outgoing and interoffice calls. May supply information to callers and record messages.</td>
</tr>
<tr>
<td>Telephone Operator</td>
<td>Provide information by accessing alphabetical, geographical, or other directories. Assist customers with billing requests, such as charges to a third party and credits or refunds for incorrectly dialed numbers or bad connections. May handle emergency calls and assist children or people with physical disabilities to make telephone calls.</td>
</tr>
<tr>
<td>Reservation and Transportation Ticket Agents</td>
<td>Make and confirm reservations for transportation or lodging, or sell transportation tickets. May check baggage and direct passengers to a designated concourse, pier, or track; deliver tickets and contact individuals and groups to inform them of package tours; or provide tourists with travel or transportation information.</td>
</tr>
<tr>
<td>Otherwise Dispatchers</td>
<td>Schedule and dispatch workers, work crews, equipment, or service vehicles for conveyance of materials, freight, or passengers, or for normal installation, service, or emergency repairs rendered outside the place of business. Duties may include using radio, telephone, or computer to transmit assignments and compiling statistics and reports on work progress.</td>
</tr>
<tr>
<td>Public-Safety Telecommunicator (aka ECO)</td>
<td>Operate telephone, radio, or other communication systems to receive and communicate requests for emergency assistance at 9-1-1 public safety answering points and emergency operations centers. Take information from the public and other sources regarding crimes, threats, disturbances, acts of terrorism, fires, medical emergencies, and other public-safety matters. May coordinate and provide information to law enforcement and emergency response personnel. May access sensitive databases and other information sources as needed. May provide additional instructions to callers based on knowledge of and certification in law enforcement, fire, or emergency medical procedures.</td>
</tr>
</tbody>
</table>

---

The reclassification denial by the OMB indicates a failure to recognize or accept the lifesaving, protective, analytical, triaging, and coordinating nature of work of the ECO, both for the public and for field responders. Its third and fourth reasons for denial (does not talk someone through procedures; does not provide advice) even seems to contradict its own assigned occupational job description contained within the last sentence of Table 3, which reads, “May provide additional instructions to callers based on knowledge of and certification in law enforcement, fire, or emergency medical procedures.” The committee’s fifth reason for denial of the reclassification was, “separating them from the other dispatchers would be confusing.”

The SOCPC apparently placed more emphasis and importance on the job title—dispatcher—than it did on analyzing the actual nature of the work performed by the ECO, and it also failed to qualify who would be confused or why confusion is even relevant. The OMB subsequently failed to correctly apply its Classification Principle 2 which reads, “Occupations are classified based on work performed and, in some cases, on the skills, education and/or training needed to perform the work.”

The ECO’s work protects and often saves lives, a distinction that none of the other Office and Administrative Support Occupations share, as well as several of the Protective Service Occupations. For example, loss prevention workers, animal cruelty investigators, casino surveillance officers, parking enforcement workers, dog catchers, private detectives, including store detectives and private eyes, all of which are in the Protective Service Occupations classification, are far less likely to administer life-saving services. Most of the other Office and Administrative Support Occupations are not hired by, report to, or serve, agency personnel who do fall within the Protective Service Occupation classification, as does the ECO, contrary to the OMB’s assertion that they have a different supervisory chain.

Furthermore, none of the other Office and Administrative Support Occupations, or several of the Protective Service Occupations, share comparable job tasks or bear similar responsibility to proficient performance as that of the ECO. There are psychological side

effects associated with the types of calls the ECO handles, and the multitasking demands of the job using multiple technical systems, such as radios, software systems for accessing, providing, documenting data, receiving of incident related texts and imaging, monitoring traffic camera feeds, and monitoring license plate readers and gunshot detection sensors, differentiate the tasks, responsibilities, or psychological responses of an ECO from those in otherwise clerical positions.99 That was not an exhaustive list, but it demonstrates that there are few parallels with any of the other Office and Administrative Support Occupations. Many ECCs also require their personnel to complete, at a minimum, basic Incident Command System (ICS) courses due to the coordinating of emergency-response disciplines and their apparatus as a key occupational responsibility.

With many agencies, the ECO is required to pass a background investigation that is often equally as rigorous as that of a police officer. This is because they access and utilize the same sensitive, highly confidential personal information: assets owned, criminal records, arrest and citation records, current and former employers, current and former residences and phone numbers, Social Security numbers, home addresses, dates of birth, and other types of personally identifiable information (PII), through databases like the National Crime Information Center (NCIC), the International Justice and Public Safety Network (NLETS), and the El Paso Intelligence Center (EPIC). The ECO is expected to be of high moral character, not susceptible to corruption and nefarious activity, and is expected to use their authority and PII access effectively and only for lawfully appropriate purposes.

They will likely encounter highly confidential public safety related operational information, such as the use of drug informants or a particular surveillance operation by law enforcement, or the treatment and transport of a mentally ill individual by EMS. All of this information must also remain confidential. Several states require a state training certification administered by the same or similar certifying entity as law enforcement

officers, due to the high moral, ethical, and performance proficiency standards expected. In Idaho, for example, the ECO is required to be Peace Officer Standards and Training (POST) certified and to affirm, via signature, that they have read, understand, and accept that any breach of the following oath may result in POST decertification, rendering them unemployable within Idaho as an ECO.

As a member of the law enforcement profession, my fundamental duty is to serve the community; to safeguard lives and property; to protect the innocent against deception, the weak against oppression or intimidation, and the peaceful against violence or disorder; and to respect the Constitutional rights of all to liberty, equality and justice.

I will keep my private life unsullied as an example to all and will behave in a manner that does not bring discredit to me or to my agency. I will maintain courageous calm in the face of danger, scorn, or ridicule; develop self-restraint; and be constantly mindful of the welfare of others. Honest in thought and deed in both my personal and official life, I will be exemplary in obeying the law and the regulations of my department. Whatever I see or hear of a confidential nature or that is confided to me in my official capacity will be kept ever secret, unless revelation is necessary in the performance of my duty.

I will never act officiously or permit personal feelings, prejudices, political beliefs, aspirations, animosities or friendships to influence my decisions. With no compromise for crime and the relentless prosecution of criminals, I will enforce the law courteously and appropriately without fear or favor, malice or ill will, never employing unnecessary force or violence and never accepting gratuities.

I recognize the badge or position of my office as a symbol of public faith, and I accept it as a public trust to be held so long as I am true to the ethics of law enforcement service/public service. I will never engage in acts of corruption or bribery, nor will I condone such acts by other law enforcement or emergency communications officers. I will cooperate with all legally authorized agencies and their representatives in the pursuit of justice.

I know that I alone am responsible for my own standard of professional performance and will take every reasonable opportunity to enhance and improve my level of knowledge and competence. I will constantly strive to achieve these objectives and ideals, dedicating myself before God, or have

a sincere and unfaltering commitment to my chosen profession...law enforcement.\textsuperscript{101}

These requirements are a stark distinction between the ECO profession and that of another non-public safety type of dispatcher, such as a taxicab dispatcher, or that of some other clerical position, but many states and territories have yet to enact them.

The public expects the ECO to calmly, effectively, and professionally handle calls reporting events ranging from barking dog complaints, or welfare check requests, to the most unimaginable and horrific calls involving crimes in progress, mass casualty incidents, natural disasters, and terrorism. These calls can include traffic complaints, vehicular crashes, shootings, homicides, armed robberies, kidnappings, and many more. This includes calls where a victim is pleading for help in an extremely dire or dangerous situation. Denise Lee’s call in 2008 changed the lives of many, and tragically delineates the fact that the ECC is the nerve-center of emergency response and its ECO is the emergency response system’s controller. In mass casualty incidents, such as the Sandy Hook school shooting, Hurricane Sandy, the Las Vegas Route 91 Music Festival shooting, and the devastating 2018 Camp fire in California, the ECO has to efficiently and effectively process the barrage of calls they receive and coordinate the response of multiple emergency assets and agencies.\textsuperscript{102} There seems to be a vast difference between the expectations of the public when interfacing with any of the other Office and Administrative Support Occupations and the public’s expectations when faced with the unfortunate need to contact 9-1-1.

The ECO is tasked with assessing calls for medical assistance by quickly identifying a caller’s or patient’s chief complaint and/or symptoms using systems containing certified medical processes and protocols. One ECO testimonial provided to APCO reads, “I’ve calmed that mother, brought her to a level where she is coherent enough to take direction, given her CPR instructions, having her count with me and then hearing

\begin{footnotesize}
\end{footnotesize}
that baby begin to cry. It made tears fall down my face. I saved that baby.”

This is known as dispatcher-assisted cardiopulmonary resuscitation (DA-CPR), or telephone CPR (t-CPR), and is believed to nearly double the administration of CPR by on-scene witnesses. Research conducted in 2011 at the University of Washington’s School of Medicine showed that ECOs from King County, Washington, correctly identified cardiac arrest in 80 percent of their calls and that proper identification rose to 92 percent when the ECO was able to determine the patient’s consciousness and breathing status. DA-CPR, among other medical emergency pre-arrival care instructions, occurs in countless ECCs across the country. Medical Priority Dispatch System (MPDS), one of several vendor protocol solutions, is a protocol system developed by the IAED to aid the ECO in dispatching appropriate aid to medical emergencies. The ECO follows its systematized caller interrogation prompts, and the answers provided by the caller to those prompts assists the ECO in providing appropriate pre-arrival care instructions in accordance with the proper protocol. IAED claims adopted use of the MPDS by over 3,500 centers within 44 countries. Many ECOs are trained in the use of these industry-accepted systems that are helpful to them in identifying illnesses or injury acuity, which then helps triage calls and direct appropriate responses by first responders. Some ECCs have even employed Emergency Communications Nurses (ECNs) to further triage calls at the ECC once the ECO has concluded the initial triage and a patient is deemed not to need an immediate ambulance response. The ECO is routinely the first point of contact for an individual in


106 International Academies of Emergency Dispatch, “Resources.”


108 Scott et al., 10.
need of emergency-responder assistance, administering lifesaving and protective instructions while analyzing and triaging the chief complaints, and while dispatching and coordinating response systems.109

The ECO is also called upon by those experiencing fire emergencies. They process the whole gamut of fire-emergency related calls, and it is important they accurately identify and assign the priority of the call, make rapid assessments as to the size and scope of the incident so the type and number of fire apparatus needed can be deployed, and provide over-the-phone scene/life safety instructions, often using established police, fire, or medical protocols until first responders arrive at-scene.110 According to Michael Karter, of the National Fire Protection Association, in 2013 there were approximately 31,644,500 fire department related calls to ECCs, with 1,240,000 for actual structure fires resulting in 3,240 civilian fatalities, 15,925 civilian fire injuries, and approximately $11.5 billion in property damage loss.111 Even though structure fires are not the primary call the ECO processes for fire departments, structure fires often cause significant financial loss and, more importantly, pose a very high risk of serious injury or death.112 The public, not just fire departments, rely on the ECO asking all of the proper questions of a caller, and providing that caller with as much scene management and life-saving direction as possible until emergency responders arrive. The ECO has to do this, often with callers that are traumatized, incoherent, and hysterically emotional. These calls are not akin to calls processed by a taxicab dispatcher, or utility company dispatcher. If the ECO fails to gather critical information useful for analyzing, triaging, and then effectively coordinating fire-


fighting response units, the magnitude of an incident’s losses can intensify, including severity of injuries and even cause fatalities, all attributable to the ECC and ECO.113

ECCs are subject to tremendous vicarious liability through its ECO based on performance and subsequent outcomes. In 2017, the International Academies of Emergency Dispatch (IAED) conducted research on ECC related liability cases from the United States and Canada. This is salient, as it further delineates the complex and significant duties and responsibilities associated with following established procedures and protocols and delivering instructive care or advice. The IAED searched for any and all cases where the ECC or an ECO were specifically referenced in the lawsuit.114 Among the inclusion criteria was that at least one of the following occurred: a court case was filed; the case was settled; the case included depositions or other kinds of data or evidence; or, the case was reported in the news.115 As a result, the IAED found 84 cases and excluded five for proper sampling criteria reasons.116 Of the remaining 79 cases (see Table 4—©2018 International Academies of Emergency Dispatch—used with permission), the average settlement amount was $1 million for the plaintiffs.117

115 Clawson et al., 4.
116 Clawson et al., 3.
117 Clawson et al., 3.
Table 4.  ECC Related Liability in the U.S. and Canada

<table>
<thead>
<tr>
<th>CASE DATA</th>
<th>CASE PARAMETERS</th>
<th>CASES EVALUATED = 79</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years</strong></td>
<td>1980 - 1989</td>
<td>13 (16.5 %)</td>
</tr>
<tr>
<td></td>
<td>1990 - 1999</td>
<td>19 (24.1 %)</td>
</tr>
<tr>
<td></td>
<td>2000 - 2015</td>
<td>47 (59.5 %)</td>
</tr>
<tr>
<td><strong>Call Origin - Regions</strong></td>
<td>Midwest</td>
<td>30 (38.0 %)</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>19 (24.1 %)</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>16 (20.2 %)</td>
</tr>
<tr>
<td></td>
<td>Northeast</td>
<td>14 (17.7 %)</td>
</tr>
<tr>
<td><strong># of calls per incident</strong></td>
<td>1</td>
<td>1 (1.3 %)</td>
</tr>
<tr>
<td></td>
<td>2 to 3</td>
<td>2 (36.7 %)</td>
</tr>
<tr>
<td></td>
<td>4 to 5</td>
<td>7 (8.9 %)</td>
</tr>
<tr>
<td></td>
<td>6 to 7</td>
<td>2 (2.5 %)</td>
</tr>
<tr>
<td></td>
<td>&gt;7</td>
<td>2 (2.5 %)</td>
</tr>
<tr>
<td></td>
<td>unknown</td>
<td>38 (48.1 %)</td>
</tr>
<tr>
<td><strong>Caller party type</strong></td>
<td>Second</td>
<td>39 (49.4 %)</td>
</tr>
<tr>
<td></td>
<td>First</td>
<td>23 (29.1 %)</td>
</tr>
<tr>
<td></td>
<td>Third</td>
<td>9 (11.4 %)</td>
</tr>
<tr>
<td></td>
<td>Others *</td>
<td>8 (10.1 %)</td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td>Died at scene or within 24 hours</td>
<td>73 (92.4 %)</td>
</tr>
<tr>
<td></td>
<td>Survived +</td>
<td>6 (7.6 %)</td>
</tr>
</tbody>
</table>

* A combination of two or more of the three (first, second, and third) caller party types.
+ These survivors include any person(s) who may have died more than 24 hours later.

©2018 International Academies of Emergency Dispatch—used with permission.

---

118 Clawson et al., 5.
Since the beginning of the 21st century, the number of lawsuits attributed to an ECC or ECO-related matter has risen significantly. There was an average of 1.3 cases per year from 1980 through 1989; 1.9 cases per year from 1990 through 1999; and, over 2.9 cases per year from 2000 through 2015.

2. Environmental Counterarguments

Compounding the ECO’s nature of work further, is emerging incident related imaging (IRI) technology streaming into the ECC.119 This technology affords the delivery of live photos and video-streaming communication into the ECC and between the ECO, first responders, and public.120 Once widespread in implementation, it will be transformative to the way public safety, first responders, and the ECCs conduct business, but with it will likely come additional staffing, training, and traumatic injury challenges for the ECO workforce. Until now, the ECO only heard the screaming, agonal breathing, or the crack of a self-inflicted gunshot by the suicidal caller, but soon if not already, the ECO may also be visually witnessing these events firsthand via this technology. Arguably, this places the ECO on the front-line and could even be worse, psychologically, than what first responders experience, due to the sheer volume of these types of instances they may encounter.

There has been recent interest in research and analysis regarding the potential psychological and emotional effects on the ECO caused by repeated exposure to traumatic incidents, and potential consequences. Benjamin Trachik, Madeline Marks, Clint Bowers, Greg Scott, Chris Olola, and Isabel Gardett, researchers for the International Academies of Emergency Dispatch, write, “The job of an emergency dispatcher requires the strategic and complex coordination of emergency personnel under highly stressful, time-intensive conditions. Dispatchers are the first contact between a distressed individual and emergency

---


120 DeMar, “Next Generation 9-1-1: Policy Implications of Incident Related Imagery on the Public Safety Answering Point.”
responders.”121 The ECO must remain poised, focused, and in many cases, do so from one traumatic incident to the next, day in and day out, and rarely, if ever, with the opportunity to gain emotional closure.122 Trachik et al. hypothesize that the ECO’s exposure to traumatic events is perhaps greater than that of first responders because oftentimes they are processing calls for police, fire, and EMS emergencies, and this may, in fact, place them at an even greater risk for psychopathology—“the manifestation of behaviors and experiences which may be indicative of mental illness or psychological impairment.”123

In 2012, a study conducted by Heather Pierce and Michelle Lilly of Northern Illinois University’s Department of Psychology analyzed work-related exposure to potentially traumatic 9-1-1 calls by 171 ECOs, the distress associated with those calls, and any subsequent Post-traumatic stress disorder (PTSD) symptoms.124 The researchers discovered that the amount of peritraumatic distress—emotional and physiological distress experienced during and/or immediately following a traumatic event—reported by ECO participants was high: on average 32 percent of the time.125 This discovery, in collaboration with other research and data, supports their hypothesis that some ECO practitioners likely experience PTSD as a result of peritraumatic distress.126

3. Political Counterarguments

The United States House of Representatives’ 9-1-1 SAVES Act (H.R. 1629) and the United States Senate’s companion bill (S. 1015) directs the OMB to enact a

---


122 Association of Public-Safety Communications Officials (APCO), *Comments of APCO International in Response to the Office of Management and Budget’s Notice of Solicitation of Comments for the Proposed Revision of the 2010 Standard Occupational Classification*.


124 Pierce and Lilly, “Duty-Related Trauma Exposure in 911 Telecommunicators.”

125 Pierce and Lilly, 213.

126 Pierce and Lilly, 213.
reclassification of the ECO from the Office and Administrative Support Occupational classification to the Protective Service Occupational classification. It has bicameral and bipartisan support, but has stalled within the respective committees of both chambers and therefore not culminated into law. This attempt to legislate a change in the ECO occupational classification demonstrates political commitment to both the argument for, and commitment to, reclassifying them to the Protective Service Occupational classification, but it also delineates the level of intervention apparently required to upend the status-quo.

Over the last 40 plus years, great strides have been made in technological capabilities and the development of a national 9-1-1 system, however, the volume and complexity of societal demands placed upon it has revealed ineffective and inefficient systems and processes creating vulnerabilities to the public’s safety and the homeland’s security. Complacency and apathy regarding calls for professionalization and standardization within the 9-1-1 system, demonstrated in Table 1, demonstrated in the number of jurisdictions lacking standards of professionalism, and demonstrated in the fact that an apparent legislative mandate to OMB to reclassify the occupation is necessary, is alarming. It has contributed to unconscionable failures, and demands focused policy and leadership to eliminate future disastrous outcomes.

A reclassification does not guarantee better pay, better benefits, more staff, or better training, but it does pave the way for the ECO to be formally recognized and accepted into the same field of work as first responders. The job of an ECO is stressful, thankless, demanding, life-saving, and extremely consequential to the public, first responders, and homeland security as a whole. The ECC is frequently that first link in the chain of public safety and emergency response for everything from a simple medical call, to a structure fire, a kidnapped mother, a natural disaster, or a terrorist incident. These practitioners are not clerical staff, they are not secretaries or taxi-cab dispatchers, they are an ECO working within the nerve-centers of public safety. According to Krouse, “Dispatchers are a linchpin of the nation’s emergency-response infrastructure. Their responses to 9-1-1 calls directly impact how quickly police, firefighters and other first responders are sent to help and
whether they go to the right place." The public is not calling them to schedule a tire rotation, order a dress, request cable TV repairs, or schedule chiropractic care.

---

III. ECC STAFFING AND FUNDING CHALLENGES

In order to diagnose a struggling ECO occupation serving a neglected 9-1-1 system, it is also necessary to understand the systemic staffing challenges occurring within the ECC and ongoing funding challenges within the 9-1-1 system. This chapter will expose challenges related to the recruitment and retention of ECO personnel. It will also disclose prevalent funding challenges within the 9-1-1 system, including inadequate or diminished funding sources and misappropriation of 9-1-1 tax revenues by some jurisdictions.

A. PERSONNEL RECRUITMENT AND RETENTION

According to the Police Executive Research Forum (PERF), more than 51 years after the first 9-1-1 call was placed, emergency dispatching services have been relegated to a subordinate and undervalued discipline within the public safety enterprise.128 There is a great deal of focus by public safety and policymakers on the need for technological innovation and enhancement of the 9-1-1 system, but public safety leaders need to address human resource deficiencies if they are to effectively employ those new systems. The PERF writes that ECCs will need to, “raise the qualifications for telecommunicators, establish career paths, and otherwise professionalize their operations.”129 Today’s 9-1-1 system is so commonplace that few people consider its operational challenges until faced with an emergency.

The ECO works long hours and rotating shifts, and does so for inadequate pay, performing very high-stress tasks without receiving appropriate esteem from other public safety colleagues and the general public.130 As a result, ECCs are routinely understaffed and experience high attrition rates, creating vulnerabilities to public safety and the homeland security enterprise. Because of attrition and recruitment challenges, many ECCs

129 Police Executive Research Forum, 53.
also require personnel to work exhausting overtime loads in order to adequately staff for its operational needs.\footnote{Beth LeBlanc, “Ingham 911 Dispatchers Rack up Thousands of OT Hours amid Staffing Struggles,” October 15, 2017, https://www.wcnc.com/article/news/nation-now/ingham-911-dispatchers-rack-up-thousands-of-ot-hours-amid-staffing-struggles/275-483600750.} Innovative and enhanced technologies are expected to exacerbate this challenge.\footnote{Police Executive Research Forum, \textit{The Revolution in Emergency Communications}, 52.} As noted in Chapter II, Krouse, in the \textit{Wall Street Journal}, refers to the ECO occupation as the, “linchpin of the nation’s emergency-response infrastructure.”\footnote{Krouse.} She goes on to write that they can be difficult to recruit and retain because the job demands that they make swift life or death decisions, oftentimes with incomplete or confusing information, and are expected to do so for roughly the same amount of compensation as a manager at a retail store.\footnote{Krouse.}

For many of the early years of 9-1-1, the job of an ECO was far less complex. In fact, the ECO would primarily answer phone calls and dispatch first responders for a single agency, using manual processes, and with limited technologies.\footnote{Police Executive Research Forum, \textit{The Revolution in Emergency Communications}, 52.} It was common for agencies to assign limited-duty personnel to the 9-1-1 center with little if any training.\footnote{Police Executive Research Forum, 52.} This is no longer the case. Today, an ECO monitors multiple computer screens and systems, conducts research through a plethora of databases, and does all of this while handling call after call, some of which are extremely stressful and involve tragic circumstances.\footnote{Police Executive Research Forum, 52.}

An ECO in today’s 9-1-1 system should have strong organizational and communicative skills, and needs to have substantial technological, analytical, and diagnostic skills.\footnote{Police Executive Research Forum, \textit{The Revolution in Emergency Communications}, 52.} The ECO should be trained and equipped to handle crisis negotiations, tactical dispatching, and de-escalating communications.\footnote{Police Executive Research Forum, 54.} PERF notes that recruitment of
the ECO has been a challenge for ECCs for several years, so recruiting applicants who are qualified and motivated to operate within these new challenges will be even greater. Their training level, already often spanning anywhere from six to twelve months, will need to increase and, according to PERF, agencies will likely need to be creative with recruitment strategies.

Megan Witherspoon, an ECC manager and researcher, posits in her thesis that there is a staffing crisis within America’s ECCs and sets out to determine cause and effect. In terms of recruitment, her research found that the new ECO fails to recognize the position as a long-term career, largely salary driven, with many treating it as a stepping stone into other public safety disciplines. She also found through her research that some ECOs believe agencies need to more effectively recruit and test for applicants who are capable of completing the hiring and training process, and adapt to the demanding and ever-changing environment of the ECC. Some applicants lack an understanding of the knowledge, skills, and demands of the job until after they are hired, and decide to resign. Another factor Witherspoon reported is the extensive time it takes to process an applicant through the ECC background investigation process, oftentimes causing applicants to lose patience and withdraw from conditional offers of employment, thus extending the vacancy, creating additional overtime, and leading to understaffed centers. After polling national and state level executive board members of both APCO and NENA chapters in 2018, Witherspoon found that approximately 53.7% of the 201 participant ECCs were down anywhere from one to five ECOs.

---

140 Police Executive Research Forum, 54.
141 Police Executive Research Forum, 54.
142 Megan Witherspoon, “Retention of Personnel in Emergency Communications Centers: A Mixed Methods Explanation of Challenges Encountered” (Doane University, 2018), ii, https://www.slideshare.net/slideshow/embed_code/key/Ghloa5Gn7MDKbG.
143 Witherspoon, 41–42.
144 Witherspoon, 44–45.
145 Witherspoon, 50.
146 Witherspoon, 49.
147 Witherspoon, 51.
B. 9-1-1 FUNDING PAUCITY

Stress on the nation’s 9-1-1 system is increased due to inadequate financial investment and diminishing revenue streams. According to the FCC, states and territories collected over $2.9 billion in 9-1-1 fees in 2017, but almost ten percent, or approximately $285 million, of those fees were expended by certain states for non-9-1-1 related purposes.\textsuperscript{148} “When Americans pay 9-1-1 fees through their phone bills, they rightfully expect that money to fund 9-1-1-related services,” said FCC Chairman Ajit Pai.\textsuperscript{149} The FCC identifies the states of Montana, New York, New Jersey, Nevada, Rhode Island, West Virginia, and the U.S. Virgin Islands as guilty of diverting 9-1-1 fees to unrelated expenditures during 2017.\textsuperscript{150} The PERF also acknowledges that the current 9-1-1 funding streams are declining and thus insufficient because of issues such as fewer wireline phones and approaching saturation levels with wireless subscribers.\textsuperscript{151}

The issue of jurisdictions diverting 9-1-1 fees has been a longstanding issue. In 2017, FCC Commissioner Michael O’Rielly characterized it as raiding 9-1-1 fees, and noted then that the FCC had been calling it out for nearly 15 years.\textsuperscript{152} He went on to assert that both shaming the jurisdictions or hoping for change has proven unproductive.\textsuperscript{153} In 2010, Bob Smith pointed out that over $200 million had been raided in 2008 and 2009 for things such as road repairs or vehicle purchases.\textsuperscript{154} On May 15, 2019, Commissioner O’Rielly addressed 9-1-1 fee diversion at a U.S. House of Representatives subcommittee hearing using strong language. Among four issues he raised, two had to do with 9-1-1 fees and investment in public safety communications infrastructure. His issues dealt with


\textsuperscript{150} Federal Communications Commission.


\textsuperscript{153} O’Rielly.

\textsuperscript{154} Smith, “The State of 911.”
jurisdictions spending tax dollars over-building current infrastructure, and the need for an end to the theft of 9-1-1 fees by jurisdictions for use on non-9-1-1 projects.¹⁵⁵

Insufficient funding to 9-1-1 is important to consider and address because its telecommunications technologies are aging and woefully inadequate. For example, it is estimated that New York needs to spend upwards of $2.2 billion to upgrade its 9-1-1 system to improve caller location identification technologies, including its ability to adopt and implement NG9-1-1 technologies effectively.¹⁵⁶ Commissioner O’Rielly testified that the theft of these funds, delaying much needed upgrades to equipment and technologies, poses a significant public safety concern to first responders and the public who expect and rely on a capable system.¹⁵⁷ O’Rielly uses New York as a prime example, calling it a recalcitrant state that has diverted as high as ninety percent of its 9-1-1 fees.¹⁵⁸ Jurisdictions that divert or misappropriate 9-1-1 fees are also ineligible for federal grant funds that could further assist with system enhancements and innovations.¹⁵⁹

In California, the Governor’s Office of Emergency Services (Cal OES) admits that its 9-1-1 system is stretched beyond its capabilities. It reports that it is currently incapable of efficient integration with current technologies, and is unreliable and unable to adequately monitor technologies needed for current disasters.¹⁶⁰ It cites its aging technology as a reason for an increase in 9-1-1 system outages and unreliability.¹⁶¹ The scenarios described in New York and California are reciprocated across the U.S. states and territories. Tim Henderson, writing for the Washington Post, noted in 2017 that due to a dilapidated

¹⁵⁷ O’Rielly, Accountability and Oversight of the Federal Communications Commission, 6.
¹⁵⁸ O’Rielly, 8.
¹⁵⁹ O’Rielly, 7–8.
¹⁶¹ Governor’s Office of Emergency Services.
9-1-1 system, and numerous jurisdictions largely unable to afford upgrades on their own, a rash of 9-1-1 disruptions across the country had occurred.\textsuperscript{162} He cited a situation in Dallas, Texas where 9-1-1 callers were unable to reach the ECC due to a spike in call volumes, with hundreds of callers being placed on hold. The Dallas situation was later blamed on both insufficient ECC staffing and a technological conflict with a T-Mobile feature, inspiring investment of more than $2 million to increase the ECC staffing and technological capabilities.\textsuperscript{163}

The 9-1-1 Fee Integrity Act (H.R. 6424) has been drafted to better regulate jurisdictional uses of 9-1-1 fees.\textsuperscript{164} More specifically, the Act would require the FCC to collaborate with public safety entities in drafting and then issuing final rules designed to prevent jurisdictions from diverting 9-1-1 revenues to non-9-1-1 related expenditures. Despite its introduction in the U.S. House of Representatives on July 18, 2018, with bipartisan support, it appears to have stalled within the House Committee on Energy and Commerce. As of December 9, 2019, no related bills have been drafted within the U.S. Senate.

The PERF posits that procuring and operating new ECC systems is, and will remain, a major national financial challenge.\textsuperscript{165} The FCC estimated, in 2011, that a national transition to NG9-1-1 technologies, technologies that greatly enhance the ability to identify caller location, texting to 9-1-1, and other advanced capabilities, will cost nearly $2.7 billion.\textsuperscript{166} The 2013 Blue Ribbon Panel on 9-1-1 Funding identified the following three major challenges related to funding the transition to NG9-1-1:

\begin{itemize}
  \item \textsuperscript{163} Henderson.
  \item \textsuperscript{165} Police Executive Research Forum, \textit{The Revolution in Emergency Communications}, 66.
\end{itemize}
• Insufficient cost estimation data for a full NG9-1-1 transition, and insufficient cost estimation for the ongoing costs to operate and maintain it;
• 9-1-1 revenue diversion to non-9-1-1 related initiatives and projects by some jurisdictions;
• Current legislative language that is prohibitive of creating new revenue streams and thus challenging jurisdictions with creating the means to support technological transitions.\textsuperscript{167}

U.S. Senator Amy Klobuchar summarizes the seriousness of these challenges writing, “In times of crisis, we also see the glaring holes in our nation’s emergency communications system. Persistent coverage gaps in rural areas, interoperability complications, dropped calls—the kind of preventable technological difficulties that put the lives of first responders and the public in danger.”\textsuperscript{168}


\textsuperscript{168} Police Executive Research Forum, \textit{The Revolution in Emergency Communications}, 68–69.
IV. PROFESSIONALIZATION AND STANDARDIZATION

To professionalize the ECO occupation and standardize the ECC system, it is important to recognize current jurisdictional policies and initiatives designed for that purpose across the U.S. and elsewhere. There are several key factors to consider surrounding the professionalization and standardization of the emergency communications discipline. This chapter will highlight those current policies within the U.S. states and territories, identifying commonalities and disparities, present some theory and processes surrounding the professionalization and standardization of an occupation, and then focus on human resource factors or implications of a professionalized and standardized discipline.

A. CURRENT STATE OF AFFAIRS

Gardett et al. highlight four themes dominating ECO related studies: the ECC as an initial care center, standardization of dispatching, resource dispatching, and dispatching best practices. Gardett et al. also assert that the ECO has experienced a revolution, currently recognized as a trained and certified professional, that provides life-saving direction until field responders arrive at an emergency event. Their assertion seems to inflate the adoption rates and level of professionalization and standardization regarding mandated training and certification of the ECO, noting that their organization’s state of Utah, and numerous others, still do not mandate a training and certification standard.

Again, there are countless examples of failure in professionalism within the ECO occupation. Consider the young asthmatic wife, Laura Levis, who died on September 16, 2016, outside of a Boston area hospital’s emergency room door, in part, because the initial ECO failed to inform another ECO, during the transfer of Laura’s 9-1-1 call, that Laura

---


170 Gardett et al.
was outside the hospital’s emergency room door. Laura had stated her location to the first ECO twice, and told her that she thought she was dying. Those details would have better communicated the urgency of Laura’s emergency and could have reduced response times by first responders who were looking for her near the hospital’s main entrance. Alternatively, Kyle Plush, the Ohio teen who called 9-1-1 twice on April 10, 2018, while pinned between the rear seat of his minivan where he suffocated to death while pleading for help. Kyle’s dad found him nearly six hours later; the ECOs and police failed to find him and dismissed the calls as a prank. The police investigation report cited inadequate supervision at the ECC as one of the causes of this failure. One of the more notorious and egregious failures by the ECO profession is the tragic death of Denise Amber Lee. Lee’s father, Sergeant Rick Goff of the Charlotte County Sheriff’s Office, is quoted as saying, “We blew it.” Each of these examples has been attributed to a collision of failures by an ill-prepared ECO, and technological limitations of the neglected ECC system. (The data contained within the following subsections one through three, including figures two through five, are the result of personal research documented in the spreadsheets—Appendices A and B.)

1. **Inventory of States With/Without Mandated Minimum Hiring, Training, and Certification Requirements**

   In researching for and reviewing professionalization and standardization laws and regulations of each of the U.S. states and territories, including Washington, D.C., in 2019,

---

171 DeMarco, “Laura Levis Was Left to Die Outside an ER. Why Were the Doors Locked?,” 16.
172 DeMarco, 16.
173 DeMarco, 16.
174 Shapiro, “Teen Mysteriously Dies in Car after Repeated Calls to 911, Police Chief Orders Internal Review into ‘Horrific Tragedy.’”
175 Shapiro.
177 Murphy, “The Detective’s Daughter.”
178 Murphy.
this author determined that only twelve of the fifty-six jurisdictions have established some iteration of an ECO hiring and character standard surrounding a jurisdictionally mandated certification, as reflected in Figure 2.

Figure 2. Mandated Hiring (Character) Standard

This means that in forty jurisdictions, with four of the U.S. territories undetermined, the ECO staff hired to work within those ECCs are not mandated to meet a hiring and certification standard above and beyond whatever the local ECC may internally impose, or by the minimum standards required by the Federal Bureau of Investigations for the ECO to have lawful access to PII data. In many cases those standards are significant, but inconsistent.

In researching for and reviewing professionalization and standardization laws and regulations of each of the same jurisdictions as it relates to a mandated minimum training
standard, it was determined that twenty-nine of the fifty-six jurisdictions have established some level of basic training. This means that twenty-three of the remaining jurisdictions have no mandated basic training requirement, with four of the U.S. territories undetermined, as reflected in Figure 3.

Figure 3. Mandated Minimum Training Standard

In researching for and reviewing professionalization and standardization laws and regulations of each of the same jurisdictions as it relates to a mandated continuing-education component, it was determined that twenty-three of the fifty-six jurisdictions have established some degree of mandated basic continuing-education training. This means that twenty-nine of the remaining jurisdictions have no mandated continuing-education component, with four of the U.S. territories undetermined, as reflected in Figure 4.
2. What Are the Commonalities/Disparities Among the Varied Hiring, Training, and Certification Requirements?

There are a number of commonalities and disparities among the fifty-six jurisdictions as it relates to initiatives on professionalization of the ECO occupation and standardization within the emergency communications system. The state of West Virginia, for example, requires an investigation of one’s character and background conducted by its State Police, but the law only expressly prohibits the hiring of an ECO with a felony conviction, and its minimum training requirement is simply a forty-hour nationally recognized ECO training course that must be completed within one year of their employment date.¹⁷⁹ Most of the twelve states requiring an investigation of character and

background issue a license, as in Texas, or certification, as in Idaho, through the jurisdiction’s law enforcement licensing or certification entity.

The training and continuing education standards required among the various jurisdictions is also widely varied. For example, in Michigan and New Jersey only the ECO working within a primary ECC is required to meet the jurisdictional standard. In other words, the ECO working in a secondary ECC, an ECC that only receives transferred 9-1-1 calls, is not required to meet any training or continuing education standard. Additionally, in North Carolina, only the ECO working for a Sheriff’s Office ECC is required to meet a training and continuing education standard. Thus, in North Carolina, any ECO working for the North Carolina State Highway Patrol, for example, or a city operated ECC, is not required to meet a state training or continuing education standard.

The amount of training required of the ECO among the jurisdictions with a standard also varies widely. In Florida, the initial training required for certification as an ECO is two-hundred and thirty-two hours, the most required of any jurisdiction, and it is provided through the Florida Department of Education. The majority of jurisdictions require something between forty hours and one-hundred and twenty hours of training leading to the initial licensing or certification. For continuing education standards, it is most common to see an annual or biannual requirement of between twenty to forty hours per practitioner.

3. Inventory of States With/Without Mandated Certification and Use of Pre-arrival Medical Protocols (EMD)

In researching for and reviewing professionalization and standardization laws and regulations of each of the U.S. states and territories, including Washington, D.C., in 2019, as it relates to a mandated use of and training in EMD protocol systems, it was determined that twenty-four of the fifty-six jurisdictions have established some level of EMD protocol system use and training, including a continuing-education requirement. This means that twenty-nine of the remaining jurisdictions have no such requirement, with three of the U.S. territories undetermined, as reflected in Figure 5.
B. THEORIES AND PROCESSES SURROUNDING PROFESSIONALIZATION AND STANDARDIZATION OF OCCUPATIONS

Standardize is synonymous with homogenize, formalize, or normalize, and standardization is the process whereby something is moved into conformance with a normalized or formalized status.\(^{180}\) In terms of the nation’s emergency communications system, standardization involves the establishment of regulations and protocols that create consistency of operational performance and functionality within and among the ECCs of a jurisdiction. This section is focused on the processes and theories, or models, that can lead

---

to a professionalization of the ECO occupation within the emergency communications system, as a standard.

A clear definition of a profession or even what a profession consists of has been elusive and debated for many years. American author and social theorist, Andrew Abbott, writes, “The tasks of professions are human problems amenable to expert service.”\textsuperscript{181} Historically, a profession was largely viewed as those learned professions such as law, ministry, medicine, engineering, and teaching, but contemporarily, the term has become more ambiguous where, for example, a highly-paid and talented athlete is now viewed as a professional.\textsuperscript{182} In fact, the word profession is often considered synonymous with employment, occupation, career, line of work, and specialty. Michael Dent, Ivy Lynn Bourgeault, Jean-Louis Denis, and Ellen Kuhlmann, all professors and researchers, write that today’s array of professions have disparate institutional arrangements and separate histories.\textsuperscript{183} Professions and professionalism are not fixed concepts; they are subject to a fluid set of jurisdictional and institutional influences.\textsuperscript{184}

Professionalization is the action or process by which an occupation gains certain qualities by increasing employment qualifications and performance expectations. Williams et al. posit that the process of professionalization is contextually dependent, and as a result will be idiosyncratic and temporally staggered.\textsuperscript{185} That process seems largely consistent in its inclusion of education and learning that is designed to enhance occupational performance, leads to credentialing, and meets a need, a process also recommended by the

\textsuperscript{182} Williams, Onsman, and Brown, “From Stretcher-Bearer to Paramedic: The Australian Paramedics’ Move Towards Professionalisation,” 1.
\textsuperscript{183} Mike Dent et al., \textit{The Routledge Companion to the Professions and Professionalism} (New York, NY: Routledge, 2016), 2.
\textsuperscript{184} Dent et al., 6.
\textsuperscript{185} Williams, Onsman, and Brown, “From Stretcher-Bearer to Paramedic: The Australian Paramedics’ Move Towards Professionalisation,” 4.
National Partnership for Reinventing Government (1999).\textsuperscript{186} As referenced in chapter 1, Ackroyd concludes that there are two dominant professionalization theories, functionalism/institutionalism and conflict theory.\textsuperscript{187} Functionalism/institutionalism theory understands professionalism to be environmentally inspired, consensual, and met with innovation to better serve stakeholders. It is focused on the controls and functions of organizations, the recognized characteristics of those organizations, and how those characteristics apply to professionalism. Conflict theory understands professionalism as an outcome of political or economic pressure exerted through organizational influence and it largely views professionalization as self-interest driven.\textsuperscript{188}

Christina Curnow, consultant and researcher, and Timothy McGonigle, research scientist, divide the theories surrounding professionalization into the following three model categories: attribute models, process models, and power and market models.\textsuperscript{189} Attribute models focus on a consistent set of attributes that delineate a profession from another occupation, where each of the attributes have to be met to be viewed as a profession.\textsuperscript{190} For example, a profession has to check all of the boxes of some specific attributes in order to be formally viewed as a profession. The process models are less focused on the traits or characteristics of a profession and more focused on a continuum process to professionalization, a process that can require adjustment as new standards or stages of the employment process are implemented.\textsuperscript{191} The power and market models focus on rationalization and bureaucratic controls, the why of the professionalization process.\textsuperscript{192} They focus on controlling the supply of occupational services through a credentialing


\textsuperscript{188} Ackroyd, 27.


\textsuperscript{190} Curnow and McGonigle, 287.

\textsuperscript{191} Curnow and McGonigle, 287–89.

\textsuperscript{192} Curnow and McGonigle, 289.
process that is attained after demonstrating knowledge of standardized and accredited learning and completing systematized training.\textsuperscript{193}

In \textit{The System of Professions}, Abbott identifies three reasons for the existence of professionalism. The first is related to the power and market-based approach, in that occupations are focused on management of limited resources, such as wealth or knowledge, and is correlated to conflict theory.\textsuperscript{194} The second is that a body of knowledge is organizable into groupings that can then be affiliated with certain occupations.\textsuperscript{195} The third is that competing interests or institutions of commodification, for example, have yet to disrupt the profession.\textsuperscript{196} Abbott distinguishes professionalism from organizations using commodification as a mechanism of organizations and assumes that professions may eventually lose out to organizations.

1. \textbf{Pathways To Professionalization and Standardization}

Contemporarily, the concept of professionalism has more to do with a practitioner being compensated for their skills or services and providing them within a business-like framework.\textsuperscript{197} Ackroyd identifies pathways of professionalization taken in the process of creating, developing, and changing a profession, by analyzing collegiate professions, organizational professions, private/public sector organizational professions, and corporate professions. Some common attributes of professionalization contained within those four types of professions are: regulatory conduct, credentialing via a licensing or certification requirement, regulatory requirements mandated by the state, dependence upon public sector organizations, and others.\textsuperscript{198}

\footnotesize
\textsuperscript{193} Curnow and McGonigle, 289.
\textsuperscript{194} Abbott, \textit{The System of Professions}, 324.
\textsuperscript{195} Abbott, 324.
\textsuperscript{196} Abbott, 324.
\textsuperscript{198} Ackroyd, 23–26.
2. Expected Outcomes of Professionalization and Standardization

Professionalization and standardization of a discipline is often driven by an interest in: (1) improving the quality and character of the practitioner pool; (2) directing and controlling the job performance of practitioners who intersect with the safety, health, and/or property of those they serve; (3) enhancing the trust and confidence of the public in the discipline’s work performance; (4) aligning the workforce with current regulations and policy requirements; (5) enhancing occupational status and compensation; (6) guiding and directing the moral and ethical behavior and activities of practitioners for the profession’s best interests; or (7) developing and standardizing the knowledge, skills, abilities, roles, and career pathways of the discipline to enhance recruitment, retention, and employment conditions. These objectives can and do improve teamwork within the discipline resulting in enhanced work proficiency and performance.

The professionalization and standardization of the ECO occupation fits within the functionalism/institutionalism theory because it is being driven by an institutional recognition of its need, both for the enhancement of the services provided to internal and external stakeholders and the elevation of the occupation as a career profession within the greater public safety and homeland security projects. It would follow the process model with focus on a continuum process to professionalization, as reflected in Figure 6. There needs to be a delineated continuum for meeting a hiring/character standard, attaining the mandated basic knowledge required through training, attaining and maintaining a certification or license, maintaining and enhancing skills through a continuing education requirement, and using industry-accepted medical pre-arrival instructional protocols in accordance with protocol standards. This would create that body of knowledge and occupational requirements that are organizable and affiliated with the ECO occupation, as noted in The System of Professions by Abbott, thus attaining professionalization.\textsuperscript{199}

\textsuperscript{199} Abbott, The System of Professions, 324.
Figure 6. Process Model of ECO Professionalization and Standardization
V. RECOMMENDATIONS AND CONCLUSIONS

These emergency dispatchers stand ready to respond to crisis, ensuring their fellow citizens receive the life-saving assistance they need. On National 9-1-1 Telecommunicators Day, we honor the invaluable contributions made by the dedicated men and women in emergency call centers throughout our great country.... Though we rarely see these heroes, we witness their around-the-clock devotion, and we owe them our deepest gratitude and appreciation for all that they do.

— President Donald Trump, 2018

This final chapter presents the results and conclusions that can be drawn from the research, including anecdotal evidence, policy analysis, and qualitative analysis conducted in the preceding chapters, and briefly highlights what Finland has done regarding professionalization and standardization of its emergency dispatching services. It demonstrates that much of the 9-1-1 system, and specifically many of its ECO practitioners, are systemically underprepared and undervalued. It exposes concerning and worsening trends in recruitment and retention of qualified practitioners, and highlights horrific mistakes made within ECCs. These human resource challenges further delineate the weaknesses and threats of the status quo within 9-1-1 for public safety and the homeland security project. While a professionalized and standardized 9-1-1 system, in terms of personnel, is mandated in numerous jurisdictions, alarming opportunities remain to standardize this objective, nationwide. Further, jurisdictional misappropriation of fees collected for the funding of 9-1-1 is further exposed and must stop. This thesis used the research results to identify several specific ways the nation’s 9-1-1 system—specifically its ECO occupation—can evolve to address problems and maximize advantages to public safety and the homeland security project.

---

A. PROFESSIONALIZATION AND STANDARDIZATION RESULTS IN FINLAND

Finland was ranked the safest country in the world—medical risks, security and road safety—by 2019 Travel Risk Map and it boasts having the most extensive Emergency Response Centre (ERC) operator’s training program in the world.\textsuperscript{201} It established the Emergency Response Centre Administration (ERCA), which is responsible for operations and regulation of all ERCs, under Finland’s Ministry of the Interior.\textsuperscript{202} Its universal emergency number is 1-1-2 and it has six ERCs employing approximately 607 ERCA personnel processing over four million calls annually.\textsuperscript{203} Finland initiated its standardization and professionalization initiatives beginning as early as 1991. Over the last twenty-eight years, it has worked to streamline processes, regionalize centers, and upgrade technological systems.\textsuperscript{204} Perhaps most importantly, for the last nearly twenty years it has mandated a stringent hiring, training, and continuing education program for its ERC operators, and a training program that Finland considers a degreed (diploma) program.\textsuperscript{205} This degreed program is run by Pelastusopisto—Emergency Services Academy Finland.\textsuperscript{206}

Finland’s population in 2019 is estimated at 5.53 million across its 130,666 square miles and borders Estonia, Russia, Sweden, Norway, and the Gulf of Finland.\textsuperscript{207} Over ninety-eight percent of its ERC operators have an upper secondary vocational education or greater, with over forty-three percent of them possessing a vocational college education or

\begin{itemize}
\item \textsuperscript{204} Kunnasvuori.
\item \textsuperscript{205} Toni Alatalo, “Humans of 112,” August 19, 2019.
\item \textsuperscript{206} Alatalo.
\end{itemize}
greater.\textsuperscript{208} Those operators answered 7,400 emergency calls per day, or just over 2.7 million emergency calls in 2018, and another approximately 1.3 million calls were for social services requests (non-emergency) or accidental dials.

Although the development of emergency dispatching services in Finland has somewhat paralleled 9-1-1’s evolution within the United States, the significant advances that have occurred in the past nearly two decades can be traced directly to the \textit{Emergency Response Centre Act} of 2001. It was in this law that Finland formed the ERCA for assuming full operational responsibility for all ERCs in the country, and connecting each one of them virtually through advanced technology.\textsuperscript{209} Those ERCs process all emergency calls for police, fire, EMS, and social and health services within Finland, except the autonomous Åland Islands.\textsuperscript{210}

The ERC operator’s degree is a comprehensive program designed by the ERCA’s Emergency Services College (Kuopio) and the Police University College (Tampere).\textsuperscript{211} It takes eighteen months to complete and comprises a total of ninety credits.\textsuperscript{212} Graduates are then eligible for hire by the ERC as an operator. Having a bachelor’s degree in police services also qualifies an applicant for ERC operator positions.\textsuperscript{213}

Finland formally recognizes that its ERC operators perform vital work in caring for the safety of society and field responders as the first link in the chain of public safety. Its degree program curriculum articulates the operator’s core work responsibilities as follows:

In order to mitigate the damage caused by an emergency and to ensure a smooth flow of urgent official functions, it is essential that an emergency response centre be able to receive an emergency call without delay, identify the risk involved in the emergency, locate the site of the emergency, determine the nature, need and urgency of help, relay the tasks to the appropriate operating units and optimise resource use, guide people in emergencies to act appropriately before help arrives.

\textsuperscript{208} Nieminen, “Emergency Response Centre Administration in Finland.”


\textsuperscript{210} Mission Critical Communications.

\textsuperscript{211} Nieminen, “Emergency Response Centre Administration in Finland.”

\textsuperscript{212} Nieminen.

\textsuperscript{213} Nieminen.
on the scene, and support the field operations of authorities using emergency response centre services.\textsuperscript{214}

It goes on to acknowledge that the operator’s fundamental premise of their duty is to respect life and human value, justness, and equality.\textsuperscript{215} It recognizes that they must have the ability to work independently, make professional decisions, act in an ethical manner and cooperate well with other public safety professionals for the common good.\textsuperscript{216} It makes several references to the importance of continual learning and renewal of professional competence, referring to the operator as a professional, even referring to them as “implementers of services within their sector of society.”\textsuperscript{217} Finland’s professionalization of the ERC operator position is summed up best within their training program curriculum with,

\begin{quote}
The process is individual, continuous construction and development of cognitive perception and skills and continuously developing signification of concepts. Each student builds their professional understandings based on their life history, work experience, organisational tradition and future expectations. A further goal of the training is to motivate the students for continuous professional self-development that may last for the entire career.\textsuperscript{218}
\end{quote}

This formal recognition and articulation by Finland of the pivotal role the ERC operator performs for the sake of public safety and security is unparalleled globally and identifies the importance it places on their role within the country’s homeland security project.

The ERC operator training program’s goals leading to a diploma for students are summed up in the following ten points:

1. Know the values and regulations of the ERC, fire service, police, EMS, and social welfare authorities (a.k.a. - other public safety disciplines) and account for them in everything the ERC operator does.


\textsuperscript{215} Pelastusopisto, 3.

\textsuperscript{216} Pelastusopisto, 5.

\textsuperscript{217} Pelastusopisto, 7.

\textsuperscript{218} Pelastusopisto, 11.
2. Effectively utilize incident information collected and master the basics of call handling and dispatching to fully support the other public service disciplines they serve, considering occupational safety of and collaboration with those other discipline’s personnel.

3. Know and understand the national operating principles of those other public safety disciplines.

4. Understand and appreciate the ERC operator’s position and significance of provisioning public safety services, and do so with customer service as part of their ethical competence.

5. Value the importance of human interaction and skilled verbal communication during the handling of emergency events, and an appetite for self-assessment in order to develop and maintain those skills.

6. Master the use of technological devices and systems required for competent and effective work performance.

7. The ability to encounter a caller in crisis and understand the significance of psychological crisis and follow-up treatment.

8. Able to accept performance evaluation for the purpose of professional development.

9. Value the importance of good health (physical and psychological) and know how to maintain it.

10. Maintain competence in the administration of pre-arrival medical instructions to callers, as well as know how to actively administer emergency first-aid measures if encountered outside the ERC.  

This ERC operators curriculum includes mandatory courses in orientation, health and physical exercise, Swedish language, English language, professional communication and interaction skills, basic professional skills, simulation learning, on-the-job learning, rescue services tasks at the ERC, social services tasks at the ERC, EMS tasks at the ERC, Police tasks at the ERC, and a final assessment of the student’s core competence.

---

219 Pelastusopisto, 6–7.
Finland’s six ERCs are located in Oulu, covering northern Finland and an area known as Lapland; Kuopio, covering east and southeast Finland; Pori, covering Pirkanmaa and Satakunta; Kerava, covering Uusimaa; Turku, covering southwest Finland and Häme; and Vaasa, covering Ostrobothnia and central Finland.\textsuperscript{220} The consolidation process that reduced the country to these six ERCs also incorporated a nationwide public safety radio network known as TETRA.\textsuperscript{221} This eliminated disparate radio systems and interoperability challenges, and gave birth to the next big technological vision of virtual connectivity of all systems (1-1-2 telephony call overflow, field command systems and software, and emergency services/public safety information networks) for full redundancy, resilience, and fail-over capabilities.

Finland’s Emergency Services Information Network (ESINet) system is called Emergency Response Integrated Common Authorities (ERICA) and its development was launched in 2017, including enhanced caller location capabilities and texting/image messaging to 1-1-2.\textsuperscript{222} All of these systems and the six ERCs are connected to a centralized Command and Control Center that,

- monitors the national situational picture of the ERCs with regard to the amount of calls and incidents, as well as the personnel situation, via ERICA
- maintains a situational picture of all the systems related to ERC operations
- monitors the situational picture (amount of resources, incidents and readiness for action) of the incidents related to ERC operations and under processing within the ERCA
- cooperates and collaborates with the different public safety authorities and other operators, such as the Finnish Meteorological Institute, the situational command and preparedness centers of the National Cyber Security Centre, and the Finnish Broadcasting Company
- follows the situational picture of its homeland security

\textsuperscript{220} Mission Critical Communications, “Finland’s Road to PSAP Consolidation.”
\textsuperscript{221} Mission Critical Communications.
\textsuperscript{222} Nieminen, “Emergency Response Centre Administration in Finland.”
• implements the communication procedures related to warning the population, and supports operative information services through those public safety warning alert systems
• processes all consular calls received by Finnish citizens or foreign nationals who are encountering distress abroad

ERICA will be fully implemented in late 2019 or early 2020, enabling optimal use of the systems and technologies of the ERC and will equip Finland’s homeland security enterprise in obtaining real-time situational awareness of internal security within the entire country through a centralized system. It includes software systems with algorithms designed to perform real-time risk analysis and produce predictable outcomes for the Command and Control Center.

From passing laws, to creating policies and programs that required regionalized ERCs and coordination between them and all Finnish public safety entities and services, Finland has focused its efforts in the past several years on universal professionalization and standardization among and within its emergency response services and systems, transforming the relationship between those services and its citizens. This has included structural and operational development and harmonization initiatives, and those initiatives have enhanced operational results of the ERCs compared with measures of operational results prior to the initiatives. Some of the enhanced operational results credited to the initiatives include answering emergency calls in less than 10 seconds, which was happening approximately 71% of the time in 2006 and in 2014 the ERCs were answering emergency calls in less than ten seconds 95% of the time. In 2006 the ERCs were answering emergency calls in less than thirty seconds only 83% of the time.

223 Nieminen.
224 Nieminen.
225 Nieminen.
227 European Emergency Number Association, 23.
they were answering them in less than thirty seconds 98% of the time. Although it was the *Emergency Response Centre Act* of 2001 that provided the statutory backdrop and legal framework that enabled these changes, it was also the cooperation and collaboration between numerous government services, programs, and systems over the last twenty years, understanding the pivotal role of the ERC in the homeland security project, that has led to unparalleled achievement regarding the professionalization and standardization within its 1-1-2 system and services.

In pursuing an aggressive transformational strategy to reform the Emergency Response Centre system and operations, Finland has made unparalleled strides in improving its public safety and homeland security systems. The full-scale adoption of professionalization and standardization policies within a centralized framework has been a strategic response to enhancement and hardening capabilities objectives within its emergency response services. As a result, Finland’s national 1-1-2 system and its effectiveness is unparalleled and the country is recognized as one of the safest countries in the world, credited in part to the professionalization, harmonization, and standardization of the ERC system.

This shift has occurred as a result of an extraordinary Finnish governmental effort that has involved several components, including: the passing of laws which changed the structures; increased human resource standards of professionalism; funded development and implementation of advanced technology networks and process-flows to promote redundancy and resilience; and mandated regionalization and consolidation. With regionalization and consolidation, for example, Finland averages one ERC per approximately 21,778 square miles, whereas the United States averages one ECC per approximately 647 square miles. Finland, with its six ERCs, is slightly smaller than both California, in terms of square miles, and Colorado, in terms of population, yet according to the FCC Master PSAP Registry, California has approximately 493 ECCs and Colorado has approximately 104 ECCs.

---

228 European Emergency Number Association, 23.
229 Federal Communications Commission, “911 Master PSAP Registry.”
In the United States, a national initiative replicating that of Finland is unreasonable because it is approximately twenty-nine times larger and its Constitution expressly resists centralized power by establishing states’ rights. The jurisdictions within the United States could, however, pursue professionalization and standardization of the 9-1-1 system with initiatives and policy focused on mandated stringent hiring, training, and continuing education standards of the ECO practitioner, regionalization or virtual/technological connectedness of its ECCs, and upgraded technological structures and systems.

B. DISCUSSION

The ECO is often the first, first-responder and their work is profoundly demanding and pivotal to the effective and efficient provisioning of public safety, security and services. They currently perform the highly confidential, often chaotic, extremely stressful and demanding emergency dispatching services during horrific situations, yet the OMB considers their work as clerical and similar to that of a taxicab or tow truck company dispatcher. ECCs are experiencing systemically high attrition rates leading to understaffing and overworked ECOs, new NG9-1-1 technologies are or soon will be exposing ECOs to traumatic images and video feeds, and some jurisdictions are using 9-1-1 fees for expenditures completely unrelated to 9-1-1, all of which leads to vulnerabilities and failures.

In addition, only twelve of the fifty-six U.S. state and territorial jurisdictions mandate a hiring standard. Just over half of those fifty-six jurisdictions mandate a basic training standard. Only half of those fifty-six jurisdictions mandate a continuing education standard, and less than half of those fifty-six jurisdictions mandate that their ECCs use and train their ECOs on industry-accepted, pre-arrival medical instruction protocols. Some jurisdictions and stakeholder organizations seem uninformed or apathetic about these various issues, resisting professionalization and standardization initiatives for reasons such as being an unfunded mandate, or the mandate may cause an undue financial or personnel burden, or they may be hesitant to relinquish regulatory control to others. Some simply view the job as less significant than that of a first responder.
C. LIMITATIONS

This research and analysis design encountered a few limitations. One of the limitations is that very little evidence of institutional opposition to professionalization and standardization within the ECO occupation is available. Also, this monograph does not study the various differences among hiring standards, basic curricula used, and varying amounts of continuing education hours required between state and territorial jurisdictions with a standard, but it is clear that there is no universal standard uniting those various jurisdictional standards. It can be argued, from a national perspective, that because various standards exist and those variances make them somewhat dissimilar, there is actually no standard.

D. RECOMMENDATIONS FOR FUTURE RESEARCH

This monograph’s research regarding a national 9-1-1 system that is under duress, particularly with regard to human resource related issues with its ECO practitioners, posits several strategies for future research. First, researchers could analyze and identify a sound strategy for effective recruitment and retention of skilled ECO practitioners. Second, researchers could explore strategies for jurisdictional standardization of the 9-1-1 ECC system, including radio communications networks, via regionalization and virtual connectedness of communications and data systems that could enhance efficiency, professionalism, redundancy, and resiliency. Finally, it could be useful to research strategies for securing adequate, sustained, and legally protected 9-1-1 funding in all of the fifty-six U.S. jurisdictions that can modernize and sustain the currently aging and underfunded system.

This thesis aims to magnify urgent human resource and funding challenges within the nation’s 9-1-1 system, and to investigate the merits of reclassification, professionalization, and standardization of the ECO occupation. This researcher recommends that future research advance that effort even further by probing the following questions. What is required to enhance the recruitment and retention of skilled and career-oriented ECO practitioners? What are the potential or likely outcomes of the status-quo if technological investment, enhancements, and capabilities outpace systemic
professionalization and standardization of the ECO occupation? What is the likely public safety and homeland security ramifications if jurisdictions continue to misappropriate 9-1-1 fees and delay necessary investment?

E. FINDINGS AND CONCLUSIONS

This research resulted in five main findings:

• The Emergency Communications Officer’s work is protective in nature. The OMB misclassifies the occupation as clerical, and its six 2018 arguments for continuing with the clerical occupational classification are unequivocally refutable.

• Nationwide, countless Emergency Communications Centers are significantly challenged by systemic recruitment and retention of skilled and career-minded Emergency Communications Officers. This is, in part, the result of being an undervalued, undertrained, and undercompensated discipline within the public safety and homeland security projects.

• The 9-1-1 system is under duress as a result of antiquated technologies and funding paucity. The deficient funding is the result of jurisdictional theft of 9-1-1 fees for appropriation of non-9-1-1 related interests, declining revenue streams caused by diminished funding sources, such as mass reduction in landline phones and saturation of wireless devices, and a lack of jurisdictional investment in the system.

• Of the fifty-six U.S. state and territorial jurisdictions, only twelve have some degree of a mandated hiring/character standard for the Emergency Communications Officer practitioner, only twenty-nine have some degree of a mandated basic training standard, only twenty-three have some degree of a continuing education standard, and only twenty-four have some degree of a mandate for Emergency Communications Centers to use and continually train on pre-arrival medical care instructional protocols. Four jurisdictions were indeterminate as to hiring/character standards, basic training standards,
continuing education standards; three jurisdictions were indeterminate as to mandated use of and continual training on pre-arrival medical care instructional protocols.

- Emergency communications organizations and their human resource programs need to project the implications to the Emergency Communications Officer practitioner of imminent technological changes, such as NG9-1-1, and professionalization. Those institutions need to pivot in support of these matters, providing enhanced training opportunities and anticipating new training requirements, developing updated minimum qualifications and necessary knowledge, skills, and abilities, including the development of new or revised applicant competence assessments, and strategize for ways to enhance the local market’s compensation value of new requirements and duties.

Professionalization and standardization should begin with an occupational classification by the OMB that accurately reflects the nature of work performed by the nation’s ECO. It should be followed by all stakeholder jurisdictions advocating for and supporting increased compensation and benefits commensurate with the local market and the demands of the work performed by the ECO practitioner, and that should be coupled with applicable jurisdictions establishing mandated standards of hiring/character, basic training and certification, including continuing education, and ongoing certification requirements in the use of medically approved pre-arrival medical instruction systems and protocols. Finally, it should include a complete termination of all jurisdictional misappropriation of 9-1-1 fees, updated and sustainable funding streams by all jurisdictions, and adequate jurisdictional investment in technological enhancements necessary to improve the system’s efficiency, proficiency, redundancy, and resilience.

Although the cultural and governmental differences between the U.S. and Finland are substantial, several of Finland’s professionalization and standardization policies offer tremendous benefits to public safety and homeland security within the U.S. states and territories. Creating such changes, however, will demand leadership at every level, demonstrating the value warranted to the role of the 9-1-1 system and its practitioners, by setting new policy, enacting new laws, closing loopholes that permit the theft of 9-1-1 fees
by states and territories, and providing investment in necessary technological transformation. While the Finish model is a national model, something not amenable to the governing structures of these United States, each state and territorial jurisdiction could, and arguably should, consider the Finnish model of professionalization and standardization for their constituents and guests. This could be done by embracing professionalization and standardization best practices developed or proposed by national organizations such as the NENA, APCO International, International Association of Chiefs of Police, National Fire Protection Association, International Association of Directors of Law Enforcement Standards and Training, National Sheriff’s Association, and others.

It should begin by each state/territory passing laws mandating hiring, training, and continuing education requirements for its ECO practitioners. Secondly, each state/territory should pursue regionalization and/or consolidation of technological systems, such as statewide ESINets and Land-Mobile-Radio systems, to decrease overall costs, improve collaboration and communications, and streamline work/process flows for improved efficiencies and effectiveness. Finally, the Federal Communications Commission should mandate, with the help of the U.S. Congress through funding, that all 9-1-1 telco providers begin immediately updating their legacy systems to vastly improve 9-1-1 caller location technologies, and each state/territory should fund and mandate advanced technology networks and process-flows to promote redundancy and resilience of a synchronized 9-1-1 system.
## APPENDIX. RESEARCH DATA ON JURISDCTIONAL POLICIES/REGULATIONS

### A. ALPHABETIZED JURISDICTIONS FROM ALABAMA TO WYOMING – HIRING AND TRAINING

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>Hiring Standard Mandated</th>
<th>Training Standard Mandated</th>
<th>Continuing-Edu Mandated</th>
<th>Hiring &amp; Training Mandate Web-Link Reference/Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2OjYYxQ">https://bit.ly/2OjYYxQ</a></td>
</tr>
<tr>
<td>Alaska</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2NPx3U">https://bit.ly/2NPx3U</a></td>
</tr>
<tr>
<td>American Samoa</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2KqEku">https://bit.ly/2KqEku</a></td>
</tr>
<tr>
<td>Arkansas</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2NPm7jm">https://bit.ly/2NPm7jm</a></td>
</tr>
<tr>
<td>Colorado</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>District of Columbia</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/3z55g8h">https://bit.ly/3z55g8h</a></td>
</tr>
<tr>
<td>Georgia</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/3555g8h">https://bit.ly/3555g8h</a></td>
</tr>
<tr>
<td>Guam</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Hawaii</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2KrJEmN">https://bit.ly/2KrJEmN</a></td>
</tr>
<tr>
<td>Idaho</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Km7mF">https://bit.ly/2Km7mF</a></td>
</tr>
<tr>
<td>Illinois</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2XhDXYZ">https://bit.ly/2XhDXYZ</a></td>
</tr>
<tr>
<td>Kansas</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/33CPhYo">https://bit.ly/33CPhYo</a></td>
</tr>
<tr>
<td>Louisiana</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Maine</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2CIq6J">https://bit.ly/2CIq6J</a></td>
</tr>
<tr>
<td>Maryland</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2CPhoFi">https://bit.ly/2CPhoFi</a></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2QhFgF">https://bit.ly/2QhFgF</a></td>
</tr>
<tr>
<td>Minnesota</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Mississippi</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Q0JrB">https://bit.ly/2Q0JrB</a></td>
</tr>
<tr>
<td>Missouri</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://bit.ly/2AqjVr">http://bit.ly/2AqjVr</a></td>
</tr>
<tr>
<td>Montana</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://bit.ly/2NOVjH1">http://bit.ly/2NOVjH1</a></td>
</tr>
<tr>
<td>Nebraska</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Nevada</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://bit.ly/3ZK0qP">http://bit.ly/3ZK0qP</a></td>
</tr>
<tr>
<td>New Jersey</td>
<td>Yes***</td>
<td>Yes***</td>
<td>Yes***</td>
<td><a href="http://bit.ly/2Cf4f4">http://bit.ly/2Cf4f4</a></td>
</tr>
<tr>
<td>New Mexico</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/35rN4o">https://bit.ly/35rN4o</a></td>
</tr>
<tr>
<td>New York</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2OFSW1w">https://bit.ly/2OFSW1w</a></td>
</tr>
<tr>
<td>North Carolina</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>ECO certified only if working for a Sheriff</td>
</tr>
<tr>
<td>North Mariana Island</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>North Dakota</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td><a href="https://bit.ly/2GcYXjQ">https://bit.ly/2GcYXjQ</a></td>
</tr>
<tr>
<td>Ohio</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2K6s7P">https://bit.ly/2K6s7P</a></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Krdw95">https://bit.ly/2Krdw95</a></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://bit.ly/2XgCMsP">http://bit.ly/2XgCMsP</a></td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td><a href="https://bit.ly/2NPzaec">https://bit.ly/2NPzaec</a></td>
</tr>
<tr>
<td>South Carolina</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>South Dakota</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td><a href="https://bit.ly/2r1CwpG">https://bit.ly/2r1CwpG</a></td>
</tr>
<tr>
<td>Tennessee</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Sm5RB">https://bit.ly/2Sm5RB</a></td>
</tr>
<tr>
<td>Texas</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/35aRV1z">https://bit.ly/35aRV1z</a></td>
</tr>
<tr>
<td>Utah</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Vermont</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2OD0dlA">https://bit.ly/2OD0dlA</a></td>
</tr>
<tr>
<td>Virginia</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td><a href="https://bit.ly/2XhE0c9">https://bit.ly/2XhE0c9</a></td>
</tr>
<tr>
<td>Virgin Islands</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td><a href="https://bit.ly/2CM22X">https://bit.ly/2CM22X</a></td>
</tr>
<tr>
<td>Wisconsin</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

---

*Primary PSAF/ECC Only*
### B. ALPHABETIZED JURISDICTIONS FROM ALABAMA TO WYOMING – EMD CERTIFICATION AND TRAINING

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>EMD Training Mandated</th>
<th>EMD Continuing-Ed Mandated</th>
<th>EMD Data Web-Link Reference/Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2q8QqCe">https://bit.ly/2q8QqCe</a></td>
</tr>
<tr>
<td>American Samoa</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>District of Columbia</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Hawaii</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Qm2Y3K">https://bit.ly/2Qm2Y3K</a></td>
</tr>
<tr>
<td>Iowa</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2QJ5MxU">https://bit.ly/2QJ5MxU</a></td>
</tr>
<tr>
<td>Louisiana</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2QkF9t7">https://bit.ly/2QkF9t7</a></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2DeQrMM">https://bit.ly/2DeQrMM</a></td>
</tr>
<tr>
<td>Michigan</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2QkCU6B">https://bit.ly/2QkCU6B</a></td>
</tr>
<tr>
<td>North Carolina</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>North Mariana Islands</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2XiW0Th">https://bit.ly/2XiW0Th</a></td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>South Carolina</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Tennessee</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Utah</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Vermont</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Virginia</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Virgin Islands</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="https://bit.ly/2Ok8yRI">https://bit.ly/2Ok8yRI</a></td>
</tr>
<tr>
<td>Wisconsin</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Wyoming</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
LIST OF REFERENCES


INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
   Ft. Belvoir, Virginia

2. Dudley Knox Library
   Naval Postgraduate School
   Monterey, California